

# D5

Re-analysis of the JPSC data by forming more homogenous sub-groups in order to reduce the variance of consumption elasticities and enhancing the robustness of results

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Tsukuba, December 2004

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## Executive Summary

This Working Paper was delivered as a part of the research project “CHap: CO<sub>2</sub>-emissions per unit of happiness: a new indicator for sustainable consumption that considers and minimizes rebound effects” that is directed by Hofstetter and Madjar and is a part of the program “Life Cycle Approaches for Sustainable Consumption,” launched by SNTT, sponsored by Japanese Ministry of Economics, Trade and Industry (METI), and proposed by Dr. A. Inaba, National Institute of Advanced Industrial Science and Technology (AIST).

The purpose of this Working Paper is to deliver results of statistical analysis on changes in consumption patterns and happiness which will then be used to derive consumption elasticities in the case of introducing new activities, such as cloths dryer, personal computer, and mobile phone, to households. The Institute for Research on Household Economics (IRHE) performs the Japanese Panel Survey of Consumers (JPSC), which includes the variables of time-use data, consumption data, happiness and life satisfaction. This data set includes cohorts of young Japanese women. The analysis on this JPSC data was executed by AIST with the methodological assistance from Büro für Analyse & Ökologie (BAO).

The main tasks of AIST for this research project for FY2004 was to provide the results of empirical analysis with increased resolution of the estimation capability of the proposed model by removing the noise of variables in order to derive consumption elasticities of adopting new technologies. The analysis approach, such as grouping of the samples and the choice of statistical tools will be the same as FY2003. The followings were specific deliverables from AIST for this year:

- D3: Empirical re-analysis of the JPSC panel data to identify major factors that affect change of happiness and life satisfaction
- D5: Re-analysis of the JPSC data by forming more homogenous sub-groups in order to reduce the variance of consumption elasticities and enhancing the robustness of results

This Working Paper delivers D5. In order to increase the robustness of the data by making clear distinctions between the target sub-groups, we made several attempts, such as stratification of the sample into married and un-married groups, removal of the cases that experienced happiness-shifting life events, removal of highly suspected outliers from the sample, combining the two datasets, and extraction of only the cases that never experienced happiness-shifting life events. Out of these attempts, significant difference in happiness score (increase) was observed only in the case of personal computer adopters after elimination of highly suspected outliers and after removing the cases that experienced happiness-shifting life events from a single dataset. Therefore, the above two methods may be the key to form homogeneous sub-groups by removing noises from the sample. Our results suggested that increasing the sample size is necessary to increase the statistical robustness of the results. Because of such a small size of targeted groups for some analytical conditions, we could not make conclusive conclusions from the results and discussions of the analysis. In spite of the difficulties to make clear distinctions of targeted groups, there still exists a possibility of the suggested model as an applicable sustainability indicator to evaluate the adoption of environmental activities. In order to further discuss the possibility, testing examples that may involve major shifts in lifestyle is strongly desirable rather than testing adoption of consumer goods to a household as consumption activities.

## 1. Introduction

How should we alter consumption towards more sustainable consumption patterns if we do not know the effect of such alterations? Consumer research looked into how to alter consumption for many years and established numerous sets of archetypical consumers that represent larger groups of consumers. Much of this research has been directed by the questions of how to shape a product and its advertisement to be attractive to the targeted consumer group(s). However, comparably little efforts have been made to look into the interdependency of consumption activities. These interdependencies of consumption activities can lead to what economists may call rebound effects, i.e., the intentional change in one consumption activity may cause a series of other changes in consumption that may compensate parts or all of the initial benefit of the consumption activity (like saving money, saving time, lowering resource consumption and pollution, etc.).

Hofstetter & Madjar (2003)<sup>[1]</sup> proposed to develop an indicator so-called “CHap” which considers the impact of consumption activities on happiness and the additional CO<sub>2</sub> emissions of the consumption activity itself but also the changes in CO<sub>2</sub> emissions for all other activities. The final paper of Hofstetter and Madjar will not only report on results that look into consumption interdependencies but also on the changes in self-reported happiness.

The development of such an indicator consists of three modules: (1) consumption pattern (CP) module; (2) CO<sub>2</sub> emission (C) module; and (3) happiness (H) module. First, a quantitative analysis of behavioural aspects of consumption and its consequences on happiness is necessary. The assessment was performed by AIST in 2003 based on three case studies, such as adoption of cloth dryer, personal computer and mobile phone. The choice of these examples was seen as a possibility to test the feasibility of the proposed method. Using panel data on household activities allows deriving consumption elasticities. These elasticities would be useful in predicting changes in consumption patterns. Changes in happiness or life satisfaction were derived from the same data sample.

The analysis from last year drew some insights, such as: (1) the JPSC panel dataset obtained for this study was comprehensive and basically useful for our analysis; and (2) this module produced data that allows empirical calculation of the average direct and indirect rebound effect for the three case studies. This information was highly significant because the rebound effects need to be considered not just for target groups but for all consumers of a service or good. At the same time, there remained some problems. The data contained a great variability even though the selected sample for this study belonged to a group with similar demographic attributes. Due to this great variability, we could not observe significant differences among the variables, particularly self-reported happiness, in targeted groups. As a result, our discussions were based on the mean values of the data. In order to make our discussions more concrete, it would be helpful if the variances are minimized further by classifying the sample into distinguished target groups (certain attributes, such as demographic, social, economical, geographical, psychological, behavioural attributes, etc.).

Therefore, the main objective of AIST’s tasks for FY2004 was to provide the results of empirical analysis with increased resolution of the estimation capability of the proposed model by removing the noise of variables in order to derive consumption elasticities of adopting new technologies, such as cloths dryer, personal computer and mobile phone. The Japanese Panel Survey of Consumers (JPSC) from the Institute for Research on Household Economics (IRHE) was used this year again for the analysis of the effects of adopting a new technology to change of household consumption patterns and happiness.

## 2. Used Data and Variables

### 2.1. Used Data

The Japanese Panel Survey of Consumers (JPSC) dataset provided by the Institute for Research on Household Economics (IRHE) of Japan was used for this study. The JPSC panel data include the variables of time-use data, consumption data, and happiness and life satisfaction, necessary for our study. The panel cohort consists of 1,500 women from 24-34 years of age in 1993 and geographically distributed throughout the nation. The statistical software SPSS v.12.0J was used to perform analysis on the three most recent available data sets (1998, 1999 and 2000).<sup>1</sup> The details on the data are described elsewhere.<sup>[1][2][3]</sup>

### 2.2. Definitions of Variables

Besides happiness, two other self-reported indices for ultimate utility – life satisfaction and life standard – were used for this analysis. According to the previous studies<sup>[4]</sup>, ‘life standard’ is a life index determined mainly by economical satisfaction (i.e. income satisfaction), and ‘life satisfaction’ is a life index determined not only by economic satisfaction but also other factors as a whole, including relationship between spouse, parents and friends. In other words, ‘income satisfaction’ and ‘life standard’ are similar economic indices; while ‘life satisfaction’ is more comprehensive index. ‘Happiness’ is well studied and considered as even more comprehensive index as a whole. Our main focus was on happiness; however, life-satisfaction and life standard were also analyzed in this study as comparisons in characteristics. For more details on the use of happiness as an indicator, refer to deliverable D2 provided by Madjar (2004). The values for variables used for this research were measured in five scales as follows:

(1) Happiness:

Question: Do you consider yourself happy or unhappy?

Self-reported scores: 1 = Unhappy, 2 = Rather unhappy, 3 = Average, 4 = Rather happy, 5 = Very happy

(2) Life-satisfaction:

Question: Are you satisfied with your life as a whole?

Self-reported scores: 1 = Unsatisfied, 2 = Rather dissatisfied, 3 = Average, 4 = Rather satisfied, 5 = Satisfied

(3) Life standard

Question: Where do you think your current life standard falls in comparisons with other households?

Self-reported scores: 1 = Low, 2 = Mid-low, 3 = Average, 4 = Mid-high, 5 = High

Apart from self-reported indices for ultimate utility, life happenings variables, status variables, consumption pattern variables were used for this study. Used variables are shown in Table 1.

Table 1. All the variables used for this study and their classification and measure.

Larger classification	Classification of variables	Variable	Measure
Dependent Variables	Ultimate Utility	Happiness	1 = Unhappy, 2 = Rather unhappy, 3 = Average, 4 = Rather happy, 5 = Very happy
		Life satisfaction	1 = Unsatisfied, 2 = Rather dissatisfied, 3 = Average, 4 = Rather satisfied, 5 = Satisfied
		Living standard	1 = Low, 2 = Mid-low, 3 = Average, 4 = Mid-high, 5 = High
A. Life Happenings variables	Life changes in member of family members	Gave birth to a child	1 = yes, 0 = no
		Took parent(s) along home	1 = yes, 0 = no
		Return of a family member	1 = yes, 0 = no
		Increase for other reason	1 = yes, 0 = no
		A family member transferred	1 = yes, 0 = no
		A family member moved out	1 = yes, 0 = no
		Loss by death	1 = yes, 0 = no
		Loss for other reason	1 = yes, 0 = no
		Married and left family	1 = yes, 0 = no
Divorced or separated	1 = yes, 0 = no		

<sup>1</sup> Toshisuke Ozawa, approved user of the JPSC data, performed the statistical analysis.

		Left for an independent life	1 = yes, 0 = no	
		Started to live with parents	1 = yes, 0 = no	
	Happenings to self	Found a new job	1 = yes, 0 = no	
		Changed job	1 = yes, 0 = no	
		Quit job	1 = yes, 0 = no	
		Enrolled to a (graduate or professional) school	1 = yes, 0 = no	
		Started a new lesson/training	1 = yes, 0 = no	
		Took a leadership of a committee or organization	1 = yes, 0 = no	
		Illness requiring an operation or hospitalization	1 = yes, 0 = no	
		Depression/other psychiatric symptoms	1 = yes, 0 = no	
		Loan/credit card related trouble	1 = yes, 0 = no	
		Accident/disaster	1 = yes, 0 = no	
		Other	1 = yes, 0 = no	
		Accidents, disasters, and consumer troubles	Traffic accidents	1 = yes, 0 = no
	Fire		1 = yes, 0 = no	
	Accidents while at work		1 = yes, 0 = no	
	Burglary or theft		1 = yes, 0 = no	
	Suffering from products		1 = yes, 0 = no	
	Bankruptcy		1 = yes, 0 = no	
	Other		1 = yes, 0 = no	
	Happenings involving family	Transferred	1 = yes, 0 = no	
		Voluntary retirement or lost job	1 = yes, 0 = no	
		Business bankrupts	1 = yes, 0 = no	
		Illness requiring hospitalization or operation	1 = yes, 0 = no	
		Depression or other psychiatric problems	1 = yes, 0 = no	
		Credit card/loan-related trouble	1 = yes, 0 = no	
		Accident/disaster	1 = yes, 0 = no	
		Entrance exam and enrollment	1 = yes, 0 = no	
	Others	1 = yes, 0 = no		
	Life changes	Big expenditure	1 = yes, 0 = no	
		Income cut or depreciation of properties	1 = yes, 0 = no	
		Heavy burden on taking care	1 = yes, 0 = no	
		Lost good relationships with other family members	1 = yes, 0 = no	
		Depression	1 = yes, 0 = no	
		Devoiced or separated	1 = yes, 0 = no	
		Others	1 = yes, 0 = no	
	B. Status Variables	Family Members	Number of Family Members	Numerical
			First Child	1 = First Child, 0 = Other
			Second Child	1 = Second Child, 0 = Other
			Third Child	1 = Third Child, 0 = Other
		Total Household Income from the Previous Year and Savings and stock (10,000 yen)	Total household income from last year - husband (10,000 yen)	Numerical
			Total household income from last year - Wife (10,000 yen)	Numerical
			Total household income from last year – own business (10,000 yen)	Numerical
			Total household income from last year – other family member (10,000 yen)	Numerical
			Total Household Savings Possession (10,000 yen)	Numerical
			Total Household Stocks Possession (10,000 yen)	Numerical
			Total Household savings and stocks possession (10,000 yen)	Numerical
Type of Housing (Dummy)		A House	1 = A House, 0 = Others	
		Dual house	1 = Dual house, 0 = Others	
		Reinforced-concrete apartment	1 = Reinforced-concrete apartment, 0 = Others	
		Wooden apartment	1 = Wooden apartment, 0 = Others	
Ownership of housing		Own house	1 = Own house, 0 = Others	
		Rent private apartment	1 = Rent private apartment, 0 = Others	
		Rent public apartment	1 = Rent public apartment, 0 = Others	
		Company/school owned housing	1 = Company/school owned housing, 0 = Others	
Employment Situation, Wife		Wife – Employed	1 = Employed, 0 = Others	
		Wife – Unemployed	1 = Unemployed, 0 = Others	
		Wife – Student	1 = Student, 0 = Others	
		Wife – Housekeeper	1 = Housekeeper, 0 = Others	
Wife – responsibility		Wife – Full-time position	1 = Full-time position, 0 = Others	
		Wife – Part-time position	1 = Part-time position, 0 = Others	
		Wife – Contractor	1 = Contractor, 0 = Others	
Employment Situation, Husband		Husband – Employed	1 = Employed, , 0 = Others	
		Husband – Unemployed	1 = Unemployed, , 0 = Others	
		Husband – Student	1 = Student, 0 = Others	

	Husband - responsibility	Husband – Full-time position	1 = Full-time position, 0 = Others
		Husband – Part-time position	1 = Part-time position, 0 = Others
		Husband – Contractor	1 = Contractor, 0 = Others
C. Consumption Pattern	Household spending allocation for the month of September (1,000 Yen)	Food	Numerical
		Housing (Rent/Mortgage)	Numerical
		Water, Gas, Electricity	Numerical
		Furniture and Household Appliances	Numerical
		Clothing and Shoes	Numerical
		Medical and Insurance	Numerical
		Transportation	Numerical
		Communication	Numerical
		Education	Numerical
		Hobby and Leisure	Numerical
		Going out	Numerical
		Allowances	Numerical
		Household possession of durable consumer good	Dining Set
	Cupboard		Numerical
	Microwave		Numerical
	Refrigerator		Numerical
	Automatic Dishwasher		Numerical
	Vacuum Cleaner		Numerical
	Laundry Machine		Numerical
	Cloths Dryer		Numerical
	Sewing Machine		Numerical
	Electric Fan		Numerical
	Air Conditioner		Numerical
	Fan Heater		Numerical
	“Kotatsu” Heater		Numerical
	TV Set		Numerical
	Stereo Sound System		Numerical
	CD Radio Cassette Recorder		Numerical
	VCR		Numerical
	Video Camera		Numerical
	Telephone		Numerical
	Bicycle		Numerical
	Car		Numerical
	TV Game		Numerical
	Word Processor		Numerical
	Personal Computer		Numerical
	FAX	Numerical	
	Mobile Phone	Numerical	
	Time-use patterns (minutes) Wife, Working Days	Weekdays-Commuting (work/school)	Numerical
		Work	Numerical
		Study	Numerical
		House-Keeping and Taking Care of Children	Numerical
		Hobby, Leisure and Going out	Numerical
	Sleep, Eat, Personal Hygiene	Numerical	
	Time-use patterns (minutes), Wife Weekends/Holidays	Weekdays-Commuting (work/school)	Numerical
		Work	Numerical
		Study	Numerical
		House-Keeping and Taking Care of Children	Numerical
		Hobby, Leisure and Going out	Numerical
	Sleep, Eat, Personal Hygiene	Numerical	
	Time-use patterns (minutes), Husband, Working Days	Weekdays-Commuting (work/school)	Numerical
		Work	Numerical
		Study	Numerical
House-Keeping and Taking Care of Children		Numerical	
Hobby, Leisure and Going out		Numerical	
Sleep, Eat, Personal Hygiene	Numerical		
Time-use patterns (minutes), Husband, Weekends/Holidays	Weekdays-Commuting (work/school)	Numerical	
	Work	Numerical	
	Study	Numerical	
	House-Keeping and Taking Care of Children	Numerical	
	Hobby, Leisure and Going out	Numerical	
Sleep, Eat, Personal Hygiene	Numerical		

### 3. Analytical Approach

We reported previously how we conducted statistical analyses on variables between adopters and non-adopters of new activities.<sup>[2][3][6]</sup> Briefly, the samples were divided into: Group NN (non-adopters) - those that have access to the new activity in neither year; Group NY (adopters) - those that started the new activity in concerned year (y) but not in the previous year (y-1); Group YY (continuous users) - those that have access to the new activity in both years; and Group YN (disposers) - those that had access in y-1 but not in y, where, “Y” and “N” denote for “Yes” and “No”, reflecting whether they possess the good. We applied the same analytical approach for adoption of new technologies to household. The cardinal numbers of previous year (y-1) were subtracted from the concerned year (y) on individual bases. This process allowed us to yield the mean values of the “true differences” based on an individual base. Then the mean values of the dependent variables were compared between adopters and non-adopters. Matched-pair t-tests were performed on the mean values to check the significant difference at  $p < 0.05$  (in some cases,  $p < 0.01, 0.1, 0.15$ , depending on the analysis) between two groups. It was expected that this analytical manner allows us to evaluate the genuine impact of the concerned life events and attributes on the shift of one’s consumption patterns and happiness/life satisfaction.

In order to deliver the results of empirical analysis with increased resolution of the estimation capability of the proposed model by removing the noise of variables in order to derive consumption elasticities of adopting new technologies, the analysis was performed mainly in two operational flows: (1) analysis on the separate data sets of 1998-1999 and 1999-2000; and (2) analysis on the combined data of 1998-1999 and 1999-2000 as shown in Figure 1. In the following sections, these two analytical flows and the results are described separately.

(1) analysis on the separate data sets of 1998-1999 and 1999-2000

(2) analysis on the combined data of 1998-1999 and 1999-2000

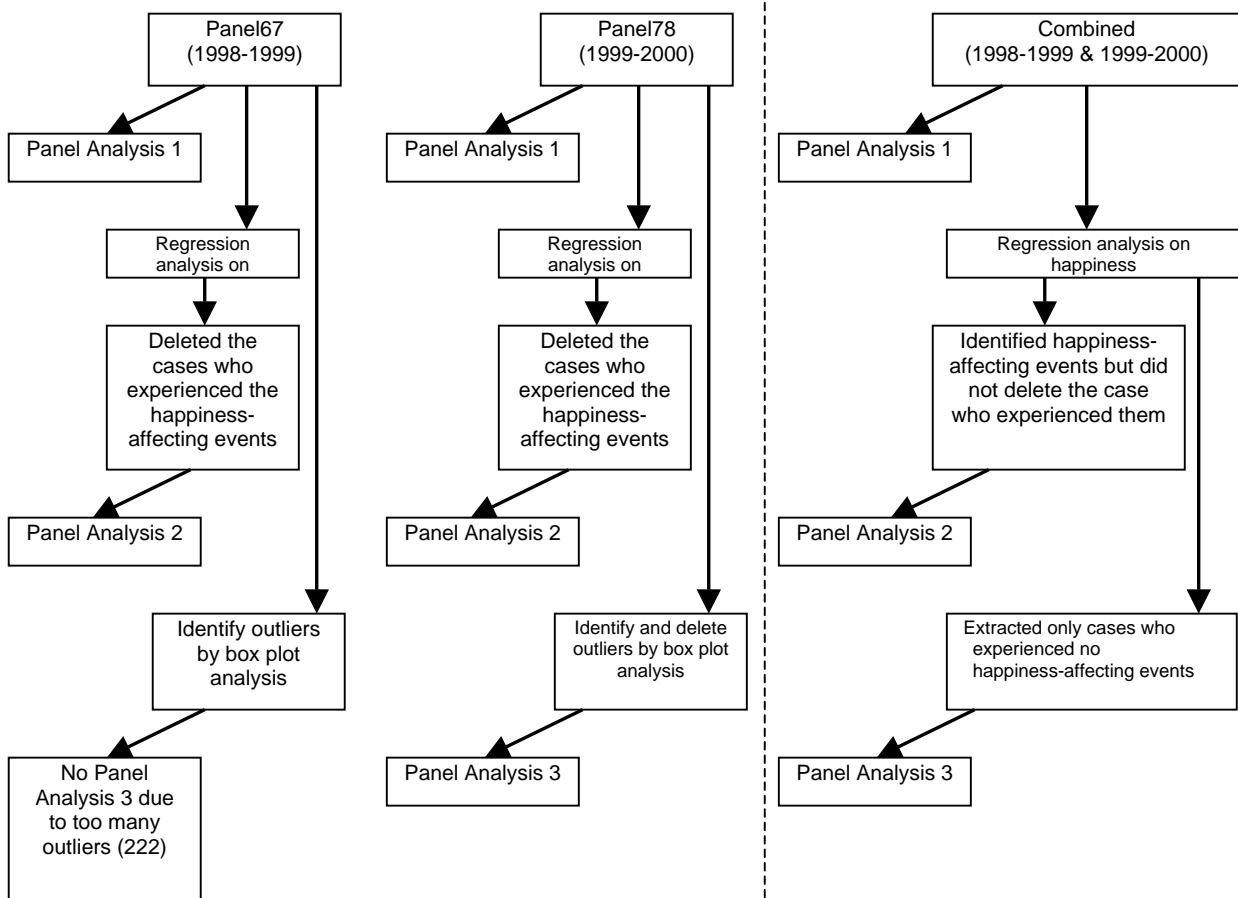


Figure 1. Flow of the statistical analysis.

### 3.1. Analysis on the Separate Data Sets of 1998-1999 and 1999-2000

#### 3.1.1. Data Preparation

- a. Last year, we used Panels 5 (1997), 6 (1998) and 7 (1999) and combined three data sets in order to increase the sample number. For this year, Panel 8 (2000) newly became available from IRHE. Therefore, we decided to use Panels 6 (1998), Panel 7 (1999) and Panel 8 (2000). For panel analysis, statistical analyses were performed between 1998-1999 and 1999-2000 separately to see any differences between two sets of data.
- b. For refinement of the data, all the cases were restricted to the individuals who responded to the survey three consecutive years between 1998 and 2000 and contain no missing values for important variables for our particular interest. The most important variables are: (1) happiness; (2) life satisfaction; (3) life standard; (4) possession of cloth dryer; (5) possession of personal computer; and (6) possession of mobile phone. All cases which do not meet the restriction were excluded from the analysis. Some single or unmarried individual who have missing values for husband-related variables were kept in the data sample. For time-use data, cases with missing values were kept in because they may put missing value on purpose for some particular reasons.
- c. Finally the case number was down to 1,176. We used this data set for analysis.
- d. Time-use data were converted into the unit of minutes.
- e. For (1) happiness, (2) life satisfaction, and (3) life standard, the scores were converted. Originally, happiness scores were: 1 = Very happy, 2 = Rather happy, 3 = Average, 4 = Rather unhappy, 5 = Unhappy; life satisfaction were: 1 = Satisfied, 2 = Rather satisfied, 3 = Average, 4 = Rather dissatisfied, 5 = Not satisfied; and life standard were: 1 = High, 2 = Middle-high, 3 = Middle-middle, 4 = Middle-low, 5 = Low. However, the scores were converted in the reverse order, such as: 1 = Unhappy, 2 = Rather unhappy, 3 = Average, 4 = Rather happy, 5 = Very happy; 1 = Not satisfied, 2 = Rather dissatisfied, 3 = Average, 4 = Rather satisfied, 5 = Satisfied; and 1 = Low, 2 = Middle-low, 3 = Middle-middle, 4 = Middle-high, 5 = High, respectively.
- f. The values for life happenings were: 1 = Yes and 2 = No. The values were converted to dummy, such as 1 = Yes, 0 = Others. Therefore, unlike last year's results, any positive signs in happiness, life satisfaction and life standard indicate happier, more satisfied and higher, respectively. In the same way, some key ordinal values were converted to dummy values (i.e. the relationship with the baby born within a year, wives' and husbands' occupation, type of function, type of housing, and ownership of housing). In the case of ownership of housing, the "Own house" were originally subdivided to: (1) own house including land property; (2) own house with partially own property; and (3) own house with rent property. However, all three were combined because living space in the house building was of the most particular interest for this study.
- g. For panel analysis, the sample was divided into four groups: non-adopter (NN), adopter (NY), continuous user (YY) and disposer (YN) for three technologies, using the variables of possession of cloth dryer, personal computer, and mobile phone.
- h. Also for some variables in cardinal numbers, matched-pair difference between previous year (y-1) and concerning year (y) were calculated for 1998-1999 and 1999-2000 separately. They were named as: Panel 6-7 (1998-1999) and Panel 7-8 (1999-2000), respectively.

#### 3.1.2. Analysis

##### A. Cross Sectional View of Separate Data

The numbers of observations and mean value and standard deviation (SD) of all the variables were calculated to check the characteristics of the sample data. It helps acquire the whole image of the sample as well as extract some important aspects for further analyses. Some of the results were compared to that of National Survey of Family Income and Expenditure (2000)<sup>[7]</sup> to see the agreement in results.

##### B. Panel View of Separate Data

The number of the observations for adopters and non-adopters of each technology, and mean value and standard deviation (SD) of all the "differences" of values were calculated to check the characteristics of the sample data. It helps acquire the sample image for further analyses. Moreover, the obtained values will be used in the process of delivering CO<sub>2</sub> emission from consumption activities.

C. Panel Analysis 1: Comparisons of mean values of the variables between non-adopters (NN) and adopters (NY) of the three technologies

The differences (or changes) of the mean values for happiness, life satisfaction, consumption patterns and time-use were compared between non-adopters (NN) and adopters (NY) of the three technologies. Analysis was performed on Panels 6-7 (1998-1999) and 7-8 (1999-2000) separately at significance levels of  $p < 0.15$ ,  $p < 0.1$ ,  $p < 0.05$  and  $p < 0.01$ . In this way, the analysis provides wider latitudes in determination of significant difference, particularly for the data with large variances.

D. Cross Section Analysis: Linear regression analysis

Multi-linear regression analysis was performed to find out the correlations between the independent variables and scores of happiness, life satisfaction and the life happenings. The variables used were cross section data; therefore, the results need to be interpreted carefully.

E. Panel Analysis 2: Comparison of mean values of the variables between NN and NY after screening of sample

An attempt was made to observe significant differences between results by screening the sample. Based on the results of cross section analysis, the cases that experienced the life happenings, which turned out to affect the shift of happiness and life satisfaction scores based on the results of linear regression analysis, were eliminated from the data. The same analysis as Panel Analysis 1 was performed after the exclusion to investigate the effects of elimination of these cases on the exhibition of significant differences between the mean values of variables between NN and NY groups.

F. Panel Analysis 3: Comparisons of mean values of the variables between NN and NY after eliminating outliers

There was a concern that the existence of outlier values in some numerical variables, such as income, savings, stock and expenditure, has significant effects on the biased results. Therefore, another attempt was made to exclude outliers from the data. First, we took the original data that was used for Panel Analysis 1, and searched for outliers in each numerical scale variable through box plot analysis, and excluded manually from the sample. The numbers of outliers in the 1998-1999 data and 1999-2000 data were 222 and 49, respectively. The reason for such large difference in number is unclear. The total sample number after preparation of the sample was 1,176. It was suspected that subtraction of 222 samples may make the data intolerable to the statistical analysis. Therefore, the removal of outlier samples was performed only on the 1999-2000 data. After conducting the above modification, panel analysis was performed once again for the adopters and non-adopters of three technologies.

### 3.1.3. Results

This section contains only the results of the analysis in tables. The explanations and discussions are included in the “4. Comprehensive Discussion” section.

#### A. Cross Sectional View of Separate Data

The numbers of observations and mean value and standard deviation (SD) of all the variables were calculated and shown in Tables 2 and 3. The shadowed boxes in grey emphasize no observation. The total numbers for observations are rather consistent in each year.

Table 2. Observations of variables for 1998, 1999 and 2000 used for this study.

Married or un-married	1998	1999	2000
Married	835	862	886
Un-married	341	314	290

Happiness	1998	1999	2000
Unhappy	8	9	12
Rather unhappy	51	42	60
Average	165	163	181
Rather happy	675	697	704
Very happy	277	265	219

Life Satisfaction	1998	1999	2000
Not satisfied	40	29	40
Rather dissatisfied	142	132	163
Average	274	300	323
Rather satisfied	590	596	549
Satisfied	130	119	101

Living Standard	1998	1999	2000
Low	31	30	36
Middle-low	247	246	274
Middle-middle	706	713	700
Middle-high	184	180	162
High	8	7	4

Life Happenings	1998	1999	2000
Gave birth to a child	91	78	76
Took parent(s) along home	4	6	7
Return of a family member	3	3	3
Increase for other reason	15	13	13
A family member transferred	3	6	8
A family member moved out	31	21	19
Loss by death	7	15	9
Loss for other reason	6	4	22
Married and left family	33	31	26
Divorced or separated	7	4	6
Left for an independent life	13	17	12
Started to live with parents	12	11	11
Found a new job	89	92	83
Changed job	87	108	71
Quit job	67	67	61
Enrolled to a (graduate or professional) school	4	6	11
Started a new lesson/training	115	117	84
Took a leadership of a committee or organization	168	181	197
Illness requiring an operation or hospitalization	18	22	19
Depression/other psychiatric symptoms	16	18	13
Loan/credit card related trouble	5	6	6
Accident/disaster	35	33	33
Other	56	47	58
Traffic accidents	30	22	26
Fire	0	0	0
Accidents while at work	0	0	0
Burglary or theft	5	9	3
Suffering from products	1	1	2
Bankruptcy	0	4	3
Other	4	4	5
Transferred	41	37	33
Vol. retirement or lost job	71	51	48

Business bankrupts	4	4	7
Illness requiring hospitalization or operation	59	56	51
Depression or other psychiatric problems	11	10	13
Credit card/loan-related trouble	6	13	6
Accident/disaster	18	31	35
Entrance exam and enrollment	104	136	134
Others	43	40	35
Big expenditure	72	74	93
Income cut or depreciation of properties	45	46	42
Heavy burden on taking care	35	38	20
Lost good relationships with other family members	21	22	10
Depression	50	59	39
Devoiced or separated	2	1	1
Others	15	14	12

Relationship with the New Born Baby within a Year	1998	1999	2000
First Child	27	28	29
Second Child	38	38	28
Third Child	26	12	19

Number of Family Members	1998	1999	2000
1	54	61	56
2	135	130	125
3	264	251	251
4	323	333	328
5	189	184	202
6	128	138	137
7	67	62	59
8	14	14	16
9	2	3	2

Type of Housing (Dummy)	1998	1999	2000
A House	675	664	689
Dual house	21	18	21
Reinforced-concrete apartment	392	411	394
Wooden apartment	86	82	72

Ownership of Housing	1998	1999	2000
Own house	747	745	763
Rent private apartment	222	227	220
Rent public apartment	119	122	113
Company/school owned housing	86	80	80

Employment Status	1998	1999	2000
Wife – Employed	703	707	714
Wife – Unemployed	15	10	8
Wife – Student	4	4	6
Wife – Housekeeper	428	435	425
Wife – Full-time position	350	330	319
Wife – Part-time position	243	258	277
Wife – Contractor	32	29	32
Husband – Employed	829	853	862
Husband – Unemployed	1	2	6
Husband – Student	7	0	0
Husband – Full-time position	693	713	719
Husband – Part-time position	3	8	6
Husband – Contractor	4	4	9

Table 3. Mean and standard deviation (SD) of variables for 1998, 1999 and 2000 used for this study.

Ultimate Utility	1998		1999		2000	
	Mean	SD	Mean	SD	Mean	SD
Happiness	3.988	0.782	3.992	0.759	3.900	0.792
Life Satisfaction	3.534	0.957	3.548	0.907	3.432	0.948
Living Standard	2.907	0.701	2.905	0.692	2.850	0.696

Household Spending Allocation for the Month of September (1,000 Yen)	1998		1999		2000	
	Mean	SD	Mean	SD	Mean	SD
Food	51.94	35.09	57.17	38.58	58.32	38.23
Housing (Rent/Mortgage)	19.73	41.23	21.27	45.20	22.16	53.34
Water, Gas, Electricity	15.52	15.21	16.22	13.31	17.32	14.00

Furniture and Household Appliances	6.26	32.71	4.28	13.00	4.57	12.97
Clothing and Shoes	11.48	15.02	11.39	14.61	12.37	15.82
Medical and Insurance	7.46	17.43	6.55	14.29	6.97	23.59
Transportation	8.95	10.86	19.33	57.68	17.69	52.65
Communication	5.48	7.03	8.57	7.95	10.48	9.95
Education	12.90	19.36	14.97	25.63	15.80	25.08
Hobby and Leisure	11.69	18.77	11.31	22.66	10.82	18.70
Going out	12.64	15.33	11.48	15.00	11.84	18.04
Allowances	24.71	27.46	23.64		23.88	27.18

	1998		1999		2000	
	Mean	SD	Mean	SD	Mean	SD
Housing Loan and Other Loan						
Mortgage / rent (1,000 Yen)	53.38	41.19	53.91	39.52	54.86	39.37
Property Area (m <sup>2</sup> )	284.04	355.14	289.76	388.67	266.84	371.64
Total due balance of housing loan (10,000 Yen)	1918.08	1127.25	1906.84	1122.07	1943.50	1,093.64
Total payment made last year (housing loan) (10,000 Yen)	736.85	2335.29	528.81	1927.28	348.70	1,432.71
Total due balance of other loan (10,000 Yen)	177.27	294.01	155.42	234.42	207.82	616.98
Total payment made last year (other loan) (10,000 Yen)	72.69	128.49	70.19	127.03	86.73	169.80
New loan committed last year	90.88	99.92	97.06	105.40	220.75	960.01

	1998		1999		2000	
	Mean	SD	Mean	SD	Mean	SD
Household Possession of Durable Consumer Good						
Dining Set	0.57	0.52	0.61	0.51	0.63	0.51
Cupboard	1.05	0.74	1.07	0.73	1.08	0.72
Microwave	0.86	0.41	0.87	0.41	0.90	0.39
Refrigerator	1.03	0.61	1.04	0.60	1.06	0.58
Automatic Dishwasher	0.07	0.26	0.07	0.27	0.09	0.29
Vacuum Cleaner	1.13	0.66	1.17	0.65	1.19	0.66
Laundry Machine	0.90	0.45	0.92	0.46	0.93	0.41
Cloths Dryer	0.21	0.41	0.21	0.40	0.21	0.41
Sewing Machine	0.66	0.59	0.68	0.58	0.69	0.56
Electric Fan	1.37	1.14	1.43	1.14	1.47	1.15
Air Conditioner	1.60	1.32	1.67	1.37	1.74	1.41
Fan Heater	0.98	0.97	1.02	1.01	1.05	1.04
“Kotatsu” Heater	0.84	0.74	0.82	0.78	0.81	0.76
TV Set	1.90	1.15	1.98	1.16	2.01	1.15
Stereo Sound System	0.65	0.61	0.65	0.63	0.65	0.62
CD Radio Cassette Recorder	0.74	0.61	0.77	0.62	0.79	0.67
VCR	1.38	0.87	1.38	0.87	1.42	0.86
Video Camera	0.55	0.56	0.58	0.57	0.60	0.57
Telephone	1.74	1.09	1.77	1.09	1.83	1.10
Bicycle	1.75	1.51	1.84	1.54	1.94	1.55
Car	1.24	0.87	1.26	0.85	1.28	0.86
TV Game	1.07	1.16	1.20	1.24	1.28	1.28
Word Processor	0.44	0.56	0.43	0.57	0.39	0.56
Personal Computer	0.37	0.65	0.49	0.74	0.64	0.79
FAX	0.32	0.48	0.39	0.50	0.44	0.51
Mobile Phone	0.95	0.76	1.13	0.81	1.38	0.83

	Time-use	1998		1999		2000	
		Mean	SD	Mean	SD	Mean	SD
Wife, Working Days	Weekdays-Commuting (work/school)	21.02	42.23	19.55	40.38	20.26	40.53
	Work	264.41	237.32	259.99	235.90	262.14	235.10
	Study	14.90	51.38	12.08	48.29	11.93	47.75
	House-Keeping and Taking Care of Children	330.75	276.44	334.70	272.70	336.46	267.75
	Hobby, Leisure and Going out	145.30	123.23	151.98	133.50	146.93	131.94
Wife Weekends/Holidays	Sleep, Eat, Personal Hygiene	629.94	148.77	627.30	151.44	628.81	146.64
	Weekends-Commuting (work/school)	0.93	9.79	1.43	13.22	1.50	13.36
	Work	12.43	64.78	13.34	66.33	9.82	56.96
	Study	16.58	55.03	14.89	46.90	13.10	47.43
	House-Keeping and Taking Care of Children	361.62	257.71	371.66	255.90	382.40	257.15
	Hobby, Leisure and Going out	323.39	213.67	313.14	210.62	309.67	212.86
Husband, Working Days	Sleep, Eat, Personal Hygiene	716.28	167.32	715.13	176.30	714.00	176.05
	Weekdays-Commuting (work/school)	55.09	60.84	54.10	60.02	52.69	57.27
	Work	597.81	130.12	598.89	126.07	594.75	141.76
	Study	7.85	27.03	8.21	27.76	9.99	34.67
	House-Keeping and Taking Care of Children	33.65	62.58	35.98	66.96	33.70	58.61
	Hobby, Leisure and Going out	108.86	91.73	112.33	101.43	117.34	111.90
Weekends/Holidays	Sleep, Eat, Personal Hygiene	596.96	121.41	591.49	112.15	594.04	123.75
	Weekends-Commuting (work/school)	0.46	5.88	0.74	9.74	0.72	9.58
	Work	20.83	83.82	19.88	77.16	20.40	77.24

Study	15.38	46.66	16.55	61.39	18.04	55.28
House-Keeping and Taking Care of Children	167.58	179.33	175.67	184.34	163.63	181.30
Hobby, Leisure and Going out	441.68	227.79	433.50	230.23	442.49	230.47
Sleep, Eat, Personal Hygiene	784.64	199.32	784.23	202.76	785.78	204.07

In this working paper, we chose “household spending allocation for the month of September (1,000 yen)” for money-based variables for comparisons of change in consumption activities. The variables chosen are only disposable income. However, household expenditure consists of: (1) household living expense; (2) household savings; (3) payment for loan, and payment for tax and liability (obligatory health insurance and pension fund) for husband, wife and other family members. The data on household expenditure categories that we chose for analysis should sum up to value (1), meaning that it is only a portion of the all household expenditure. Value (1) does not include savings or payment for loan. Value (2) includes savings and life insurance, and value (3) includes paying for housing loan and other loans that are not included in the credit payment in value (1). The reason why we chose only household living expense was that these variables are, unlike payment for loan or for tax and social security, subject to change by varying one’s lifestyle.

Tables 4 and 5 show the mean values, SD, and average value per annum for: (1) total monthly household living expense (1,000 yen); (2) total monthly household savings (1,000 yen); (3) total monthly payment for loan (1,000 yen), and annual payment for tax and liability (obligatory health insurance and pension fund, 10,000 yen) for husband (4), wife (5) and other family member (6) for 1998, 1999 and 2000. The JPSC survey form implies that the total of the six values will very much cover most of the household expenditure including tax. We further calculated the total values for all six of them for 1998, 1999 and 2000 including household expenditure per family and per family member.

Table 4. Household expenditure per family

1998	Mean	SD	Observation	Average value per annum (10,000 yen)
Number of family members	4.01	1.56	1176	
Tax and Social Security - Husband (10,000 yen)	31.82	55.16	1176	31.82
Tax and Social Security - Wife (10,000 yen)	10.25	27.14	1176	10.25
Tax and Social Security - Other family member (10,000 yen)	19.83	59.15	1176	19.83
Total Monthly Household Living Expense (1,000 yen)	232.43	111.51	1176	278.92
Total Monthly Household Savings (1,000 yen)	82.65	86.24	1176	99.18
Total Monthly Payment for Loan (1,000 yen)	40.72	70.65	1176	48.87
Total				488.86

1999	Mean	SD	Observation	Average value per annum (10,000 yen)
Number of family members	4.02	1.57	1176	
Tax and Social Security - Husband (10,000 yen)	78.04	67.98	1176	78.04
Tax and Social Security - Wife (10,000 yen)	40.80	35.98	1176	40.80
Tax and Social Security - Other family member (10,000 yen)	81.08	102.36	1176	81.08
Total Monthly Household Living Expense (1,000 yen)	236.96	122.39	1176	284.36
Total Monthly Household Savings (1,000 yen)	76.77	72.19	1176	92.12
Total Monthly Payment for Loan (1,000 yen)	41.91	62.73	1176	50.29
Total				626.70

2000	Mean	SD	Observation	Average value per annum (10,000 yen)
Number of family members	4.05	1.55	1176	
Tax and Social Security - Husband (10,000 yen)	76.34	57.74	1176	76.34
Tax and Social Security - Wife (10,000 yen)	42.33	36.06	1176	42.33
Tax and Social Security - Other family member (10,000 yen)	81.09	111.14	1176	81.09
Total Monthly Household Living Expense (1,000 yen)	230.17	104.50	1176	276.21
Total Monthly Household Savings (1,000 yen)	72.52	68.47	1176	87.02
Total Monthly Payment for Loan (1,000 yen)	82.82	62.67	1176	99.38
Total	38.55			662.37

Table 5. Household expenditure per family member

1998	Mean	SD	Observation	Average value per annum (10,000 yen)
Tax and Social Security - Husband (10,000 yen)	8.27	15.15	1176	8.27
Tax and Social Security - Wife (10,000 yen)	4.19	14.35	1176	4.19
Tax and Social Security - Other family member (10,000 yen)	5.34	16.82	1176	5.34
Total Monthly Household Living Expense (1,000 yen)	60.49	38.49	1176	72.59
Total Monthly Household Savings (1,000 yen)	21.45	25.30	1176	25.74
Total Monthly Payment for Loan (1,000 yen)	10.79	17.80	1176	12.94
Total				129.07

1999	Mean	SD	Observation	Average value per annum (10,000 yen)
Tax and Social Security - Husband (10,000 yen)	20.93	21.75	1176	20.93
Tax and Social Security - Wife (10,000 yen)	16.37	21.45	1176	16.37
Tax and Social Security - Other family member (10,000 yen)	20.66	27.85	1176	20.66
Total Monthly Household Living Expense (1,000 yen)	61.58	43.68	1176	73.90
Total Monthly Household Savings (1,000 yen)	19.83	23.32	1176	23.79
Total Monthly Payment for Loan (1,000 yen)	11.24	17.89	1176	13.49
Total				169.13

2000	Mean	SD	Observation	Average value per annum (10,000 yen)
Tax and Social Security - Husband (10,000 yen)	20.39	18.89	1176	20.39
Tax and Social Security - Wife (10,000 yen)	17.11	20.83	1176	17.11
Tax and Social Security - Other family member (10,000 yen)	21.97	35.83	1176	21.97
Total Monthly Household Living Expense (1,000 yen)	58.42	32.39	1176	70.10
Total Monthly Household Savings (1,000 yen)	18.70	21.42	1176	22.44
Total Monthly Payment for Loan (1,000 yen)	22.10	19.65	1176	26.52
Total				178.53

## B. Panel View of Separate Data

Panel view on frequencies of non-adopters (NN) and adopters (NY) among others are shown in Tables 6-8 and Figures 2-4. The data from 1997-1999 (Table 6) are from the Report of FY2003, and the rest from this year's study. Among the three examples, majority of the individuals is no-user of cloth dryer. The diffusion rate of cloth dryer according to JPSC data is some 20-23 percent among Japanese young households. As a consequence, the number of adopters is in a range of 29-48 per year, which may be too small for statistical analysis. Personal computer is increasing in its diffusion and the adopters are in the range of 130-160 per year. Mobile phone is popular among Japanese young households and over 75 percent of the sample is the continuous users. The non-adopters and adopters are in a range of 130-400 and 120-230, respectively, which make good balance in observations when compared.

Table 6. Observations of non-adopters (NN) and adopters (NY) of three technologies in 1997-1998 (from last year's results)

	NN	NY	YY	YN	Total
Cloth Dryer	1257	48	275	42	1622
Personal Computer	1101	131	348	42	1622
Mobile Phone	422	232	933	35	1622

Table 7. Observations of non-adopters (NN) and adopters (NY) of three technologies in 1998-1999.

	NN	NY	YY	YN	Total
Cloth Dryer	906	29	213	28	1176
Personal Computer	689	135	324	28	1176
Mobile Phone	215	124	804	33	1176

Table 8. Observations of non-adopters (NN) and adopters (NY) of three technologies in 1999-2000

	NN	NY	YY	YN	Total
Cloth Dryer	902	32	215	27	1176
Personal Computer	555	162	428	31	1176
Mobile Phone	129	119	911	17	1176

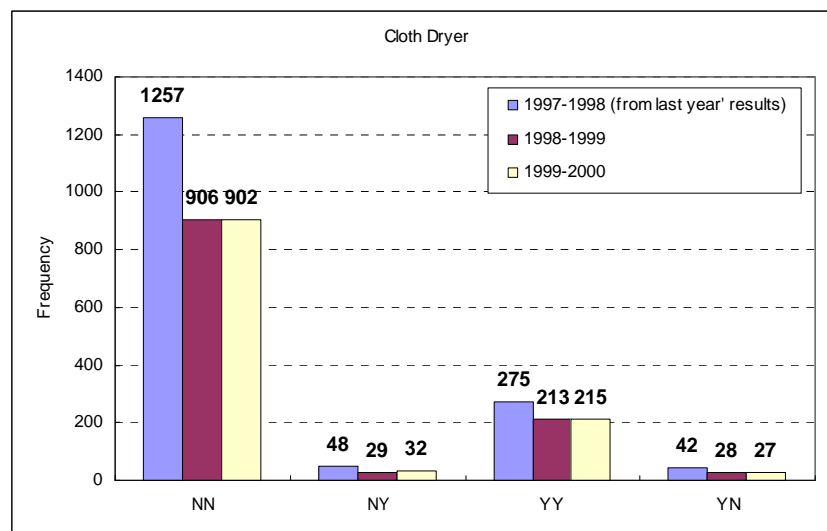
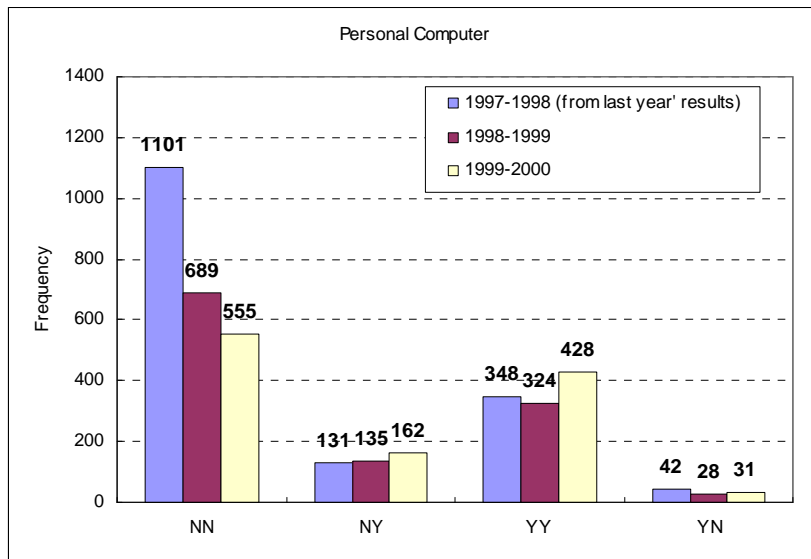
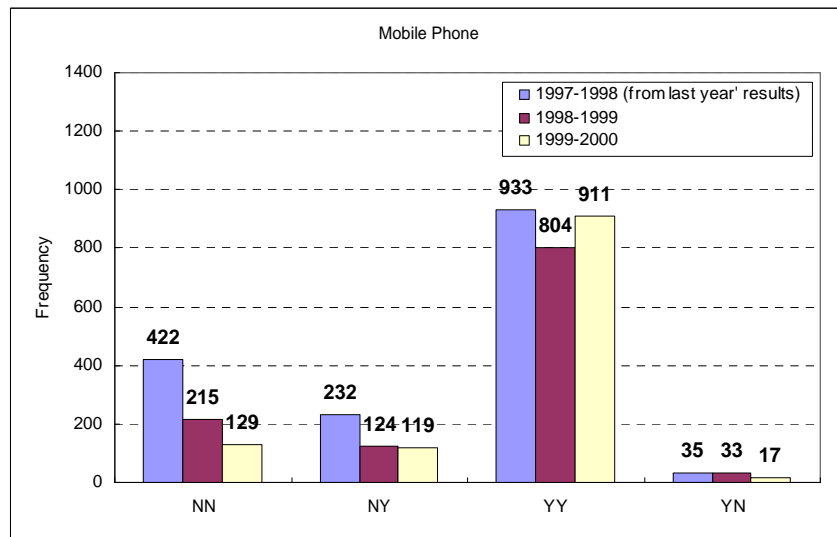


Figure 2. Observations of non-adopters (NN), adopters (NY), YY and YN of cloth dryer.



**Figure 3.** Observations of non-adopters (NN), adopters (NY), YY and YN of personal computer.



**Figure 4.** Observations of non-adopters (NN), adopters (NY), YY and YN of mobile phone.

C. Panel Analysis 1: Comparisons of mean values of the variables between non-adopters (NN) and adopters (NY) of the three technologies

Again, the results section contains only the results of the analysis in tables. The explanations and discussions on details are kept in the “4. Comprehensive Discussion” section.

Tables 9-14 show comparisons of mean values of ultimate utility and consumption between non-adopters (NN) and adopters (NY) of three technologies in 1998-1999 and 1999-2000.

Table 9. Comparisons of mean values of ultimate utility and consumption between NN and NY of cloth dryer (1998-1999)

Indicators for ultimate utility	NN (906)		NY (29)		S.D.
	Mean	SD	Mean	SD	
Happiness	0.012	0.679	-0.103	0.489	
Life Satisfaction	0.020	0.863	-0.034	0.981	
Living Standard	0.008	0.573	-0.034	0.680	

	NN (906)		NY (29)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	0.01	0.64	-0.24	0.83	**

Household spending allocation for the month of September (1,000 Yen)	NN (906)		NY (29)		S.D.
	Mean	SD	Mean	SD	
Food	4.91	28.21	15.17	25.27	*
Housing (Rent/Mortgage)	1.75	43.69	-0.45	32.66	
Water, Gas, Electricity	0.97	9.01	2.76	9.58	
Furniture and Household Appliances	-1.31	13.92	1.07	8.96	
Clothing and Shoes	0.26	17.85	0.69	16.38	
Medical and Insurance	-0.46	20.36	-1.48	14.29	
Transportation	9.98	59.66	11.86	24.73	
Communication	3.18	8.31	1.93	10.12	
Education	1.95	23.55	-1.93	11.61	
Hobby and Leisure	-0.41	25.75	-0.28	28.70	
Going out	-1.18	18.41	-1.76	19.81	
Allowances	-0.38	24.83	-2.38	24.30	

Household possession of durable consumer good	NN (906)		NY (29)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.04	0.40	0.17	0.47	*
Cupboard	0.00	0.48	0.14	0.64	
Microwave	0.02	0.31	0.10	0.41	
Refrigerator	0.02	0.38	0.03	0.33	
Automatic Dishwasher	0.00	0.19	0.07	0.26	*
Vacuum Cleaner	0.05	0.52	0.21	0.56	
Laundry Machine	0.02	0.33	0.07	0.46	
Cloths Dryer	0.00	0.00	1.00	0.00	
Sewing Machine	0.02	0.36	-0.03	0.19	
Electric Fan	0.04	0.68	0.28	0.70	*
Air Conditioner	0.07	0.74	0.41	1.02	**
Fan Heater	0.02	0.63	0.03	0.68	
“Kotatsu” Heater	-0.03	0.52	0.00	0.65	
TV Set	0.09	0.71	0.45	0.87	***
Stereo Sound System	0.01	0.49	-0.07	0.46	
CD Radio Cassette Recorder	0.01	0.51	0.24	0.58	**
VCR	-0.01	0.63	0.03	0.73	
Video Camera	0.04	0.29	-0.03	0.33	
Telephone	0.03	0.87	0.21	1.01	
Bicycle	0.06	0.83	0.45	1.06	**
Car	0.02	0.51	0.17	0.38	
TV Game	0.12	0.66	0.14	0.52	
Word Processor	-0.01	0.38	0.00	0.46	
Personal Computer	0.12	0.44	0.03	0.73	
FAX	0.06	0.36	0.21	0.56	**
Mobile Phone	0.18	0.60	0.31	0.54	

Time-use patterns (minutes)	NN (906)		NY (29)		S.D.
	Mean	SD	Mean	SD	
Weekdays-Commuting (work/school)	-1.53	31.45	-0.03	15.81	
Work	-6.59	165.12	2.03	158.76	

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	Study	-2.78	58.42	-12.10	103.13	
	House-Keeping and Taking Care of Children	4.81	186.72	35.24	148.41	
	Hobby, Leisure and Going out	4.98	137.66	14.48	145.88	
	Sleep, Eat, Personal Hygiene	0.33	172.17	-35.90	144.58	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.48	15.73	0.00	0.00	
	Work	0.14	71.31	24.72	99.55	*
	Study	-2.01	63.99	-2.17	65.30	
	House-Keeping and Taking Care of Children	14.08	189.20	50.03	139.11	
	Hobby, Leisure and Going out	-15.49	194.18	-18.93	177.54	
	Sleep, Eat, Personal Hygiene	1.41	196.57	-55.52	143.21	
Husband, Working Days	Weekdays-Commuting (work/school)	-2.01	48.59	-2.71	60.80	
	Work	0.44	121.52	11.29	55.33	
	Study	0.99	33.42	-14.05	61.76	*
	House-Keeping and Taking Care of Children	3.71	73.73	24.76	51.74	
	Hobby, Leisure and Going out	1.51	103.00	23.24	143.84	
	Sleep, Eat, Personal Hygiene	-3.83	124.44	-32.24	135.33	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.10	7.48	0.00	0.00	
	Work	-1.33	91.46	-8.57	43.62	
	Study	0.32	66.27	19.86	89.70	
	House-Keeping and Taking Care of Children	14.27	169.68	2.81	139.71	
	Hobby, Leisure and Going out	-12.41	237.45	42.48	272.35	
	Sleep, Eat, Personal Hygiene	0.18	225.42	-48.86	222.47	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 10. Comparisons of mean values of ultimate utility and consumption between NN and NY of personal computer (1998-1999)

Indicators for ultimate utility	NN (689)		NY (135)		S.D.
	Mean	SD	Mean	SD	
Happiness	0.057	0.712	-0.007	0.641	
Life Satisfaction	0.044	0.885	-0.089	0.851	
Living Standard	-0.004	0.572	0.030	0.646	

	NN (689)		NY (135)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	0.01	0.61	0.00	0.68	

Household spending allocation for the month of September (1,000 Yen)	NN (689)		NY (135)		S.D.
	Mean	SD	Mean	SD	
Food	3.87	26.80	8.26	25.61	*
Housing (Rent/Mortgage)	0.77	20.15	4.50	32.02	*
Water, Gas, Electricity	0.86	9.43	-0.56	22.89	
Furniture and Household Appliances	-1.62	38.76	-3.50	30.42	
Clothing and Shoes	-0.16	17.29	-1.21	19.55	
Medical and Insurance	-1.16	24.81	-1.17	13.75	
Transportation	9.61	51.23	12.59	62.64	
Communication	3.13	8.86	2.22	7.61	
Education	1.24	25.20	3.18	15.03	
Hobby and Leisure	0.03	24.97	-1.91	15.60	
Going out	-1.53	18.33	-1.56	18.93	
Allowances	-1.01	23.93	2.86	18.13	*

Household possession of durable consumer good	NN (689)		NY (135)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.04	0.38	0.10	0.45	*
Cupboard	0.01	0.47	0.08	0.49	
Microwave	0.00	0.29	0.09	0.36	***
Refrigerator	0.02	0.38	0.01	0.45	
Automatic Dishwasher	0.00	0.21	0.01	0.19	
Vacuum Cleaner	0.02	0.50	0.16	0.52	***
Laundry Machine	-0.01	0.31	0.08	0.30	***
Cloths Dryer	0.00	0.21	0.01	0.19	
Sewing Machine	0.01	0.36	0.07	0.36	*
Electric Fan	0.05	0.67	0.11	0.61	
Air Conditioner	0.07	0.68	0.17	0.92	
Fan Heater	0.04	0.60	0.09	0.75	
“Kotatsu” Heater	-0.04	0.45	0.07	0.59	***
TV Set	0.08	0.65	0.20	0.87	*
Stereo Sound System	0.00	0.48	0.12	0.57	***
CD Radio Cassette Recorder	0.03	0.50	0.00	0.55	
VCR	-0.02	0.59	0.14	0.76	***
Video Camera	0.03	0.30	0.07	0.28	

Telephone	0.03	0.86	0.07	0.87	
Bicycle	0.09	0.87	0.21	0.81	
Car	0.03	0.49	0.13	0.60	**
TV Game	0.13	0.68	0.20	0.68	
Word Processor	0.01	0.32	-0.07	0.48	**
Personal Computer	0.00	0.00	1.02	0.15	***
FAX	0.05	0.35	0.13	0.44	**
Mobile Phone	0.17	0.59	0.20	0.71	

	Time-use patterns (minutes)	NN (689)		NY (135)		S.D.
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-0.88	29.10	-1.39	37.82	
	Work	-4.72	159.35	-32.05	199.77	*
	Study	-4.99	50.66	11.53	60.66	***
	House-Keeping and Taking Care of Children	7.19	180.78	21.26	229.36	
	Hobby, Leisure and Going out	7.69	137.93	-5.59	146.59	
	Sleep, Eat, Personal Hygiene	-5.48	170.81	9.44	186.92	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	1.17	15.80	0.02	7.40	
	Work	1.08	73.19	3.15	59.69	
	Study	-2.56	58.95	3.20	62.46	
	House-Keeping and Taking Care of Children	8.07	185.34	28.60	204.53	
	Hobby, Leisure and Going out	-7.32	194.87	-53.61	209.37	**
	Sleep, Eat, Personal Hygiene	-2.44	195.95	15.39	221.10	
Husband, Working Days	Weekdays-Commuting (work/school)	-1.45	46.90	6.98	70.88	
	Work	-0.19	116.16	-1.47	94.96	
	Study	-0.55	29.91	0.90	33.76	
	House-Keeping and Taking Care of Children	7.48	77.22	4.52	47.64	
	Hobby, Leisure and Going out	2.86	102.95	-8.20	96.12	
	Sleep, Eat, Personal Hygiene	-6.15	127.76	-7.13	125.27	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.14	6.39	2.94	26.51	**
	Work	-2.39	94.11	20.75	73.68	**
	Study	0.39	40.49	-4.93	81.85	
	House-Keeping and Taking Care of Children	15.95	169.12	8.83	184.92	
	Hobby, Leisure and Going out	-10.47	242.41	-75.52	240.31	**
	Sleep, Eat, Personal Hygiene	-2.06	232.52	40.86	236.20	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 11. Comparisons of mean values of ultimate utility and consumption between NN and NY of mobile phone (1998-1999)

Indicators for ultimate utility	NN (215)		NY (124)		S.D.
	Mean	SD	Mean	SD	
Happiness	0.023	0.659	0.016	0.624	
Life Satisfaction	-0.060	0.815	0.032	0.874	
Living Standard	0.014	0.568	0.016	0.510	

	NN (215)		NY (124)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	0.04	0.43	-0.02	0.86	

Household spending allocation for the month of September (1,000 Yen)	NN (215)		NY (124)		S.D.
	Mean	SD	Mean	SD	
Food	7.49	28.87	7.76	27.46	
Housing (Rent/Mortgage)	4.64	70.10	-2.07	58.63	
Water, Gas, Electricity	-0.03	8.06	1.60	9.65	*
Furniture and Household Appliances	-0.04	12.91	0.68	16.28	
Clothing and Shoes	-1.52	17.11	1.85	17.45	*
Medical and Insurance	-1.44	12.49	2.94	28.42	*
Transportation	10.43	69.64	6.98	19.96	
Communication	1.62	4.88	4.45	9.41	***
Education	2.90	26.76	2.88	16.92	
Hobby and Leisure	-1.67	19.90	-1.00	22.48	
Going out	0.08	19.13	-2.39	16.33	
Allowances	-2.71	26.09	0.80	20.76	

Household possession of durable consumer good	NN (215)		NY (124)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.07	0.34	0.06	0.50	
Cupboard	0.04	0.49	0.09	0.48	
Microwave	0.03	0.28	0.01	0.33	
Refrigerator	0.01	0.35	0.02	0.41	
Automatic Dishwasher	0.00	0.15	-0.04	0.24	**

Vacuum Cleaner	0.09	0.43	0.01	0.50	
Laundry Machine	0.03	0.30	0.02	0.34	
Cloths Dryer	0.03	0.22	-0.02	0.25	
Sewing Machine	0.05	0.29	-0.02	0.30	**
Electric Fan	0.09	0.56	0.08	0.63	
Air Conditioner	0.05	0.81	0.06	0.71	
Fan Heater	0.09	0.56	0.04	0.52	
“Kotatsu” Heater	0.02	0.54	-0.05	0.44	
TV Set	0.11	0.59	0.10	0.61	
Stereo Sound System	-0.02	0.40	0.02	0.40	
CD Radio Cassette Recorder	0.11	0.45	0.03	0.48	
VCR	0.00	0.47	0.10	0.59	*
Video Camera	0.04	0.25	0.03	0.25	
Telephone	0.15	0.79	0.06	0.93	
Bicycle	0.01	0.73	0.18	1.02	*
Car	0.03	0.27	0.06	0.48	
TV Game	0.06	0.68	0.09	0.61	
Word Processor	-0.02	0.35	0.03	0.34	
Personal Computer	0.08	0.44	0.11	0.43	
FAX	0.02	0.26	0.02	0.32	
Mobile Phone	0.00	0.00	1.16	0.45	***

	Time-use patterns (minutes)	NN (215)		NY (124)		S.D.
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-0.50	23.45	-3.43	29.45	
	Work	6.52	118.19	-18.09	168.72	
	Study	-1.42	56.78	-6.33	59.32	
	House-Keeping and Taking Care of Children	-3.12	166.63	15.67	181.69	
	Hobby, Leisure and Going out	24.68	114.08	7.39	135.81	
	Sleep, Eat, Personal Hygiene	-25.92	148.75	5.67	162.40	*
Wife Weekends/Holidays	Weekdays-Commuting (work/school)	1.67	19.26	-0.52	5.47	
	Work	0.29	40.98	-1.98	66.30	
	Study	8.21	56.45	-4.87	71.45	*
	House-Keeping and Taking Care of Children	12.16	172.15	5.43	181.20	
	Hobby, Leisure and Going out	-12.91	171.81	-18.84	191.54	
	Sleep, Eat, Personal Hygiene	-12.20	190.03	22.55	203.41	
Husband, Working Days	Weekdays-Commuting (work/school)	4.77	47.91	-3.96	55.61	
	Work	-7.39	102.89	16.75	119.87	
	Study	-0.44	30.11	-0.10	25.43	
	House-Keeping and Taking Care of Children	-0.13	61.96	-11.92	74.91	
	Hobby, Leisure and Going out	23.14	102.91	-4.70	126.83	*
	Sleep, Eat, Personal Hygiene	-10.82	103.41	9.41	136.17	
Husband, Weekends/Holidays	Weekdays-Commuting (work/school)	-0.02	0.24	-0.69	11.85	
	Work	-12.69	76.18	8.57	62.07	**
	Study	1.14	55.41	-12.61	74.98	
	House-Keeping and Taking Care of Children	18.05	156.56	-17.71	206.18	
	Hobby, Leisure and Going out	-11.23	222.47	20.22	259.57	
	Sleep, Eat, Personal Hygiene	9.01	227.43	2.92	243.47	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 12. Comparisons of mean values of ultimate utility and consumption between NN and NY of cloth dryer (1999-2000)

Indicators for ultimate utility	NN (902)		NY (32)		S.D.
	Mean	SD	Mean	SD	
Happiness	-0.08	0.67	-0.06	0.72	
Life Satisfaction	-0.11	0.83	-0.03	1.09	
Living Standard	-0.04	0.55	0.00	0.67	

	NN (902)		NY (32)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	0.02	0.60	0.16	0.45	

Household spending allocation for the month of September (1,000 Yen)	NN (902)		NY (32)		S.D.
	Mean	SD	Mean	SD	
Food	0.84	29.70	1.56	39.53	
Housing (Rent/Mortgage)	0.97	56.07	-4.47	23.35	
Water, Gas, Electricity	1.28	9.90	3.06	17.22	
Furniture and Household Appliances	0.69	12.69	3.06	25.48	
Clothing and Shoes	0.88	16.57	7.03	20.02	**
Medical and Insurance	0.80	29.21	-7.19	24.64	
Transportation	0.09	67.34	-34.47	132.10	***

Communication	1.66	10.00	1.81	7.35	
Education	0.71	21.35	-3.28	42.06	
Hobby and Leisure	-0.34	27.59	1.91	19.54	
Going out	-0.24	18.78	9.72	25.92	***
Allowances	0.42	21.77	4.81	29.85	

Household possession of durable consumer good	NN (902)		NY (32)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.03	0.40	0.19	0.47	**
Cupboard	0.02	0.50	0.28	0.52	***
Microwave	0.03	0.31	0.13	0.42	*
Refrigerator	0.01	0.39	0.19	0.47	**
Automatic Dishwasher	0.01	0.18	0.19	0.40	***
Vacuum Cleaner	0.01	0.46	0.28	0.68	***
Laundry Machine	0.02	0.32	0.19	0.47	***
Cloths Dryer	0.00	0.00	1.00	0.00	
Sewing Machine	0.01	0.33	0.13	0.49	*
Electric Fan	0.06	0.68	0.19	0.64	
Air Conditioner	0.07	0.70	0.88	1.76	***
Fan Heater	0.01	0.63	0.28	0.89	**
“Kotatsu” Heater	-0.02	0.52	0.06	0.44	
TV Set	0.03	0.68	0.28	0.68	**
Stereo Sound System	0.00	0.53	0.13	0.42	
CD Radio Cassette Recorder	0.04	0.54	0.06	0.50	
VCR	0.04	0.63	0.28	0.89	**
Video Camera	0.02	0.33	0.03	0.47	
Telephone	0.05	0.81	0.34	0.83	**
Bicycle	0.11	0.86	0.09	1.03	
Car	0.05	0.51	0.13	0.75	
TV Game	0.08	0.67	0.03	1.00	
Word Processor	-0.02	0.40	0.06	0.56	
Personal Computer	0.13	0.48	0.25	0.51	
FAX	0.06	0.34	0.13	0.42	
Mobile Phone	0.25	0.66	0.38	0.94	

	Time-use patterns (minutes)	NN (902)		NY (32)		S.D.
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.74	29.52	-7.69	39.14	
	Work	7.71	163.19	-9.50	239.97	
	Study	-1.33	46.17	5.56	41.36	
	House-Keeping and Taking Care of Children	-1.36	177.85	39.09	256.78	
	Hobby, Leisure and Going out	-5.88	140.31	44.81	170.54	**
	Sleep, Eat, Personal Hygiene	0.91	169.32	-68.91	173.16	**
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.10	17.42	0.00	0.00	
	Work	-5.06	74.92	1.88	10.61	
	Study	-1.79	48.63	-5.88	59.51	
	House-Keeping and Taking Care of Children	6.07	189.68	28.28	264.70	
	Hobby, Leisure and Going out	2.07	200.99	-3.75	182.97	
	Sleep, Eat, Personal Hygiene	-0.91	202.27	-17.16	220.48	
Husband, Working Days	Weekdays-Commuting (work/school)	-0.98	44.41	-6.54	44.67	
	Work	-1.77	124.03	16.31	189.70	
	Study	1.20	36.71	2.27	72.87	
	House-Keeping and Taking Care of Children	0.10	66.78	-38.85	158.05	***
	Hobby, Leisure and Going out	2.84	113.01	26.92	109.39	
	Sleep, Eat, Personal Hygiene	0.49	126.37	-6.35	133.04	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.20	11.63	0.00	0.00	
	Work	-0.80	87.31	-4.80	48.74	
	Study	2.01	66.76	6.96	49.85	
	House-Keeping and Taking Care of Children	-4.55	159.35	-14.16	198.47	
	Hobby, Leisure and Going out	6.10	244.83	-9.60	283.62	
	Sleep, Eat, Personal Hygiene	-2.32	242.98	19.44	202.28	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 13. Comparisons of mean values of ultimate utility and consumption between NN and NY of personal computer (1999-2000)

Indicators for ultimate utility	NN (555)		NY (162)		S.D.
	Mean	SD	Mean	SD	
Happiness	-0.150	0.690	-0.050	0.630	*
Life Satisfaction	-0.140	0.840	-0.050	0.770	
Living Standard	-0.060	0.580	0.040	0.560	**

	NN (555)		NY (162)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	0.00	0.51	0.01	0.67	

Household spending allocation for the month of September (1,000 Yen)	NN (555)		NY (162)		S.D.
	Mean	SD	Mean	SD	
Food	1.32	30.38	2.99	32.49	
Housing (Rent/Mortgage)	3.57	53.56	1.20	26.13	
Water, Gas, Electricity	0.95	10.00	1.29	9.61	
Furniture and Household Appliances	-0.60	17.72	0.95	11.09	
Clothing and Shoes	0.92	13.98	0.46	18.94	
Medical and Insurance	-0.36	19.09	0.31	24.00	
Transportation	0.31	69.23	-4.19	80.43	
Communication	1.47	10.27	3.78	9.20	**
Education	0.66	15.03	-0.06	38.96	
Hobby and Leisure	-0.54	26.00	-0.18	32.07	
Going out	0.10	19.84	-2.65	18.81	
Allowances	0.12	19.09	1.12	25.34	

Household possession of durable consumer good	NN (555)		NY (162)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.03	0.37	0.08	0.37	
Cupboard	0.03	0.50	0.04	0.49	
Microwave	0.03	0.31	0.06	0.29	
Refrigerator	0.01	0.44	0.04	0.42	
Automatic Dishwasher	0.01	0.19	0.04	0.22	*
Vacuum Cleaner	0.02	0.45	0.04	0.51	
Laundry Machine	0.03	0.32	0.05	0.29	
Cloths Dryer	0.00	0.20	0.00	0.25	
Sewing Machine	0.04	0.36	0.02	0.29	
Electric Fan	0.07	0.68	0.06	0.76	
Air Conditioner	0.06	0.65	0.18	0.90	*
Fan Heater	0.06	0.62	-0.03	0.68	
“Kotatsu” Heater	0.01	0.46	0.04	0.53	
TV Set	0.02	0.65	0.09	0.74	
Stereo Sound System	0.01	0.55	0.05	0.51	
CD Radio Cassette Recorder	0.02	0.51	0.01	0.50	
VCR	0.06	0.58	0.12	0.73	
Video Camera	0.04	0.32	-0.01	0.37	*
Telephone	0.06	0.79	0.10	0.73	
Bicycle	0.10	0.84	0.06	0.87	
Car	0.03	0.49	0.06	0.66	
TV Game	0.12	0.72	0.06	0.73	
Word Processor	0.01	0.34	-0.09	0.45	***
Personal Computer	0.00	0.00	1.01	0.11	***
FAX	0.05	0.33	0.10	0.36	*
Mobile Phone	0.19	0.61	0.39	0.75	***

	Time-use patterns (minutes)	NN (555)		NY (162)		S.D.
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	2.81	31.08	-0.77	29.97	
	Work	6.52	168.23	-23.22	156.30	**
	Study	0.61	43.50	4.17	49.33	
	House-Keeping and Taking Care of Children	-9.04	185.91	-15.33	183.67	
	Hobby, Leisure and Going out	-1.00	144.01	0.29	133.82	
	Sleep, Eat, Personal Hygiene	2.25	166.39	38.19	148.52	**
Wife, Weekends/Holidays	Weekends-Commuting (work/school)	0.70	13.69	-1.83	27.92	
	Work	-3.26	80.84	-3.67	61.87	
	Study	-2.19	40.55	2.59	53.71	
	House-Keeping and Taking Care of Children	0.03	198.78	-10.57	196.70	
	Hobby, Leisure and Going out	3.90	205.70	1.14	191.52	
	Sleep, Eat, Personal Hygiene	1.60	206.91	14.33	184.64	
Husband, Working Days	Weekdays-Commuting (work/school)	0.31	45.40	4.21	43.80	
	Work	-10.41	141.06	-2.75	103.34	
	Study	1.64	36.30	0.51	16.84	
	House-Keeping and Taking Care of Children	-8.91	85.30	-0.79	48.91	
	Hobby, Leisure and Going out	14.86	122.57	-4.49	110.19	
	Sleep, Eat, Personal Hygiene	2.07	133.15	9.47	108.23	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.49	14.57	-0.56	5.70	
	Work	-5.60	77.22	3.81	71.56	
	Study	2.13	40.40	2.22	41.16	
	House-Keeping and Taking Care of Children	-16.69	161.91	-19.99	194.57	

	Hobby, Leisure and Going out	-3.61	238.93	14.14	257.26	
	Sleep, Eat, Personal Hygiene	23.72	237.05	0.86	259.16	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 14. Comparisons of mean values of ultimate utility and consumption between NN and NY of mobile phone (1999-2000)

Indicators for ultimate utility	NN (129)		NY (119)		S.D.
	Mean	SD	Mean	SD	
Happiness	-0.100	0.620	-0.150	0.710	
Life Satisfaction	-0.060	0.680	0.000	0.820	
Living Standard	-0.090	0.550	-0.020	0.580	

	NN (129)		NY (119)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	0.05	0.29	0.02	0.50	

Household spending allocation for the month of September (1,000 Yen)	NN (129)		NY (119)		S.D.
	Mean	SD	Mean	SD	
Food	-2.33	28.80	1.32	24.25	
Housing (Rent/Mortgage)	-2.94	25.10	-10.46	91.22	
Water, Gas, Electricity	0.74	9.11	0.87	8.17	
Furniture and Household Appliances	0.18	12.02	1.78	17.82	
Clothing and Shoes	1.16	14.20	1.09	14.10	
Medical and Insurance	1.44	18.82	0.18	10.42	
Transportation	-2.57	29.20	-0.50	128.61	
Communication	0.43	4.50	3.54	9.96	***
Education	-0.99	22.77	1.30	12.21	
Hobby and Leisure	2.99	19.17	-4.08	21.90	***
Going out	-2.88	17.55	3.73	24.93	**
Allowances	0.97	14.18	5.92	14.89	***

Household possession of durable consumer good	NN (129)		NY (119)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.02	0.35	-0.01	0.42	
Cupboard	-0.02	0.39	-0.01	0.48	
Microwave	0.05	0.25	0.03	0.32	
Refrigerator	0.02	0.31	0.02	0.34	
Automatic Dishwasher	0.01	0.15	0.03	0.18	
Vacuum Cleaner	-0.02	0.40	0.01	0.48	
Laundry Machine	0.03	0.21	0.03	0.29	
Cloths Dryer	-0.02	0.22	0.01	0.24	
Sewing Machine	0.03	0.30	0.05	0.36	
Electric Fan	0.19	0.67	0.13	0.67	
Air Conditioner	0.09	0.54	0.15	0.73	
Fan Heater	0.01	0.62	0.01	0.46	
"Kotatsu" Heater	0.05	0.56	-0.07	0.76	
TV Set	-0.02	0.40	0.03	0.60	
Stereo Sound System	-0.02	0.45	0.01	0.48	
CD Radio Cassette Recorder	0.05	0.53	0.02	0.55	
VCR	0.05	0.48	0.07	0.55	
Video Camera	-0.02	0.34	0.05	0.34	*
Telephone	0.07	0.71	0.17	0.68	
Bicycle	0.09	0.94	0.22	0.84	
Car	0.01	0.36	0.10	0.40	*
TV Game	0.03	0.64	0.13	0.62	
Word Processor	-0.05	0.39	-0.03	0.40	
Personal Computer	0.10	0.50	0.23	0.63	*
FAX	0.03	0.30	0.13	0.40	**
Mobile Phone	0.00	0.00	1.23	0.48	***

Time-use patterns (minutes)	NN (129)		NY (119)		S.D.
	Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	1.71	17.84	0.00	25.29
	Work	-8.03	109.97	-10.59	165.09
	Study	0.05	33.25	-2.08	43.92
	House-Keeping and Taking Care of Children	-7.09	179.10	6.56	187.84
	Hobby, Leisure and Going out	2.02	134.99	-9.98	162.81
	Sleep, Eat, Personal Hygiene	14.28	151.90	16.54	174.07
Wife Weekends/Holidays	Weekends-Commuting (work/school)	-2.31	21.75	1.06	17.50
	Work	0.44	49.46	7.10	76.20
	Study	-4.74	51.69	-0.91	42.85

	House-Keeping and Taking Care of Children	-3.05	171.48	18.13	197.48	
	Hobby, Leisure and Going out	17.19	196.72	-14.13	197.60	
	Sleep, Eat, Personal Hygiene	-7.11	185.61	-12.61	188.79	
Husband, Working Days	Weekdays-Commuting (work/school)	-0.45	43.40	-2.35	41.63	
	Work	9.62	92.80	-7.60	160.36	
	Study	2.49	17.57	-1.45	35.04	
	House-Keeping and Taking Care of Children	-1.67	61.78	5.00	65.47	
	Hobby, Leisure and Going out	-6.65	102.53	-7.55	111.08	
	Sleep, Eat, Personal Hygiene	-7.42	109.03	10.70	133.15	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.00	0.00	-2.92	26.67	
	Work	1.95	49.36	-6.54	55.44	
	Study	7.25	49.63	-8.69	55.50	**
	House-Keeping and Taking Care of Children	12.60	162.63	1.43	169.00	
	Hobby, Leisure and Going out	-2.48	222.95	13.90	248.04	
	Sleep, Eat, Personal Hygiene	-25.25	252.97	2.16	228.51	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

In addition to Panel Analysis 1, the mean values of ultimate utility and consumption between NN and NY of three technologies were stratified into two subgroups: married and un-married (single) groups, to check the effect of stratification on significant distinctions in ultimate utility and consumption patterns. Table 15 shows hypothetical differences between married and un-married women that may possibly cause of significant distinctions in consumption patterns. The differences are discussed by authors between married persons' household and single persons' household living with their family in various aspects, such as residence type, role in the family, responsibilities on house-keeping, financial resource, life stage of household or family, possession of durable goods, contribution to the decision-making of family-related matters.

Table 15. Hypothetical differences between married and un-married women that may possibly cause to significant distinctions in consumption patters.

	Married	Unmarried
Residence	Own house, apartment (private, company-owned), with her family.	Parents' house or private apartment for herself.
Role in the family	Wife, mother, part-time worker	Daughter, full-time worker, student (and part-time worker if a student)
Responsibilities on house-keeping	High (cleaning, cooking, laundry, grocery shopping, taking care of children, etc.)	Low if living with her parents (no laundry, no cooking, no grocery shopping, no taking care of children). If living by herself, some of the house-keeping chores will increase accordingly.
Financial resource	Mostly husband. Wife's own salary, if working, but limited.	Mostly father for house-related expendables. Own salary or allowance for leisure and personal expenditure.
Life stage of household or family	Early stage (growing)	Mature (no growth in terms of activities and possession of material)
Possession of durable goods	Increasing in number and items	Mostly saturated
Contribution to the decision-making of family-related matters	High	Low

Tables 16-19 show the results of the comparisons of mean values and SD of ultimate utility and consumption variables between NN and NY of three technologies stratified by marital status. The results show that significant differences in mean values were observed in consumption variables, such as possession of durable consumer good and expenditure, between married and un-married individuals' households. However, results suggest that marrying and leaving family does neither significantly nor largely affect happiness.

Table 16. The mean values and SD of ultimate utility and consumption variables between NN and NY stratified by marital status – Cloth dryer 1998-1999

Indicators for ultimate utility	MD					UnMD				
	NN (623)		NY (23)		Significant	NN (283)		NY (6)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.016	0.656	-0.087	0.417		0.074	0.723	-0.167	0.753	
Life Satisfaction	0.010	0.841	0.000	0.953		0.042	0.910	-0.167	1.169	
Living Standard	0.016	0.572	-0.087	0.668		-0.011	0.574	0.167	0.753	

	MD					UnMD				
	NN (623)		NY (23)		Significant	NN (283)		NY (6)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.08	0.61	-0.09	0.60		-0.13	0.67	-0.83	1.33	**

	MD					UnMD				
	NN (623)		NY (23)		Significant	NN (283)		NY (6)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Total household income from last year (10,000 yen)										
Husband	9.09	251.79	13.62	130.18						
Wife	0.55	70.44	1.71	102.91		12.96	87.28	79.40	140.48	*
Common business	-0.29	8.61	-0.32	13.40		N/A	N/A	N/A	N/A	
Other household member(s)	-11.09	136.52	37.79	100.92		-40.53	375.55	-470.00	485.08	*

	MD					UnMD				
	NN (623)		NY (23)		Significant	NN (283)		NY (6)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household Savings and Stocks Possession (10,000 Yen)										
Household Savings Possession	37.82	370.99	-46.11	217.85						
Household Stocks Possession	0.43	498.19	10.00							

	MD					UnMD				
	NN (623)		NY (23)		Significant	NN (283)		NY (6)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household spending allocation for the month of September (1,000 Yen)										
Food	5.08	31.34	16.13	27.96	*	4.53	19.68	11.50	10.77	
Housing (Rent/Mortgage)	1.81	52.00	-2.30	35.77		1.61	12.69	6.67	16.33	
Water, Gas, Electricity	1.31	10.33	2.39	10.53		0.21	4.95	4.17	4.75	*
Furniture and Household Appliances	-1.53	15.78	0.17	7.84		-0.84	8.47	4.50	12.71	
Clothing and Shoes	0.23	15.60	1.39	15.84		0.33	22.04	-2.00	19.68	
Medical and Insurance	-0.38	23.10	-1.17	15.68		-0.63	12.39	-2.67	7.71	
Transportation	13.47	71.27	14.70	27.06		2.32	11.54	1.00	4.86	
Communication	3.27	8.85	3.83	6.74		2.99	7.00	-5.33	17.14	***
Education	3.04	26.76	-2.43	13.05		-0.45	13.86	0.00	0.00	
Hobby and Leisure	-0.12	23.09	-0.48	30.99		-1.05	30.85	0.50	19.64	
Going out	-0.59	18.64	-2.61	21.50		-2.49	17.84	1.50	12.14	
Allowances	-0.66	29.63	-3.17	27.34		0.24	6.47	0.67	1.63	

	MD					UnMD				
	NN (623)		NY (23)		Significant	NN (283)		NY (6)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household possession of durable consumer good										
Dining Set	0.05	0.39	0.13	0.46		0.02	0.41	0.33	0.52	*
Cupboard	0.01	0.45	0.04	0.47		0.00	0.55	0.50	1.05	**
Microwave	0.01	0.23	0.09	0.29		0.04	0.44	0.17	0.75	
Refrigerator	0.00	0.29	0.04	0.21		0.05	0.51	0.00	0.63	
Automatic Dishwasher	0.00	0.20	0.09	0.29	**	0.00	0.18	0.00	0.00	
Vacuum Cleaner	0.04	0.47	0.13	0.55		0.08	0.63	0.50	0.55	
Laundry Machine	0.02	0.27	0.00	0.43		0.03	0.43	0.33	0.52	*
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.02	0.33	0.00	0.00		0.01	0.43	-0.17	0.41	
Electric Fan	0.05	0.61	0.30	0.76	*	0.01	0.81	0.17	0.41	
Air Conditioner	0.08	0.67	0.26	0.92		0.05	0.88	1.00	1.26	***
Fan Heater	0.04	0.63	-0.09	0.60		-0.01	0.62	0.50	0.84	**
"Kotatsu" Heater	-0.02	0.48	0.09	0.60		-0.05	0.60	-0.33	0.82	
TV Set	0.11	0.65	0.43	0.73	**	0.04	0.82	0.50	1.38	
Stereo Sound System	0.01	0.49	-0.13	0.34		-0.01	0.49	0.17	0.75	
CD Radio Cassette Recorder	0.04	0.52	0.22	0.52		-0.05	0.50	0.33	0.82	*
VCR	-0.03	0.63	0.00	0.80		0.05	0.63	0.17	0.41	
Video Camera	0.05	0.31	-0.04	0.37		0.00	0.24	0.00	0.00	
Telephone	0.04	0.84	0.30	1.06		0.03	0.91	-0.17	0.75	
Bicycle	0.08	0.92	0.48	1.16	**	0.01	0.59	0.33	0.52	
Car	0.03	0.50	0.17	0.39		0.00	0.54	0.17	0.41	
TV Game	0.15	0.70	0.13	0.55		0.06	0.56	0.17	0.41	
Word Processor	0.00	0.39	0.04	0.37		-0.01	0.37	-0.17	0.75	
Personal Computer	0.14	0.45	0.00	0.80		0.08	0.42	0.17	0.41	
FAX	0.07	0.34	0.22	0.60	*	0.04	0.40	0.17	0.41	
Mobile Phone	0.22	0.60	0.43	0.51	*	0.09	0.60	-0.17	0.41	

		MD					UnMD				
		NN (623)		NY (23)		Significant	NN (283)		NY (6)		Significant
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
	Time-use patterns (minutes)										
Wife, Working Days	Weekdays-Commuting (work/school)	-1.86	27.02	-2.52	12.57		-0.81	39.52	9.50	23.82	
	Work	-7.91	166.05	-2.48	178.25		-3.68	163.30	19.33	29.98	
	Study	-1.95	50.31	-28.43	103.72	**	-4.59	73.20	50.50	79.38	*
	House-Keeping and Taking Care of Children	4.63	218.78	41.65	165.46		5.21	79.98	10.67	44.47	
	Hobby, Leisure and Going out	6.77	135.58	33.91	150.43		1.04	142.28	-60.00	105.90	
	Sleep, Eat, Personal Hygiene	0.93	174.98	-37.43	156.27		-0.99	166.14	-30.00	97.74	
Wife, Weekends/Holidays	Weekends-Commuting (work/school)	-0.31	8.75	0.00	0.00		2.22	24.94	0.00	0.00	
	Work	-0.11	65.47	0.00	18.09		0.68	82.88	119.50	201.16	***
	Study	-3.32	47.09	-5.22	43.99		0.86	90.85	9.50	123.12	
	House-Keeping and Taking Care of Children	15.75	217.12	55.26	151.45		10.38	103.91	30.00	82.70	
	Hobby, Leisure and Going out	-11.67	189.41	2.22	168.74		-23.94	204.42	-100.00	203.17	
	Sleep, Eat, Personal Hygiene	-1.50	197.48	-56.96	153.89		7.85	194.76	-50.00	103.01	
Husband, Working Days	Weekdays-Commuting (work/school)	-2.01	48.59	-2.71	60.80		N/A	N/A	N/A	N/A	
	Work	0.44	121.52	11.29	55.33		N/A	N/A	N/A	N/A	
	Study	0.99	33.42	-14.05	61.76	*	N/A	N/A	N/A	N/A	
	House-Keeping and Taking Care of Children	3.71	73.73	24.76	51.74		N/A	N/A	N/A	N/A	
	Hobby, Leisure and Going out	1.51	103.00	23.24	143.84		N/A	N/A	N/A	N/A	
	Sleep, Eat, Personal Hygiene	-3.83	124.44	-32.24	135.33		N/A	N/A	N/A	N/A	
Weekends/Holidays	Weekends-Commuting (work/school)	-0.10	7.48	0.00	0.00		N/A	N/A	N/A	N/A	
	Work	-1.33	91.46	-8.57	43.62		N/A	N/A	N/A	N/A	
	Study	0.32	66.27	19.86	89.70		N/A	N/A	N/A	N/A	

House-Keeping and Taking Care of Children	14.27	169.68	2.81	139.71		N/A	N/A	N/A	N/A
Hobby, Leisure and Going out	-12.41	237.45	42.48	272.35		N/A	N/A	N/A	N/A
Sleep, Eat, Personal Hygiene	0.18	225.42	-48.86	222.47		N/A	N/A	N/A	N/A

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 17. The mean values and SD of ultimate utility and consumption variables between NN and NY stratified by marital status – Cloth dryer 1999-2000

Indicators for ultimate utility	MD					UnMD				
	NN (637)		NY (38)		Significant	NN (265)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.104	0.653	-0.036	0.744		-0.023	0.712	-0.250	0.500	
Life Satisfaction	-0.110	0.803	-0.107	1.133		-0.098	0.878	0.500	0.577	
Living Standard	-0.039	0.544	0.036	0.693		-0.053	0.568	-0.250	0.500	

Number of Family Members	MD					UnMD				
	NN (637)		NY (38)		Significant	NN (265)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.06	0.54	0.18	0.48		-0.09	0.71	0.00	0.00	

Total household income from last year (10,000 yen)	MD					UnMD				
	NN (637)		NY (38)		Significant	NN (265)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Husband	2.33	193.13	4.16	129.32						
Wife	-8.72	77.58	13.83	69.63		7.69	82.23	0.33	10.50	
Common business	-0.08	7.82	0.48	2.62						
Other household member(s)	-9.80	167.59	-7.79	31.08		-26.74	558.26	-114.33	249.03	

Household Savings and Stocks Possession (10,000 Yen)	MD					UnMD				
	NN (637)		NY (38)		Significant	NN (265)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household Savings Possession	14.04	290.52	-102.92	643.77	*					
Household Stocks Possession	25.49	270.05	-100.00							

Household spending allocation for the month of September (1,000 Yen)	MD					UnMD				
	NN (637)		NY (38)		Significant	NN (265)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	0.95	33.29	1.25	42.14		0.57	18.45	3.75	12.50	
Housing (Rent/Mortgage)	1.05	66.04	-5.11	24.96		0.79	14.88	0.00	0.00	
Water, Gas, Electricity	1.77	11.37	3.61	18.38		0.10	4.59	-0.75	1.50	
Furniture and Household Appliances	0.42	12.99	2.79	27.08		1.34	11.94	5.00	10.00	
Clothing and Shoes	1.31	15.48	6.96	20.86	*	-0.17	18.93	7.50	15.00	
Medical and Insurance	0.62	32.76	-6.54	25.00		1.26	18.07	-11.75	24.85	
Transportation	-0.49	79.52	-39.14	140.90	**	1.49	15.47	-1.75	5.68	
Communication	1.88	10.35	2.43	7.50		1.11	9.11	-2.50	5.00	
Education	0.58	22.74	-4.11	44.97		1.04	17.60	2.50	5.00	
Hobby and Leisure	0.10	25.51	1.82	20.87		-1.40	32.06	2.50	5.00	
Going out	0.18	19.91	7.96	23.89	**	-1.26	15.71	22.00	39.74	***
Allowances	0.28	25.50	5.36	31.94		0.77	7.11	1.00	2.00	

Household possession of durable consumer good	MD					UnMD				
	NN (637)		NY (38)		Significant	NN (265)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.39	0.18	0.48	**	0.02	0.43	0.25	0.50	
Cupboard	0.02	0.47	0.29	0.53	***	0.02	0.58	0.25	0.50	
Microwave	0.03	0.26	0.11	0.42		0.03	0.42	0.25	0.50	
Refrigerator	0.01	0.37	0.18	0.48	**	0.02	0.44	0.25	0.50	
Automatic Dishwasher	0.02	0.19	0.18	0.39	***	0.00	0.14	0.25	0.50	***
Vacuum Cleaner	0.01	0.43	0.18	0.61	*	0.01	0.54	1.00	0.82	***
Laundry Machine	0.02	0.29	0.14	0.45	**	0.03	0.39	0.50	0.58	**
Cloths Dryer	0.00	0.00	1.00	0.00	**	0.00	0.00	1.00	0.00	
Sewing Machine	0.02	0.31	0.07	0.47		-0.01	0.37	0.50	0.58	**
Electric Fan	0.07	0.64	0.11	0.42		0.03	0.78	0.75	1.50	*
Air Conditioner	0.10	0.60	0.89	1.73	***	-0.02	0.90	0.75	2.22	
Fan Heater	0.03	0.61	0.18	0.67		-0.03	0.67	1.00	1.83	***
"Kotatsu" Heater	-0.03	0.52	0.04	0.43		0.02	0.52	0.25	0.50	
TV Set	0.04	0.66	0.32	0.48	**	-0.01	0.72	0.00	1.63	
Stereo Sound System	0.00	0.52	0.11	0.42		-0.02	0.54	0.25	0.50	
CD Radio Cassette Recorder	0.03	0.55	0.04	0.51		0.07	0.52	0.25	0.50	
VCR	0.06	0.61	0.14	0.52		0.01	0.67	1.25	2.06	***
Video Camera	0.02	0.35	0.00	0.47		0.02	0.26	0.25	0.50	*
Telephone	0.08	0.81	0.29	0.66		-0.01	0.80	0.75	1.71	*
Bicycle	0.15	0.94	0.07	0.86		0.02	0.62	0.25	2.06	
Car	0.06	0.52	0.18	0.67		0.02	0.48	-0.25	1.26	
TV Game	0.12	0.70	0.14	0.89		-0.01	0.57	-0.75	1.50	**
Word Processor	-0.01	0.40	0.04	0.58		-0.04	0.40	0.25	0.50	
Personal Computer	0.15	0.49	0.25	0.52		0.09	0.47	0.25	0.50	
FAX	0.08	0.33	0.11	0.42		0.02	0.36	0.25	0.50	
Mobile Phone	0.32	0.68	0.46	0.79		0.08	0.58	-0.25	1.71	

Time-use patterns (minutes)	MD					UnMD				
	NN (637)		NY (38)		Significant	NN (265)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Weekdays-Commuting (work/school)	0.83	24.79	-0.18	22.63		0.54	38.63	-60.25	83.72	***
Work	9.82	162.89	25.57	214.97		2.63	164.11	-255.00	295.47	***
Study	-0.63	39.60	2.07	38.24		-3.02	59.11	30.00	60.00	
House-Keeping and Taking Care of Children	-2.53	205.45	38.25	273.49		1.45	79.08	45.00	90.00	
Hobby, Leisure and Going out	-10.32	135.32	17.14	151.75		4.78	151.39	238.50	190.06	***
Sleep, Eat, Personal Hygiene	1.31	176.68	-79.00	176.66	**	-0.06	150.50	1.75	146.17	
Weekends-Commuting (work/school)	-0.38	6.72	0.00	0.00		1.26	30.41	0.00	0.00	

Husband, Working Days	Work	-4.99	54.49	0.00	0.00		-5.20	109.55	15.00	30.00	
	Study	-0.74	31.90	-8.86	62.39		-4.33	74.91	15.00	30.00	
	House-Keeping and Taking Care of Children	10.04	215.16	38.86	263.79		-3.49	105.52	-45.75	298.95	
	Hobby, Leisure and Going out	-8.35	191.74	4.29	174.46		27.11	220.03	-60.00	259.23	
	Sleep, Eat, Personal Hygiene	3.66	197.07	-32.36	226.12		-11.89	214.24	89.25	157.80	
	Weekdays-Commuting (work/school)	-0.98	44.41	-6.54	44.67		N/A	N/A	N/A	N/A	
	Work	-1.77	124.03	16.31	189.70		N/A	N/A	N/A	N/A	
	Study	1.20	36.71	2.27	72.87		N/A	N/A	N/A	N/A	
	House-Keeping and Taking Care of Children	0.10	66.78	-38.85	158.05	***	N/A	N/A	N/A	N/A	
	Hobby, Leisure and Going out	2.84	113.01	26.92	109.39		N/A	N/A	N/A	N/A	
	Sleep, Eat, Personal Hygiene	0.49	126.37	-6.35	133.04		N/A	N/A	N/A	N/A	
	Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.20	11.63	0.00	0.00		N/A	N/A	N/A	N/A
Work		-0.80	87.31	-4.80	48.74		N/A	N/A	N/A	N/A	
Study		2.01	66.76	6.96	49.85		N/A	N/A	N/A	N/A	
House-Keeping and Taking Care of Children		-4.55	159.35	-14.16	198.47		N/A	N/A	N/A	N/A	
Hobby, Leisure and Going out		6.10	244.83	-9.60	283.62		N/A	N/A	N/A	N/A	
Sleep, Eat, Personal Hygiene	-2.32	242.98	19.44	202.28		N/A	N/A	N/A	N/A		

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 18. The mean values and SD of ultimate utility and consumption variables between NN and NY stratified by marital status – Personal Computer 1998-1999

1998-1999	MD					UnMD				
	NN (473)		NY (99)		Significant	NN (216)		NY (36)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Indicators for ultimate utility										
Happiness	0.038	0.697	-0.020	0.589		0.097	0.744	0.028	0.774	
Life Satisfaction	0.053	0.883	-0.131	0.751	*	0.023	0.892	0.028	1.082	
Living Standard	-0.006	0.554	0.020	0.714		0.000	0.610	0.056	0.410	

	MD					UnMD				
	NN (473)		NY (99)		Significant	NN (216)		NY (36)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.08	0.58	0.04	0.70		-0.13	0.65	-0.11	0.62	

	MD					UnMD				
	NN (473)		NY (99)		Significant	NN (216)		NY (36)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Total household income from last year (10,000 yen)										
Husband	10.65	197.85	18.54	98.55						
Wife	0.58	68.68	-17.30	77.97	**	12.74	81.11	8.97	62.29	
Common business	-0.64	6.78	-4.33	37.78	*					
Other household member(s)	12.85	351.59	-8.89	76.23		-39.61	400.45	-93.52	310.94	

	MD					UnMD				
	NN (473)		NY (99)		Significant	NN (216)		NY (36)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household Savings and Stocks Possession (10,000 Yen)										
Household Savings Possession	-2.93	334.08	54.40	287.71						
Household Stocks Possession	-42.76	614.10	60.00	172.24						

	MD					UnMD				
	NN (473)		NY (99)		Significant	NN (216)		NY (36)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household spending allocation for the month of September (1,000 Yen)										
Food	3.90	29.06	8.82	28.28		3.81	21.09	6.72	16.39	
Housing (Rent/Mortgage)	0.41	22.72	6.59	36.08	**	1.56	12.87	-1.22	15.29	
Water, Gas, Electricity	1.13	10.85	-0.67	26.71		0.26	5.09	-0.28	2.85	
Furniture and Household Appliances	-1.85	46.38	-4.36	35.42		-1.12	9.16	-1.14	4.81	
Clothing and Shoes	-0.06	16.41	-1.16	15.78		-0.38	19.13	-1.36	27.68	
Medical and Insurance	-0.90	28.84	-1.65	15.03		-1.72	11.99	0.14	9.39	
Transportation	12.74	61.15	15.77	72.69		2.75	11.05	3.83	10.84	
Communication	3.42	9.16	1.84	8.24		2.49	8.15	3.28	5.47	
Education	2.64	28.10	3.80	17.24		-1.81	16.89	1.47	5.32	
Hobby and Leisure	-0.18	23.52	-1.33	11.88		0.48	27.94	-3.50	23.08	
Going out	-1.10	18.12	-1.16	20.63		-2.47	18.77	-2.64	13.35	
Allowances	-1.32	28.21	3.69	20.96	*	-0.33	9.25	0.58	4.53	

	MD					UnMD				
	NN (473)		NY (99)		Significant	NN (216)		NY (36)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household possession of durable consumer good										
Dining Set	0.05	0.38	0.06	0.45		0.00	0.39	0.22	0.42	**
Cupboard	0.02	0.45	0.05	0.41		0.00	0.51	0.17	0.65	*
Microwave	0.00	0.21	0.04	0.28		0.00	0.43	0.22	0.48	**
Refrigerator	0.01	0.29	-0.04	0.40		0.03	0.53	0.14	0.54	
Automatic Dishwasher	0.00	0.23	0.00	0.14		-0.01	0.15	0.03	0.29	
Vacuum Cleaner	0.01	0.44	0.12	0.50	**	0.04	0.62	0.25	0.55	*
Laundry Machine	-0.01	0.26	0.05	0.26	**	0.00	0.40	0.17	0.38	**
Cloths Dryer	0.00	0.22	0.00	0.20	*	-0.01	0.20	0.03	0.17	
Sewing Machine	0.00	0.35	0.07	0.36		0.02	0.40	0.08	0.37	
Electric Fan	0.09	0.65	0.08	0.62		-0.03	0.72	0.19	0.58	*
Air Conditioner	0.11	0.65	0.05	0.66		0.00	0.74	0.50	1.36	**
Fan Heater	0.05	0.62	0.11	0.82		0.01	0.57	0.03	0.51	
"Kotatsu" Heater	-0.02	0.40	0.02	0.55		-0.10	0.54	0.22	0.68	**
TV Set	0.11	0.62	0.15	0.81		0.00	0.72	0.33	1.01	**
Stereo Sound System	0.00	0.48	0.13	0.57	**	-0.01	0.48	0.08	0.60	
CD Radio Cassette Recorder	0.06	0.50	0.00	0.55		-0.03	0.51	0.00	0.53	
VCR	-0.03	0.61	0.08	0.74		-0.01	0.55	0.31	0.82	**
Video Camera	0.04	0.33	0.09	0.32		0.00	0.23	0.00	0.00	
Telephone	0.05	0.83	0.05	0.92		-0.03	0.92	0.14	0.72	
Bicycle	0.14	0.94	0.22	0.92		-0.02	0.68	0.17	0.38	
Car	0.04	0.52	0.09	0.41		0.00	0.40	0.25	0.94	**
TV Game	0.17	0.73	0.19	0.71		0.05	0.53	0.22	0.59	*

Word Processor	0.02	0.33	-0.06	0.45	**	-0.01	0.27	-0.11	0.57	*
Personal Computer	0.00	0.00	1.02	0.14	***	0.00	0.00	1.03	0.17	**
FAX	0.07	0.36	0.15	0.41	**	0.02	0.35	0.08	0.50	
Mobile Phone	0.22	0.59	0.16	0.63		0.06	0.56	0.31	0.89	**

		MD				Significant	UnMD				Significant
		NN (473)		NY (99)			NN (216)		NY (36)		
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Time-use patterns (minutes)										
	Weekdays-Commuting (work/school)	-1.43	22.41	-0.64	37.11		0.32	40.03	-3.47	40.19	
	Work	-7.47	150.50	-32.14	215.88		1.29	177.35	-31.81	149.35	
	Study	-4.22	39.51	8.45	56.91	***	-6.66	69.09	20.00	70.15	**
	House-Keeping and Taking Care of Children	9.41	209.49	33.35	259.10		2.33	91.07	-12.00	108.99	
	Hobby, Leisure and Going out	11.03	133.35	-9.26	156.57		0.42	147.48	4.53	116.14	
Wife, Weekends/Holidays	Sleep, Eat, Personal Hygiene	-6.97	169.31	1.32	202.28		-2.22	174.40	31.75	136.02	
	Weekends-Commuting (work/school)	-0.13	8.37	0.00	0.14		4.05	25.28	0.06	14.57	
	Work	1.82	61.11	-0.03	48.74		-0.57	94.82	12.06	83.33	
	Study	-2.54	40.35	1.29	47.96		-2.61	87.20	8.57	92.43	
	House-Keeping and Taking Care of Children	11.04	209.14	41.82	231.00		1.46	116.45	-8.40	90.89	
	Hobby, Leisure and Going out	-4.72	185.84	-50.79	210.89	**	-13.08	213.92	-61.51	207.89	
Husband, Working Days	Sleep, Eat, Personal Hygiene	-7.68	191.07	4.96	234.96		9.20	206.36	44.60	176.34	
	Weekdays-Commuting (work/school)	-1.45	46.90	6.98	70.88		N/A	N/A	N/A	N/A	
	Work	-0.19	116.16	-1.47	94.96		N/A	N/A	N/A	N/A	
	Study	-0.55	29.91	0.90	33.76		N/A	N/A	N/A	N/A	
	House-Keeping and Taking Care of Children	7.48	77.22	4.52	47.64		N/A	N/A	N/A	N/A	
	Hobby, Leisure and Going out	2.86	102.95	-8.20	96.12		N/A	N/A	N/A	N/A	
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	-6.15	127.76	-7.13	125.27		N/A	N/A	N/A	N/A	
	Weekends-Commuting (work/school)	0.14	6.39	2.94	26.51	**	N/A	N/A	N/A	N/A	
	Work	-2.39	94.11	20.75	73.68	**	N/A	N/A	N/A	N/A	
	Study	0.39	40.49	-4.93	81.85		N/A	N/A	N/A	N/A	
	House-Keeping and Taking Care of Children	15.95	169.12	8.83	184.92		N/A	N/A	N/A	N/A	
	Hobby, Leisure and Going out	-10.47	242.41	-75.52	240.31	**	N/A	N/A	N/A	N/A	
Sleep, Eat, Personal Hygiene	-2.06	232.52	40.86	236.20		N/A	N/A	N/A	N/A		

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 19. The mean values and SD of ultimate utility and consumption variables between NN and NY stratified by marital status – Personal Computer 1999-2000

Indicators for ultimate utility	MD				Significant	UnMD				Significant
	NN (384)		NY (129)			NN (171)		NY (33)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.159	0.680	-0.093	0.605		-0.135	0.727	0.121	0.696	*
Life Satisfaction	-0.154	0.827	-0.047	0.789		-0.099	0.879	-0.061	0.704	
Living Standard	-0.078	0.559	0.085	0.545	***	-0.018	0.618	-0.121	0.600	

Number of Family Members	MD				Significant	UnMD				Significant
	NN (384)		NY (129)			NN (171)		NY (33)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.04	0.48	0.04	0.65		-0.07	0.58	-0.09	0.72	

Total household income from last year (10,000 yen)	MD				Significant	UnMD				Significant
	NN (384)		NY (129)			NN (171)		NY (33)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Husband	14.00	145.71	28.37	412.07		.	.	.	.	
Wife	-5.16	64.29	-14.54	82.82		3.79	79.63	21.70	114.91	
Common business	0.37	4.97	-0.30	5.19		.	.	.	.	
Other household member(s)	-19.06	289.22	-0.57	126.33		-95.68	416.14	167.48	1176.19	*

Household Savings and Stocks Possession (10,000 Yen)	MD				Significant	UnMD				Significant
	NN (384)		NY (129)			NN (171)		NY (33)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household Savings Possession	13.10	252.04	71.01	387.85	*	.	.	.	.	
Household Stocks Possession	22.38	58.81	-23.00	53.34	**	.	.	.	.	

Household spending allocation for the month of September (1,000 Yen)	MD				Significant	UnMD				Significant
	NN (384)		NY (129)			NN (171)		NY (33)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	1.74	34.32	2.94	34.83		0.37	18.75	3.18	21.47	
Housing (Rent/Mortgage)	5.34	63.47	1.12	28.49		-0.40	15.80	1.52	13.69	
Water, Gas, Electricity	1.27	11.56	1.62	10.68		0.24	4.90	0.00	2.59	
Furniture and Household Appliances	-1.20	21.05	2.02	10.98	*	0.74	4.77	-3.24	10.65	***
Clothing and Shoes	0.80	13.63	1.62	16.86		1.16	14.77	-4.09	25.33	
Medical and Insurance	-1.07	22.28	-1.33	15.85		1.22	8.08	6.73	42.89	
Transportation	0.66	82.79	-6.70	88.84		-0.48	13.34	5.64	29.17	*
Communication	1.63	10.85	4.72	9.56	***	1.09	8.83	0.09	6.54	
Education	1.13	17.28	-2.36	37.13		-0.41	7.85	8.94	44.94	**
Hobby and Leisure	0.46	26.60	-0.33	27.84		-2.78	24.53	0.42	45.55	
Going out	0.78	21.41	-2.43	19.58		-1.42	15.70	-3.48	15.71	
Allowances	0.33	22.36	0.68	28.14		-0.36	7.77	2.82	7.68	**

Household possession of durable consumer good	MD				Significant	UnMD				Significant
	NN (384)		NY (129)			NN (171)		NY (33)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.36	0.09	0.35		0.02	0.41	0.06	0.43	
Cupboard	0.01	0.47	0.02	0.52		0.08	0.57	0.12	0.33	
Microwave	0.02	0.23	0.05	0.29		0.04	0.43	0.09	0.29	
Refrigerator	-0.01	0.45	0.03	0.41		0.04	0.43	0.09	0.46	
Automatic Dishwasher	0.01	0.22	0.04	0.23		0.01	0.13	0.03	0.17	
Vacuum Cleaner	0.02	0.40	0.03	0.50		0.02	0.54	0.06	0.56	

Laundry Machine	0.03	0.27	0.04	0.29		0.05	0.40	0.09	0.29	
Cloths Dryer	0.01	0.20	-0.01	0.27		-0.02	0.19	0.03	0.17	
Sewing Machine	0.05	0.35	0.02	0.26		0.02	0.38	0.03	0.39	
Electric Fan	0.07	0.62	0.05	0.77		0.07	0.79	0.09	0.72	
Air Conditioner	0.09	0.58	0.20	0.83	*	-0.01	0.77	0.09	1.16	
Fan Heater	0.08	0.65	0.00	0.63		0.01	0.53	-0.15	0.87	
“Kotatsu” Heater	0.01	0.45	0.02	0.53		0.03	0.48	0.12	0.55	
TV Set	0.04	0.63	0.09	0.68		-0.01	0.69	0.06	0.97	
Stereo Sound System	0.02	0.58	0.06	0.45		-0.02	0.50	0.00	0.71	
CD Radio Cassette Recorder	-0.01	0.52	-0.05	0.47		0.07	0.49	0.21	0.60	
VCR	0.08	0.58	0.07	0.60		0.02	0.58	0.30	1.10	**
Video Camera	0.05	0.36	0.00	0.35		0.04	0.21	-0.06	0.43	*
Telephone	0.09	0.79	0.06	0.68		0.01	0.79	0.24	0.90	
Bicycle	0.14	0.91	0.06	0.92		0.01	0.65	0.06	0.61	
Car	0.04	0.50	0.05	0.66		0.01	0.47	0.12	0.65	
TV Game	0.15	0.78	0.08	0.79		0.04	0.55	-0.03	0.47	
Word Processor	0.02	0.32	-0.12	0.46	**	0.01	0.38	0.03	0.39	
Personal Computer	0.00	0.00	1.01	0.09	***	0.00	0.00	1.03	0.17	***
FAX	0.06	0.33	0.12	0.37		0.02	0.35	0.03	0.30	
Mobile Phone	0.23	0.63	0.47	0.76	***	0.12	0.57	0.09	0.63	

		MD				Significant	UnMD				Significant
		NN (384)		NY (129)			NN (171)		NY (33)		
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Time-use patterns (minutes)										
	Weekdays-Commuting (work/school)	2.42	23.44	0.93	24.24		3.68	43.69	-7.39	45.94	
	Work	10.91	162.34	-19.94	162.25	*	-3.34	180.87	-36.06	131.91	
	Study	2.18	38.37	1.91	47.64		-2.92	53.23	13.03	55.34	
Wife, Weekends/Holidays	House-Keeping and Taking Care of Children	-12.70	215.28	-13.21	203.18		-0.82	90.11	-23.61	67.18	
	Hobby, Leisure and Going out	-7.51	135.12	-5.16	132.84		13.63	161.68	21.61	137.53	
	Sleep, Eat, Personal Hygiene	4.42	173.32	38.82	153.88	**	-2.65	150.03	35.70	127.51	
	Weekends-Commuting (work/school)	0.14	3.07	-1.83	14.89	**	1.96	24.23	-1.82	55.08	
Husband, Working Days	Work	-2.67	51.38	-5.12	67.51		-4.58	123.88	2.00	31.41	
	Study	-0.64	25.64	0.42	34.09		-5.67	62.12	11.09	98.86	
	House-Keeping and Taking Care of Children	2.83	227.77	-8.02	209.89		-6.27	108.75	-20.55	135.35	
	Hobby, Leisure and Going out	-7.34	193.23	-10.17	193.69		29.15	229.88	45.36	178.73	
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	8.10	198.68	25.98	193.68		-13.01	224.21	-31.18	137.11	
	Weekdays-Commuting (work/school)	0.31	45.40	4.21	43.80		N/A	N/A	N/A	N/A	
	Work	-10.41	141.06	-2.75	103.34		N/A	N/A	N/A	N/A	
	Study	1.64	36.30	0.51	16.84		N/A	N/A	N/A	N/A	
Husband, Weekends/Holidays	House-Keeping and Taking Care of Children	-8.91	85.30	-0.79	48.91		N/A	N/A	N/A	N/A	
	Hobby, Leisure and Going out	14.86	122.57	-4.49	110.19		N/A	N/A	N/A	N/A	
	Sleep, Eat, Personal Hygiene	2.07	133.15	9.47	108.23		N/A	N/A	N/A	N/A	
	Weekends-Commuting (work/school)	0.49	14.57	-0.56	5.70		N/A	N/A	N/A	N/A	
Husband, Weekends/Holidays	Work	-5.60	77.22	3.81	71.56		N/A	N/A	N/A	N/A	
	Study	2.13	40.40	2.22	41.16		N/A	N/A	N/A	N/A	
	House-Keeping and Taking Care of Children	-16.69	161.91	-19.99	194.57		N/A	N/A	N/A	N/A	
	Hobby, Leisure and Going out	-3.61	238.93	14.14	257.26		N/A	N/A	N/A	N/A	
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	23.72	237.05	0.86	259.16		N/A	N/A	N/A	N/A	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 20. The mean values and SD of ultimate utility and consumption variables between NN and NY stratified by marital status – Mobile Phone 1998-1999

Indicators for ultimate utility	MD				Significant	UnMD				Significant
	NN (158)		NY (87)			NN (57)		NY (37)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	0.006	0.633	0.057	0.653		0.070	0.728	-0.081	0.547	
Life Satisfaction	-0.070	0.799	0.011	0.934		-0.035	0.865	0.081	0.722	
Living Standard	0.013	0.597	0.000	0.550		0.018	0.481	0.054	0.405	

Number of Family Members	MD				Significant	UnMD				Significant
	NN (158)		NY (87)			NN (57)		NY (37)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.08	0.34	0.06	0.72		-0.09	0.61	-0.22	1.11	

Total household income from last year (10,000 yen)	MD				Significant	UnMD				Significant
	NN (158)		NY (87)			NN (57)		NY (37)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Husband	28.37	261.52	18.56	160.14		N/A	N/A	N/A	N/A	
Wife	2.78	45.22	3.97	72.63		21.07	82.53	2.83	88.78	
Common business	-0.48	12.47	-4.79	40.07		N/A	N/A	N/A	N/A	
Other household member(s)	-28.34	156.03	3.52	116.18		91.97	534.22	-9.57	391.77	

Household Savings and Stocks Possession (10,000 Yen)	MD				Significant	UnMD				Significant
	NN (158)		NY (87)			NN (57)		NY (37)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household Savings Possession	48.18	508.21	-35.61	464.62		.	.	.	.	
Household Stocks Possession	5.65	430.26	5.00	8.37		.	.	.	.	

Household spending allocation for the month of September (1,000 Yen)	MD				Significant	UnMD				Significant
	NN (158)		NY (87)			NN (57)		NY (37)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	8.70	32.80	9.99	31.46		4.14	12.40	2.51	13.07	
Housing (Rent/Mortgage)	5.35	81.21	-3.56	69.68		2.65	16.74	1.43	11.29	
Water, Gas, Electricity	-0.22	9.04	2.32	10.94	*	0.51	4.34	-0.11	5.26	
Furniture and Household Appliances	-0.01	14.46	0.94	19.14		-0.12	7.15	0.05	5.46	
Clothing and Shoes	-1.29	13.87	0.56	15.75		-2.14	24.06	4.86	20.83	
Medical and Insurance	-1.44	12.95	3.99	33.57	*	-1.44	11.23	0.46	7.57	

Transportation	13.17	80.89	9.17	22.90		2.84	10.59	1.81	8.39	
Communication	1.53	5.25	4.33	7.07	***	1.86	3.67	4.73	13.52	
Education	4.56	28.08	2.98	19.36		-1.70	22.27	2.65	9.04	
Hobby and Leisure	-0.92	21.46	0.46	25.84		-3.75	14.74	-4.43	10.70	
Going out	-0.11	20.23	-2.59	16.70		0.61	15.83	-1.92	15.64	
Allowances	-3.26	29.86	1.18	24.54		-1.18	9.89	-0.11	5.69	

Household possession of durable consumer good	MD					UnMD				
	NN (158)		NY (87)		Significant	NN (57)		NY (37)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.05	0.32	0.09	0.47		0.14	0.40	-0.03	0.55	*
Cupboard	0.02	0.47	0.13	0.43	*	0.11	0.52	0.00	0.58	
Microwave	0.00	0.20	0.03	0.18		0.12	0.43	-0.05	0.52	*
Refrigerator	-0.03	0.32	0.06	0.32	*	0.11	0.41	-0.05	0.57	
Automatic Dishwasher	0.00	0.16	-0.02	0.21		0.02	0.13	-0.08	0.28	**
Vacuum Cleaner	0.07	0.42	0.01	0.44		0.14	0.44	0.00	0.62	
Laundry Machine	-0.01	0.21	0.03	0.32		0.14	0.44	-0.03	0.37	*
Cloths Dryer	0.04	0.25	0.00	0.26		0.02	0.13	-0.05	0.23	*
Sewing Machine	0.03	0.29	-0.01	0.29		0.11	0.31	-0.05	0.33	**
Electric Fan	0.08	0.52	0.13	0.50		0.12	0.68	-0.03	0.87	
Air Conditioner	0.04	0.87	0.11	0.54		0.07	0.62	-0.08	1.01	
Fan Heater	0.08	0.61	0.05	0.55		0.14	0.40	0.03	0.44	
“Kotatsu” Heater	0.03	0.56	-0.03	0.42		-0.02	0.48	-0.08	0.49	
TV Set	0.11	0.54	0.15	0.47		0.12	0.73	0.00	0.85	
Stereo Sound System	-0.03	0.41	0.02	0.43		0.00	0.38	0.00	0.33	
CD Radio Cassette Recorder	0.15	0.50	0.05	0.46		0.02	0.23	0.00	0.53	
VCR	-0.03	0.50	0.07	0.62		0.07	0.37	0.16	0.50	
Video Camera	0.04	0.25	0.05	0.26		0.04	0.26	0.00	0.24	
Telephone	0.09	0.74	0.11	0.97		0.32	0.91	-0.05	0.85	*
Bicycle	-0.01	0.79	0.24	1.09	**	0.05	0.55	0.03	0.83	
Car	0.03	0.28	0.08	0.49		0.04	0.26	0.00	0.47	
TV Game	0.06	0.76	0.09	0.58		0.05	0.40	0.08	0.68	
Word Processor	-0.04	0.32	0.06	0.35	**	0.04	0.42	-0.03	0.29	
Personal Computer	0.08	0.46	0.11	0.47		0.07	0.37	0.11	0.31	
FAX	0.01	0.25	0.06	0.28		0.05	0.29	-0.05	0.40	
Mobile Phone	0.00	0.00	1.21	0.49	***	0.00	0.00	1.05	0.33	***

		MD					UnMD					
		NN (158)		NY (87)		Significant	NN (57)		NY (37)		Significant	
		Mean	SD	Mean	SD		Mean	SD	Mean	SD		
Time-use patterns (minutes)												
Wife, Working Days	Weekdays-Commuting (work/school)	1.22	19.27	-4.88	20.64	**	-5.21	32.02	-0.05	43.78		
	Work	3.94	120.46	-37.83	158.74	**	13.63	112.41	27.78	184.07		
	Study	-4.25	47.17	-5.59	65.39		6.39	77.34	-8.03	42.72		
	House-Keeping and Taking Care of Children	-5.75	181.98	24.35	201.04		4.11	115.25	-4.51	125.88		
	Hobby, Leisure and Going out	34.53	118.22	5.01	134.00	*	-2.44	97.68	12.92	141.66		
	Sleep, Eat, Personal Hygiene	-29.34	141.86	23.34	165.76	***	-16.47	167.25	-35.41	148.39		
	Wife, Weekends/Holidays	Weekends-Commuting (work/school)	-0.03	0.25	-0.71	6.50		6.41	37.39	-0.06	0.71	
		Work	3.46	39.13	-2.14	76.66		-8.63	44.93	-1.61	30.38	
		Study	1.18	44.41	-9.00	67.37		27.91	78.43	5.00	80.53	
		House-Keeping and Taking Care of Children	19.93	184.33	2.83	201.03		-9.63	131.15	11.67	123.74	
Hobby, Leisure and Going out		-9.16	164.85	-8.47	197.91		-23.43	191.17	-43.64	175.54		
Sleep, Eat, Personal Hygiene	-17.80	176.16	18.74	218.25		3.50	225.46	31.64	165.02			
Husband, Working Days	Weekdays-Commuting (work/school)	4.77	47.91	-3.96	55.61		N/A	N/A	N/A	N/A		
	Work	-7.39	102.89	16.75	119.87		N/A	N/A	N/A	N/A		
	Study	-0.44	30.11	-0.10	25.43		N/A	N/A	N/A	N/A		
	House-Keeping and Taking Care of Children	-0.13	61.96	-11.92	74.91		N/A	N/A	N/A	N/A		
	Hobby, Leisure and Going out	23.14	102.91	-4.70	126.83	*	N/A	N/A	N/A	N/A		
Sleep, Eat, Personal Hygiene	-10.82	103.41	9.41	136.17		N/A	N/A	N/A	N/A			
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.02	0.24	-0.69	11.85		N/A	N/A	N/A	N/A		
	Work	-12.69	76.18	8.57	62.07	**	N/A	N/A	N/A	N/A		
	Study	1.14	55.41	-12.61	74.98		N/A	N/A	N/A	N/A		
	House-Keeping and Taking Care of Children	18.05	156.56	-17.71	206.18		N/A	N/A	N/A	N/A		
	Hobby, Leisure and Going out	-11.23	222.47	20.22	259.57		N/A	N/A	N/A	N/A		
Sleep, Eat, Personal Hygiene	9.01	227.43	2.92	243.47		N/A	N/A	N/A	N/A			

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 21. The mean values and SD of ultimate utility and consumption variables between NN and NY stratified by marital status – Mobile Phone 1999-2000

1999-2000											
Indicators for ultimate utility	MD					UnMD					
	NN (94)		NY (87)		Significant	NN (35)		NY (32)		Significant	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD		
Happiness	-0.106	0.595	-0.161	0.663		-0.086	0.702	-0.125	0.833		
Life Satisfaction	-0.032	0.647	-0.023	0.762		-0.143	0.772	0.063	0.982		
Living Standard	-0.096	0.530	-0.023	0.570		-0.057	0.591	0.000	0.622		

Number of Family Members	MD					UnMD				
	NN (94)		NY (87)		Significant	NN (35)		NY (32)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.06	0.32	0.02	0.46		0.03	0.17	0.00	0.62	

Total household income from last year (10,000 yen)	MD					UnMD				
	NN (94)		NY (87)		Significant	NN (35)		NY (32)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Husband	-23.10	289.24	11.47	76.58		N/A	N/A	N/A	N/A	
Wife	-7.24	61.75	-2.45	44.87		-14.31	74.93	13.35	65.32	
Common business	-0.99	13.11	0.69	5.48		N/A	N/A	N/A	N/A	
Other household member(s)	3.65	49.23	18.25	147.40		29.09	200.13	-269.50	825.64	

	MD					UnMD				
	NN (94)		NY (87)		Significant	NN (35)		NY (32)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household Savings and Stocks Possession (10,000 Yen)	63.03	394.00	-95.77	439.18	**	.	.	.	.	.
Household Savings Possession	4.29	89.16	-10.00	62.72	.	.	.	.	.	.

	MD					UnMD				
	NN (94)		NY (87)		Significant	NN (35)		NY (32)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household spending allocation for the month of September (1,000 Yen)	-2.93	32.04	2.66	25.98	.	-0.71	17.67	-2.31	18.66	.
Food	-4.26	28.93	-13.90	106.37	.	0.60	8.09	-1.13	12.82	.
Housing (Rent/Mortgage)	0.91	10.60	1.41	9.00	.	0.26	2.19	-0.63	5.10	.
Water, Gas, Electricity	-0.13	13.05	2.31	20.70	.	1.00	8.83	0.34	4.24	.
Furniture and Household Appliances	2.28	13.03	1.29	14.19	.	-1.83	16.81	0.56	14.06	.
Clothing and Shoes	1.44	21.00	0.57	10.96	.	1.46	11.24	-0.91	8.88	.
Medical and Insurance	-4.82	33.18	-0.06	150.46	.	3.49	12.12	-1.72	12.31	*
Transportation	0.33	5.12	4.09	9.68	***	0.71	2.09	2.03	10.68	.
Communication	-0.89	25.94	1.20	13.86	.	-1.26	10.58	1.59	5.86	.
Education	2.88	18.23	-6.05	22.53	**	3.29	21.80	1.25	19.42	.
Hobby and Leisure	-2.97	19.80	5.10	26.72	**	-2.63	9.30	0.00	19.08	.
Going out	0.88	15.74	8.16	16.88	***	1.20	8.91	-0.16	0.99	.
Allowances										

	MD					UnMD				
	NN (94)		NY (87)		Significant	NN (35)		NY (32)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Household possession of durable consumer good	-0.01	0.31	0.02	0.43	.	0.09	0.45	-0.09	0.39	.
Dining Set	-0.06	0.38	-0.01	0.52	.	0.11	0.40	0.00	0.36	.
Cupboard	0.02	0.21	0.03	0.32	.	0.11	0.32	0.03	0.31	.
Microwave	-0.01	0.31	0.00	0.30	.	0.09	0.28	0.06	0.44	.
Refrigerator	0.01	0.10	0.03	0.18	.	0.00	0.24	0.03	0.18	.
Automatic Dishwasher	-0.05	0.42	0.03	0.49	.	0.06	0.34	-0.06	0.44	.
Vacuum Cleaner	0.02	0.21	0.03	0.28	.	0.06	0.24	0.03	0.31	.
Laundry Machine	-0.02	0.25	0.02	0.26	.	0.00	0.00	-0.03	0.18	.
Cloths Dryer	0.02	0.29	0.05	0.30	.	0.06	0.34	0.06	0.50	.
Sewing Machine	0.18	0.57	0.07	0.64	.	0.23	0.91	0.28	0.73	.
Electric Fan	0.06	0.52	0.21	0.72	.	0.17	0.57	0.00	0.76	.
Air Conditioner	0.05	0.68	0.00	0.48	.	-0.11	0.40	0.03	0.40	.
"Kotatsu" Heater	0.01	0.48	-0.13	0.86	.	0.17	0.75	0.09	0.30	.
TV Set	-0.03	0.45	0.03	0.58	.	0.00	0.24	0.00	0.67	.
Stereo Sound System	-0.03	0.45	-0.01	0.52	.	0.03	0.45	0.06	0.35	.
CD Radio Cassette Recorder	0.00	0.55	-0.02	0.53	.	0.17	0.45	0.13	0.61	.
VCR	0.05	0.49	0.05	0.53	.	0.03	0.45	0.13	0.61	.
Video Camera	-0.03	0.37	0.02	0.34	.	0.00	0.24	0.13	0.34	*
Telephone	0.09	0.76	0.22	0.72	.	0.03	0.57	0.03	0.54	.
Bicycle	0.13	1.03	0.22	0.93	.	0.00	0.64	0.22	0.49	.
Car	-0.02	0.39	0.09	0.39	*	0.09	0.28	0.13	0.42	.
TV Game	0.00	0.72	0.18	0.69	*	0.11	0.32	0.00	0.36	.
Word Processor	-0.03	0.34	-0.02	0.37	.	-0.09	0.51	-0.03	0.47	.
Personal Computer	0.11	0.52	0.26	0.56	*	0.09	0.45	0.13	0.79	.
FAX	0.04	0.33	0.14	0.41	*	0.00	0.24	0.09	0.39	.
Mobile Phone	0.00	0.00	1.30	0.53	***	0.00	0.00	1.03	0.18	***

	MD					UnMD					
	NN (94)		NY (87)		Significant	NN (35)		NY (32)		Significant	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD		
Time-use patterns (minutes)											
Wife, Working Days	Weekdays-Commuting (work/school)	0.62	13.33	0.15	15.49	.	4.66	26.46	-0.41	42.06	.
	Work	-10.81	125.96	6.77	129.72	.	-0.57	45.30	-57.78	232.18	.
	Study	0.11	31.56	-6.90	30.94	.	-0.11	37.92	11.03	66.66	.
	House-Keeping and Taking Care of Children	-7.20	205.52	6.23	214.56	.	-6.80	72.25	7.47	81.26	.
	Hobby, Leisure and Going out	-4.90	130.87	-31.67	158.41	.	20.60	145.83	48.97	162.39	.
Wife, Weekends/Holidays	Sleep, Eat, Personal Hygiene	22.19	153.62	22.31	177.74	.	-6.97	147.22	0.84	165.35	.
	Weekends-Commuting (work/school)	0.00	0.00	0.03	0.32	.	-8.51	41.55	3.84	33.98	.
	Work	-5.14	35.91	0.71	31.02	.	15.43	73.26	24.47	137.87	.
	Study	0.61	14.05	-6.10	38.99	.	-19.11	96.06	13.22	49.91	*
	House-Keeping and Taking Care of Children	-6.11	195.77	24.89	227.69	.	5.14	76.00	-0.25	64.41	.
Husband, Working Days	Hobby, Leisure and Going out	11.50	206.35	-29.67	190.53	.	32.49	169.97	28.09	213.05	.
	Sleep, Eat, Personal Hygiene	-1.44	186.59	8.28	170.41	.	-22.34	184.76	-69.38	224.85	.
	Weekdays-Commuting (work/school)	-0.45	43.40	-2.35	41.63	.	N/A	N/A	N/A	N/A	.
	Work	9.62	92.80	-7.60	160.36	.	N/A	N/A	N/A	N/A	.
	Study	2.49	17.57	-1.45	35.04	.	N/A	N/A	N/A	N/A	.
Husband, Weekends/Holidays	House-Keeping and Taking Care of Children	-1.67	61.78	5.00	65.47	.	N/A	N/A	N/A	N/A	.
	Hobby, Leisure and Going out	-6.65	102.53	-7.55	111.08	.	N/A	N/A	N/A	N/A	.
	Sleep, Eat, Personal Hygiene	-7.42	109.03	10.70	133.15	.	N/A	N/A	N/A	N/A	.
	Weekends-Commuting (work/school)	0.00	0.00	-2.92	26.67	.	N/A	N/A	N/A	N/A	.
	Work	1.95	49.36	-6.54	55.44	.	N/A	N/A	N/A	N/A	.
Husband, Weekends/Holidays	Study	7.25	49.63	-8.69	55.50	**	N/A	N/A	N/A	N/A	.
	House-Keeping and Taking Care of Children	12.60	162.63	1.43	169.00	.	N/A	N/A	N/A	N/A	.
	Hobby, Leisure and Going out	-2.48	222.95	13.90	248.04	.	N/A	N/A	N/A	N/A	.
Sleep, Eat, Personal Hygiene	-25.25	252.97	2.16	228.51	.	N/A	N/A	N/A	N/A	.	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

#### D. Cross Section Analysis: Linear regression analysis

One of the possible causes of not being able to observe significant difference in happiness and life satisfaction between NN and NY of technologies was that the life events occurred in the same year may have had great influence to the increase or decrease of happiness and life satisfaction, and the influence of adopting these technology may be hidden by the influential life events. Therefore, an attempt was made to exclude the individuals who had the influential life events in the same year to remove the noise in analysis.

Multi-linear regression analysis was performed on the data to find out the correlations between the life event variables and scores of happiness and life satisfaction. Tables 22 and 23 show the results of the regression. P.L. in the table denotes for probability level and asterisk (\*) indicates statistically significant at  $p < 0.05$ .

The variables that were significantly correlated with the happiness score more than two years were, gave a birth, married and left family, divorced or separated and lost good relationships with other family members. The cases that experienced these four life events were eliminated from the data. The events that had significance at least once among the three years are rather related to subjective and emotional aspects of life.

Table 22. Results from the linear regression analysis for happiness

	Panel 6 (1998)				Panel 7 (1999)				Panel 8 (2000)			
	Normali zed correlati on B	t	P.L.	p<0.05	Normali zed correlati on B	t	P.L.	p<0.05	Normali zed correlati on B	t	P.L.	p<0.05
Gave a birth	0.052	1.785	0.075		0.069	2.355	0.019	*	0.092	3.180	0.002	*
Took parent(s) along home	-0.001	-0.029	0.977		-0.030	-1.005	0.315		-0.011	-0.358	0.721	
Return of a family member	0.002	0.060	0.952		0.024	0.834	0.405		-0.017	-0.573	0.567	
Increase for other reason	0.003	0.106	0.915		-0.024	-0.822	0.411		-0.025	-0.873	0.383	
A family member transferred	0.023	0.798	0.425		0.008	0.268	0.789		0.016	0.539	0.590	
A family member moved out	0.009	0.310	0.757		-0.003	-0.096	0.924		-0.042	-1.460	0.144	
Loss by death	-0.042	-1.431	0.153		0.012	0.402	0.688		0.022	0.755	0.450	
Loss for other reason	-0.002	-0.070	0.944		0.002	0.083	0.934		0.006	0.197	0.844	
Married and left family	0.057	1.943	0.052		0.081	2.781	0.005	*	0.095	3.273	0.001	*
Divorced or separated	-0.069	-2.281	0.023	*	0.008	0.254	0.799		-0.098	-3.365	0.001	*
Left for an independent life	0.004	0.124	0.902		0.023	0.806	0.420		-0.040	-1.388	0.165	
Started to live with parents	-0.003	-0.098	0.922		-0.018	-0.577	0.564		0.028	0.954	0.340	
Found a new job	0.004	0.130	0.897		-0.011	-0.366	0.715		-0.016	-0.539	0.590	
Changed job	-0.017	-0.574	0.566		0.024	0.804	0.422		-0.051	-1.738	0.082	
Quit job	0.013	0.437	0.662		0.043	1.470	0.142		-0.041	-1.375	0.170	
Enrolled to a (graduate or professional) school	-0.052	-1.742	0.082		-0.057	-1.892	0.059		-0.017	-0.588	0.556	
Started a new lesson/training	-0.004	-0.121	0.904		0.021	0.710	0.478		0.032	1.090	0.276	
Took a leadership of a committee or organization	-0.025	-0.851	0.395		0.023	0.797	0.425		-0.001	-0.023	0.981	
Illness requiring an operation or hospitalization	-0.005	-0.178	0.859		-0.022	-0.733	0.464		0.009	0.300	0.764	
Depression/other psychiatric symptoms	-0.089	-2.955	0.003	*	-0.015	-0.463	0.644		0.006	0.185	0.853	
Loan/credit card related trouble	-0.018	-0.602	0.547		-0.032	-1.075	0.283		-0.030	-1.030	0.303	
Accident/disaster	0.022	0.732	0.464		-0.058	-1.984	0.047	*	-0.056	-1.886	0.060	
Other	0.051	1.719	0.086		-0.026	-0.887	0.375		0.035	1.198	0.231	
Transferred					0.066	0.417	0.680		-0.168	-0.785	0.440	
Vol. retirement or lost job	0.039	0.187	0.853		0.287	1.365	0.183		-0.075	-0.221	0.827	
Business bankrupts					-0.067	-0.278	0.783		0.707	1.763	0.091	
Illness requiring hospitalization or operation	0.098	0.536	0.596		-0.123	-0.592	0.558		-0.011	-0.056	0.956	
Depression or other psychiatric problems												
Credit card/loan-related trouble	0.000	0.000	1.000		-0.275	-0.960	0.346		-0.688	-1.809	0.083	
Accident/disaster	-0.123	-0.698	0.491		-0.149	-0.905	0.374		0.301	1.639	0.114	
Entrance exam and enrollment	0.201	0.764	0.451		0.327	1.793	0.084		0.208	1.115	0.276	
Others	-0.309	-0.924	0.363						-0.087	-0.367	0.717	
Big expenditure	0.018	0.314	0.754		-0.037	-0.680	0.497		-0.033	-0.585	0.559	
Income cut or depreciation of properties	-0.003	-0.055	0.956		-0.053	-0.967	0.335		-0.123	-2.172	0.031	*
Heavy burden on taking care	-0.115	-1.963	0.051		0.047	0.854	0.394		-0.052	-0.929	0.354	
Lost good relationships with other family members	-0.185	-3.013	0.003	*	-0.114	-2.032	0.043	*	-0.132	-2.137	0.033	*
Depression	0.079	1.278	0.202		-0.221	-3.821	0.000	*	-0.028	-0.445	0.657	
Divorced or separated	0.020	0.334	0.739									
Others	0.060	1.042	0.298		0.026	0.486	0.627		0.025	0.440	0.660	
Wife – Employed	0.028	0.480	0.632		0.064	1.099	0.272		0.079	1.448	0.148	
Wife – Unemployed												
Wife – Student												
Wife – Housekeeper												
Wife – Full-time position	0.083	1.386	0.167		0.018	0.305	0.761		-0.005	-0.094	0.926	
Wife – Part-time position												
Wife – Contractor	-0.135	-2.312	0.021	*	-0.001	-0.015	0.988		-0.030	-0.541	0.589	
Husband – Employed	0.147	2.551	0.011	*					-0.016	-0.286	0.775	
Husband – Full-time position												
Husband – Part-time position	-0.011	-0.198	0.843		-0.100	-1.743	0.082		-0.031	-0.565	0.572	
Husband – Contractor	-0.004	-0.077	0.938		0.008	0.136	0.892		-0.003	-0.063	0.950	
A House	-0.322	-0.924	0.356		-0.676	-1.366	0.172					
Dual house	-0.130	-1.330	0.184		-0.196	-1.557	0.120		-0.016	-0.531	0.595	
Reinforced-concrete apartment	-0.221	-0.664	0.507		-0.594	-1.244	0.214		0.052	1.251	0.211	
Wooden apartment	-0.082	-0.443	0.658		-0.306	-1.189	0.235		-0.022	-0.594	0.553	
Own house	-0.333	-0.986	0.324		-0.657	-1.930	0.054					

Rent private apartment	-0.284	-1.024	0.306		-0.528	-1.875	0.061		0.005	0.120	0.905
Rent public apartment	-0.341	-1.585	0.113		-0.476	-2.176	0.030	*	-0.068	-1.827	0.068
Company/school owned housing	-0.159	-0.856	0.392		-0.347	-1.920	0.055		0.027	0.819	0.413

The results from the linear regression analysis for life satisfaction are shown below to point out that life satisfaction is a different indicator from happiness in terms of the correlations with life events. The significantly correlated events to life satisfaction for more than two years are: changed job, income cut or depreciation of properties, and depression. It was indicated from the observation of all the significantly correlated events, life satisfaction is sensitive to more tangible and objective aspects of life than happiness.

Table 23. Results from the linear regression analysis for life satisfaction

	Panel 6 (1998)				Panel 7 (1999)				Panel 8 (2000)			
	Normali zed correlati on	t	P.L.	p<0.05	Normali zed correlati on	t	P.L.	p<0.05	Normali zed correlati on	t	P.L.	p<0.05
	B				B				B			
Gave a birth	0.057	1.937	0.053		0.029	0.987	0.324		0.051	1.744	0.081	
Took parent(s) along home	0.011	0.378	0.706		-0.025	-0.835	0.404		-0.053	-1.793	0.073	
Return of a family member	-0.062	-2.147	0.032	*	0.045	1.531	0.126		-0.009	-0.302	0.762	
Increase for other reason	0.016	0.540	0.590		-0.028	-0.951	0.342		-0.030	-1.018	0.309	
A family member transferred	-0.027	-0.940	0.348		-0.025	-0.835	0.404		0.019	0.630	0.529	
A family member moved out	0.013	0.429	0.668		-0.008	-0.281	0.779		-0.031	-1.051	0.294	
Loss by death	-0.033	-1.118	0.264		-0.045	-1.527	0.127		0.020	0.678	0.498	
Loss for other reason	0.053	1.816	0.070		0.014	0.480	0.631		-0.014	-0.458	0.647	
Married and left family	0.023	0.773	0.440		0.082	2.798	0.005	*	0.031	1.070	0.285	
Divorced or separated	-0.034	-1.121	0.263		0.027	0.879	0.380		-0.052	-1.772	0.077	
Left for an independent life	0.011	0.363	0.716		0.023	0.785	0.433		0.020	0.687	0.492	
Started to live with parents	-0.038	-1.284	0.199		0.011	0.348	0.728		-0.044	-1.489	0.137	
Found a new job	-0.016	-0.536	0.592		-0.042	-1.421	0.156		-0.063	-2.165	0.031	*
Changed job	-0.094	-3.163	0.002	*	-0.016	-0.554	0.580		-0.102	-3.484	0.001	*
Quit job	0.001	0.047	0.962		0.040	1.365	0.172		-0.024	-0.810	0.418	
Enrolled to a (graduate or professional) school	0.000	-0.013	0.990		-0.034	-1.125	0.261		-0.005	-0.163	0.870	
Started a new lesson/training	0.024	0.812	0.417		0.015	0.528	0.597		-0.034	-1.173	0.241	
Took a leadership of a committee or organization	-0.013	-0.441	0.660		0.012	0.423	0.673		-0.010	-0.353	0.724	
Illness requiring an operation or hospitalization	-0.026	-0.894	0.372		-0.028	-0.933	0.351		0.037	1.263	0.207	
Depression/other psychiatric symptoms	-0.068	-2.257	0.024	*	-0.052	-1.657	0.098		-0.014	-0.459	0.646	
Loan/credit card related trouble	-0.021	-0.732	0.464		-0.007	-0.236	0.814		-0.056	-1.923	0.055	
Accident/disaster	0.006	0.212	0.832		-0.096	-3.296	0.001	*	-0.001	-0.020	0.984	
Other	0.034	1.158	0.247		-0.058	-1.987	0.047	*	0.005	0.180	0.857	
Transferred					-0.167	-0.989	0.331		-0.282	-1.395	0.176	
Vol. retirement or lost job	-0.088	-0.426	0.673		0.086	0.387	0.701		0.046	0.142	0.889	
Business bankrupts					0.056	0.217	0.830		0.180	0.477	0.638	
Illness requiring hospitalization or operation	0.039	0.212	0.833		-0.362	-1.643	0.112		-0.098	-0.536	0.597	
Depression or other psychiatric problems									-0.297	-0.828	0.416	
Credit card/loan-related trouble	0.000	0.000	1.000		-0.180	-0.592	0.559					
Accident/disaster	-0.196	-1.123	0.270		-0.054	-0.311	0.758		0.193	1.118	0.275	
Entrance exam and enrollment	0.375	1.440	0.160		0.261	1.350	0.188		0.143	0.817	0.422	
Others	-0.230	-0.694	0.493						0.072	0.323	0.750	
Big expenditure	-0.007	-0.128	0.899		0.007	0.135	0.893		-0.145	-2.683	0.008	*
Income cut or depreciation of properties	-0.139	-2.391	0.017	*	-0.026	-0.476	0.634		-0.123	-2.231	0.026	*
Heavy burden on taking care	-0.102	-1.778	0.076		0.022	0.397	0.692		-0.034	-0.632	0.528	
Lost good relationships with other family members	-0.174	-2.871	0.004	*	-0.046	-0.820	0.413		-0.098	-1.637	0.103	
Depression	-0.018	-0.300	0.765		-0.246	-4.204	0.000	*	-0.173	-2.858	0.005	*
Divorced or separated	0.015	0.265	0.792									
Others	0.053	0.944	0.346		0.066	1.215	0.225		-0.015	-0.274	0.784	
Wife – Employed	0.059	0.993	0.322		0.032	0.546	0.585		0.037	0.698	0.486	
Wife – Unemployed												
Wife – Student												
Wife – Housekeeper												
Wife – Full-time position	0.006	0.091	0.928		0.083	1.411	0.159		0.057	1.044	0.297	
Wife – Part-time position												
Wife – Contractor	-0.086	-1.449	0.148		0.007	0.125	0.901		0.026	0.481	0.631	
Husband – Employed	0.095	1.621	0.106						0.038	0.685	0.494	
Husband – Full-time position												
Husband – Part-time position	-0.005	-0.093	0.926		-0.093	-1.623	0.106		-0.177	-3.295	0.001	*
Husband – Contractor	-0.048	-0.823	0.411		0.003	0.049	0.961		-0.063	-1.151	0.251	
A House	0.059	0.170	0.865		-0.246	-0.497	0.619					
Dual house	-0.054	-0.553	0.580		-0.111	-0.877	0.381		-0.041	-1.323	0.186	
Reinforced-concrete apartment	0.020	0.060	0.952		-0.243	-0.508	0.612		0.050	1.198	0.231	
Wooden apartment	0.019	0.101	0.920		-0.164	-0.640	0.522		-0.017	-0.455	0.649	
Own house	-0.219	-0.644	0.520		-0.505	-1.482	0.139					
Rent private apartment	-0.144	-0.516	0.606		-0.392	-1.389	0.165		-0.003	-0.070	0.944	
Rent public apartment	-0.190	-0.876	0.381		-0.357	-1.631	0.103		-0.064	-1.729	0.084	
Company/school owned housing	-0.091	-0.487	0.627		-0.196	-1.084	0.278		0.033	0.995	0.320	

The same regression analysis was performed on the relationships between life events and the possession of three technologies. It would help us know the possible causal relationships between life events and

possession of cloth dryers, personal computers and mobile phone. Tables 24-26 show the results. For possession of cloth dryer the correlated events for more than two years was wife's full-time position. For possession of personal computer, taking a leadership of a committee or organization and wife's full-time position have significant correlations more than two years, and none for mobile phone. No elimination was performed based on these results.

Table 24. Results from the linear regression analysis for household possession of cloth dryer

	Panel 6 (1998)				Panel 7 (1999)				Panel 8 (2000)			
	Normalized correlation B	t	P.L.	p<0.05	Normalized correlation B	t	P.L.	p<0.05	Normalized correlation B	t	P.L.	p<0.05
Gave a birth	0.109	3.738	0.000	*	-0.043	-1.466	0.143		0.004	0.139	0.890	
Took parent(s) along home	0.001	0.050	0.960		0.028	0.957	0.339		0.068	2.307	0.021	*
Return of a family member	-0.025	-0.849	0.396		-0.027	-0.926	0.355		-0.024	-0.811	0.418	
Increase for other reason	-0.055	-1.882	0.060		-0.021	-0.737	0.461		-0.055	-1.871	0.062	
A family member transferred	-0.025	-0.849	0.396		-0.042	-1.449	0.147		-0.014	-0.460	0.645	
A family member moved out	0.001	0.037	0.970		-0.055	-1.888	0.059		-0.018	-0.633	0.527	
Loss by death	0.039	1.346	0.178		0.131	4.506	0.000	*	0.025	0.849	0.396	
Loss for other reason	-0.031	-1.042	0.297		-0.031	-1.068	0.286		-0.020	-0.663	0.507	
Married and left family	-0.002	-0.062	0.950		-0.046	-1.583	0.114		-0.051	-1.746	0.081	
Divorced or separated	-0.027	-0.893	0.372		-0.029	-0.968	0.333		-0.040	-1.350	0.177	
Left for an independent life	-0.011	-0.395	0.693		-0.011	-0.388	0.698		-0.034	-1.168	0.243	
Started to live with parents	-0.023	-0.760	0.448		-0.005	-0.169	0.865		0.013	0.441	0.659	
Found a new job	-0.049	-1.635	0.102		-0.002	-0.069	0.945		-0.042	-1.414	0.158	
Changed job	-0.025	-0.849	0.396		-0.042	-1.418	0.156		-0.014	-0.491	0.623	
Quit job	0.014	0.486	0.627		-0.022	-0.757	0.449		0.020	0.692	0.489	
Enrolled to a (graduate or professional) school	0.011	0.355	0.723		-0.035	-1.167	0.243		-0.006	-0.199	0.842	
Started a new lesson/training	-0.009	-0.321	0.748		-0.057	-1.935	0.053		0.009	0.309	0.757	
Took a leadership of a committee or organization	0.068	2.325	0.020	*	0.056	1.923	0.055		0.050	1.687	0.092	
Illness requiring an operation or hospitalization	-0.009	-0.314	0.754		-0.040	-1.308	0.191		0.039	1.336	0.182	
Depression/other psychiatric symptoms	0.007	0.230	0.818		-0.018	-0.581	0.561		-0.037	-1.234	0.218	
Loan/credit card related trouble	-0.005	-0.154	0.878		0.030	0.994	0.321		-0.012	-0.399	0.690	
Accident/disaster	0.001	0.036	0.971		0.033	1.128	0.260		0.018	0.609	0.543	
Other	-0.012	-0.403	0.687		0.069	2.341	0.019	*	0.021	0.731	0.465	
Transferred					0.252	1.511	0.142		-0.047	-0.246	0.808	
Vol. retirement or lost job	-0.267	-1.371	0.181		-0.214	-0.967	0.342		-0.338	-1.102	0.281	
Business bankrupts					0.160	0.629	0.535		0.818	2.277	0.032	*
Illness requiring hospitalization or operation	0.202	1.179	0.248		-0.418	-1.913	0.066		0.179	1.025	0.316	
Depression or other psychiatric problems												
Credit card/loan-related trouble	0.000	0.000	1.000		0.308	1.021	0.316		-0.276	-0.809	0.427	
Accident/disaster	0.078	0.474	0.639		0.032	0.185	0.855		0.178	1.082	0.290	
Entrance exam and enrollment	0.139	0.567	0.575		-0.003	-0.016	0.987		0.613	3.666	0.001	*
Others	0.000	0.000	1.000						-0.008	-0.039	0.969	
Big expenditure	0.025	0.427	0.670		0.046	0.818	0.414		0.008	0.144	0.886	
Income cut or depreciation of properties	0.018	0.298	0.766		-0.055	-0.980	0.328		-0.051	-0.893	0.372	
Heavy burden on taking care	0.081	1.365	0.173		0.084	1.490	0.137		-0.085	-1.507	0.133	
Lost good relationships with other family members	0.008	0.124	0.902		0.005	0.082	0.935		-0.018	-0.294	0.769	
Depression	0.049	0.771	0.441		0.092	1.533	0.126		0.137	2.186	0.030	*
Divorced or separated	-0.047	-0.790	0.430									
Others	0.057	0.968	0.334		-0.083	-1.499	0.135		0.006	0.100	0.921	
Wife – Employed												
Wife – Unemployed	-0.040	-0.672	0.502		-0.129	-2.224	0.027	*	-0.082	-1.528	0.128	
Wife – Student												
Wife – Housekeeper												
Wife – Full-time position	0.109	1.812	0.071		0.137	2.331	0.020	*	0.197	3.614	0.000	*
Wife – Part-time position												
Wife – Contractor	-0.037	-0.635	0.526		-0.005	-0.081	0.936		0.051	0.937	0.349	
Husband – Employed	0.030	0.524	0.601						0.094	1.704	0.089	
Husband – Full-time position												
Husband – Part-time position	0.121	2.069	0.039	*	-0.008	-0.133	0.895		0.020	0.373	0.709	
Husband – Contractor	-0.052	-0.900	0.369		0.051	0.888	0.375		0.068	1.244	0.215	
A House	0.284	0.812	0.417		0.293	0.593	0.553					
Dual house	0.121	1.239	0.215		0.096	0.765	0.445		0.029	0.946	0.345	
Reinforced-concrete apartment	0.270	0.807	0.420		0.249	0.523	0.601		-0.030	-0.711	0.478	
Wooden apartment	0.097	0.519	0.604		0.092	0.358	0.721		-0.079	-2.171	0.030	*
Own house	-0.322	-0.947	0.344		-0.311	-0.917	0.359					
Rent private apartment	-0.316	-1.132	0.258		-0.323	-1.150	0.251		-0.037	-0.925	0.355	
Rent public apartment	-0.266	-1.234	0.218		-0.245	-1.124	0.261		-0.083	-2.272	0.023	*
Company/school owned housing	-0.167	-0.897	0.370		-0.147	-0.813	0.416		-0.021	-0.628	0.530	

Table 25. Results from the linear regression analysis for household possession of personal computer

	Panel 6 (1998)				Panel 7 (1999)				Panel 8 (2000)			
	Normalized correlation B	t	P.L.	p<0.05	Normalized correlation B	t	P.L.	p<0.05	Normalized correlation B	t	P.L.	p<0.05
Gave a birth	0.154	0.071	0.063		-0.041	-1.409	0.159		-0.008	-0.275	0.784	
Took parent(s) along home	0.102	0.325	0.009		0.027	0.929	0.353		0.025	0.822	0.411	
Return of a family member	0.308	0.374	0.024		-0.011	-0.393	0.694		-0.003	-0.116	0.907	
Increase for other reason	-0.145	0.170	-0.025		0.006	0.221	0.826		-0.012	-0.423	0.672	
A family member transferred	1.308	0.374	0.102		0.027	0.929	0.353		0.025	0.846	0.398	
A family member moved out	-0.031	0.118	-0.008		-0.047	-1.616	0.106		-0.027	-0.906	0.365	
Loss by death	0.048	0.246	0.006		-0.014	-0.487	0.626		0.016	0.532	0.595	
Loss for other reason	0.011	0.268	0.001		-0.020	-0.679	0.497		-0.019	-0.652	0.514	
Married and left family	-0.041	0.115	-0.010		0.024	0.808	0.419		0.010	0.352	0.725	
Divorced or separated	-0.219	0.249	-0.026		-0.034	-1.112	0.266		-0.028	-0.953	0.341	

Left for an independent life	-0.051	0.181	-0.008		-0.024	-0.821	0.412		-0.018	-0.617	0.537	
Started to live with parents	-0.111	0.196	-0.016		-0.018	-0.597	0.551		0.002	0.069	0.945	
Found a new job	-0.022	-0.719	0.472		0.008	0.268	0.789		-0.059	-2.006	0.045	*
Changed job	-0.015	-0.513	0.608		-0.012	-0.416	0.677		-0.001	-0.051	0.959	
Quit job	0.036	1.215	0.225		0.036	1.235	0.217		-0.021	-0.724	0.469	
Enrolled to a (graduate or professional) school	-0.012	-0.393	0.694		-0.014	-0.474	0.636		0.083	2.848	0.004	*
Started a new lesson/training	0.053	1.811	0.070		0.094	3.220	0.001	*	0.026	0.888	0.375	
Took a leadership of a committee or organization	0.045	1.528	0.127		0.138	4.744	0.000	*	0.084	2.872	0.004	*
Illness requiring an operation or hospitalization	-0.020	-0.668	0.504		-0.063	-2.097	0.036	*	0.033	1.143	0.253	
Depression/other psychiatric symptoms	0.005	0.172	0.863		0.004	0.111	0.911		-0.004	-0.121	0.904	
Loan/credit card related trouble	0.000	0.009	0.993		0.011	0.388	0.698		-0.001	-0.020	0.984	
Accident/disaster	-0.001	-0.047	0.962		0.013	0.438	0.661		-0.020	-0.669	0.503	
Other	0.006	0.205	0.838		-0.003	-0.098	0.922		0.019	0.659	0.510	
Transferred					0.100	0.603	0.552		-0.009	-0.035	0.972	
Vol. retirement or lost job	-0.098	-0.480	0.635		-0.075	-0.341	0.736		-0.279	-0.657	0.517	
Business bankrupts					0.514	2.038	0.051		0.349	0.702	0.489	
Illness requiring hospitalization or operation	0.150	0.840	0.407		-0.142	-0.654	0.519		-0.133	-0.550	0.587	
Depression or other psychiatric problems												
Credit card/loan-related trouble	0.270	1.154	0.258		-0.435	-1.456	0.157		0.007	0.015	0.988	
Accident/disaster	-0.207	-1.202	0.239		-0.167	-0.970	0.341		0.050	0.218	0.829	
Entrance exam and enrollment	0.321	1.250	0.221		0.069	0.362	0.720		-0.012	-0.050	0.960	
Others	0.000	0.000	1.000						-0.166	-0.564	0.578	
Big expenditure	0.018	0.307	0.759		0.019	0.338	0.735		-0.016	-0.292	0.770	
Income cut or depreciation of properties	-0.049	-0.817	0.414		-0.089	-1.570	0.117		-0.113	-1.977	0.049	*
Heavy burden on taking care	0.045	0.762	0.447		0.069	1.222	0.223		-0.128	-2.272	0.024	*
Lost good relationships with other family members	-0.015	-0.235	0.814		-0.026	-0.446	0.656		0.061	0.988	0.324	
Depression	0.021	0.338	0.736		-0.035	-0.583	0.561		-0.058	-0.937	0.350	
Divorced or separated	-0.031	-0.520	0.604									
Others	0.057	0.970	0.333		0.064	1.145	0.253		-0.052	-0.922	0.357	
Wife – Employed												
Wife – Unemployed	0.062	1.048	0.296		0.063	1.098	0.273		-0.029	-0.533	0.594	
Wife – Student												
Wife – Housekeeper												
Wife – Full-time position	0.094	1.555	0.121		0.145	2.482	0.014	*	0.182	3.330	0.001	*
Wife – Part-time position												
Wife – Contractor	0.040	0.681	0.496		0.042	0.727	0.468		0.014	0.255	0.799	
Husband – Employed	0.033	0.562	0.574						0.103	1.873	0.062	
Husband – Full-time position												
Husband – Part-time position	-0.062	-1.062	0.289		-0.113	-1.993	0.047	*	-0.089	-1.665	0.097	
Husband – Contractor	0.081	1.389	0.166		0.008	0.143	0.886		-0.008	-0.154	0.878	
A House	-0.131	-0.376	0.707		0.317	0.648	0.517					
Dual house	0.013	0.138	0.890		0.087	0.697	0.486		0.028	0.927	0.354	
Reinforced-concrete apartment	0.074	0.223	0.824		0.504	1.068	0.286		0.130	3.135	0.002	*
Wooden apartment	-0.002	-0.010	0.992		0.228	0.899	0.369		0.056	1.538	0.124	
Own house	0.261	0.774	0.439		0.308	0.915	0.360					
Rent private apartment	0.066	0.237	0.812		0.116	0.418	0.676		-0.131	-3.268	0.001	*
Rent public apartment	-0.025	-0.115	0.909		-0.011	-0.053	0.958		-0.212	-5.802	0.000	*
Company/school owned housing	0.122	0.660	0.509		0.140	0.782	0.434		0.000	-0.010	0.992	

Table 26. Results from the linear regression analysis for household possession of mobile phone

	Panel 6 (1998)				Panel 7 (1999)				Panel 8 (2000)			
	Normalized correlation B	t	P.L.	p<0.05	Normalized correlation B	t	P.L.	p<0.05	Normalized correlation B	t	P.L.	p<0.05
Gave a birth	-0.054	-1.850	0.065		-0.010	-0.330	0.741		-0.037	-1.276	0.202	
Took parent(s) along home	0.064	2.218	0.027		-0.010	-0.324	0.746		0.065	2.208	0.027	
Return of a family member	-0.018	-0.632	0.527		-0.008	-0.271	0.786		0.031	1.053	0.292	
Increase for other reason	0.033	1.114	0.265		0.031	1.054	0.292		-0.028	-0.960	0.337	
A family member transferred	0.026	0.886	0.376		0.079	2.662	0.008	*	0.030	1.002	0.317	
A family member moved out	-0.013	-0.459	0.646		0.049	1.697	0.090		-0.009	-0.326	0.744	
Loss by death	-0.007	-0.226	0.821		0.037	1.251	0.211		-0.004	-0.136	0.892	
Loss for other reason	0.052	1.785	0.075		-0.009	-0.313	0.754		-0.019	-0.637	0.524	
Married and left family	0.089	3.037	0.002		0.005	0.186	0.852		0.064	2.190	0.029	
Divorced or separated	-0.003	-0.117	0.907		-0.024	-0.782	0.434		-0.043	-1.477	0.140	
Left for an independent life	-0.013	-0.463	0.643		-0.053	-1.833	0.067		-0.024	-0.807	0.420	
Started to live with parents	-0.017	-0.588	0.557		-0.011	-0.350	0.727		-0.033	-1.110	0.267	
Found a new job	0.023	0.762	0.446		0.023	0.779	0.436		0.038	1.305	0.192	
Changed job	0.048	1.615	0.107		0.068	2.298	0.022	*	0.046	1.580	0.114	
Quit job	0.037	1.266	0.206		-0.003	-0.097	0.923		0.066	2.233	0.026	
Enrolled to a (graduate or professional) school	-0.047	-1.601	0.110		-0.042	-1.392	0.164		0.006	0.197	0.844	
Started a new lesson/training	0.021	0.723	0.470		0.009	0.322	0.747		-0.013	-0.436	0.663	
Took a leadership of a committee or organization	0.038	1.311	0.190		0.017	0.581	0.561		0.025	0.835	0.404	
Illness requiring an operation or hospitalization	-0.001	-0.033	0.974		0.004	0.129	0.897		-0.013	-0.442	0.659	
Depression/other psychiatric symptoms	-0.028	-0.937	0.349		-0.030	-0.944	0.346		0.007	0.224	0.823	
Loan/credit card related trouble	0.001	0.028	0.978		0.000	-0.002	0.999		-0.027	-0.922	0.356	
Accident/disaster	0.005	0.167	0.868		-0.016	-0.554	0.580		0.026	0.891	0.373	
Other	-0.015	-0.500	0.617		0.002	0.073	0.942		-0.018	-0.599	0.549	
Transferred					0.155	0.888	0.382		0.314	1.392	0.177	
Vol. retirement or lost job	0.055	0.267	0.791		-0.010	-0.042	0.967		-0.333	-0.924	0.365	
Business bankrupts					0.154	0.580	0.567		0.195	0.462	0.648	
Illness requiring hospitalization or operation	0.341	1.883	0.069		-0.236	-1.039	0.308		-0.124	-0.606	0.550	
Depression or other psychiatric problems												
Credit card/loan-related trouble	0.000	0.000	1.000		-0.122	-0.390	0.700		0.326	0.815	0.423	
Accident/disaster	0.069	0.393	0.697		-0.135	-0.746	0.462		-0.255	-1.322	0.198	
Entrance exam and enrollment	-0.029	-0.111	0.913		-0.199	-0.993	0.329		-0.001	-0.007	0.995	
Others	0.000	0.000	1.000						-0.120	-0.482	0.634	
Big expenditure	0.087	1.503	0.134		0.101	1.773	0.077		0.095	1.678	0.094	

Income cut or depreciation of properties	0.023	0.391	0.696		-0.035	-0.619	0.536		-0.010	-0.170	0.865	
Heavy burden on taking care	0.109	1.847	0.066		-0.016	-0.288	0.773		-0.093	-1.638	0.102	
Lost good relationships with other family members	0.024	0.379	0.705		-0.051	-0.870	0.385		0.035	0.565	0.572	
Depression	0.002	0.025	0.980		0.068	1.124	0.262		-0.029	-0.464	0.643	
Divorced or separated	0.004	0.060	0.952									
Others	-0.009	-0.150	0.881		-0.047	-0.832	0.406		-0.048	-0.841	0.401	
Wife – Employed												
Wife – Unemployed	0.028	0.467	0.641		0.040	0.691	0.490		0.022	0.409	0.683	
Wife – Student												
Wife – Housekeeper												
Wife – Full-time position	0.127	2.109	0.036	*	0.066	1.122	0.263		0.051	0.945	0.345	
Wife – Part-time position												
Wife – Contractor	0.074	1.262	0.208		0.115	1.994	0.047	*	0.096	1.785	0.075	
Husband – Employed									0.123	2.262	0.024	
Husband – Full-time position	0.074	1.273	0.204									
Husband – Part-time position	0.028	0.477	0.633		-0.010	-0.184	0.854		-0.003	-0.058	0.954	
Husband – Contractor	0.090	1.549	0.122		0.122	2.132	0.034	*	0.221	4.082	0.000	
A House	-0.086	-0.245	0.807		0.103	0.209	0.834					
Dual house	0.035	0.360	0.719		0.066	0.520	0.603		0.001	0.022	0.983	
Reinforced-concrete apartment	-0.044	-0.130	0.896		0.052	0.108	0.914		-0.017	-0.417	0.677	
Wooden apartment	-0.035	-0.187	0.852		-0.004	-0.015	0.988		-0.025	-0.669	0.503	
Own house	0.272	0.798	0.425		0.101	0.295	0.768					
Rent private apartment	0.205	0.731	0.465		0.116	0.410	0.682		-0.002	-0.059	0.953	
Rent public apartment	0.186	0.857	0.392		0.079	0.361	0.718		-0.015	-0.403	0.687	
Company/school owned housing	0.104	0.553	0.581		-0.021	-0.118	0.906		-0.044	-1.313	0.189	

Cloth dryer and personal computer are more expensive than mobile phone in terms of capital cost. On the other hand, mobile phone may cost more than former in terms of running cost, depending on how a consumer uses them. We came to a realization that it is necessary to check if there are any correlations between income and savings with possession of three technologies. In order to do so, a linear regression analysis was performed between possession of cloth dryer, personal computer and mobile phone against the numerical values for annual income per person and household savings. The results are shown in Table 27-29. Correlation was found only with the wife's annual income in 1998 (positive correlation). The normalized coefficient is 0.086 and rather small, meaning that the correlation is small. As a whole, one may conclude that the amount of income or savings has no insignificant effects on the possession of cloth dryers.

Table 27. Results from the linear regression analysis for household possession of cloth dryer against annual income and household savings

	Cloth Dryer				
	Not-normalized		Normalized Coefficient	t	Significance Level
	B	Standard Deviation			
1998					
Variable					
Annual Income - Husband (10,000 yen)	0.2169	0.0404	0.0208	5.3693	0.0000
Annual Income - Wife (10,000 yen)	0.0003	0.0001	0.0860	2.1838	0.0293
Annual Income - Husband and Wife total (10,000 yen)	0.0008	0.0012	0.0271	0.7027	0.4825
Household savings (10,000 yen)	0.0000	0.0000	0.0558	1.3373	0.1816

	Cloth Dryer				
	Not-normalized		Normalized Coefficient	t	Significance Level
	B	Standard Deviation			
1999					
Variable					
Annual Income - Husband (10,000 yen)	0.0001	0.0001	0.0744	1.8818	0.0603
Annual Income - Wife (10,000 yen)	0.0002	0.0001	0.0727	1.9129	0.0562
Annual Income - Husband and Wife total (10,000 yen)	-0.0014	0.0028	-0.0188	-0.5014	0.6162
Household savings (10,000 yen)	0.0000	0.0000	0.0029	0.0732	0.9417

	Cloth Dryer				
	Not-normalized		Normalized Coefficient	t	Significance Level
	B	Standard Deviation			
2000					
Variable					
Annual Income - Husband (10,000 yen)	0.0001	0.0001	0.0388	0.9945	0.3203
Annual Income - Wife (10,000 yen)	0.0002	0.0001	0.0610	1.6347	0.1025
Annual Income - Husband and Wife total (10,000 yen)	-0.0034	0.0037	-0.0339	-0.9139	0.3611
Household savings (10,000 yen)	0.0000	0.0000	0.0477	1.2187	0.2234

According to Table 28, the normalized coefficients for husbands' annual income are in the range of 0.14 and 0.17 consistently between 1998 and 2000. This indicates that the possession of personal computer is correlated with husbands' annual income. Another observation is that the correlation with wives' annual income increases as the year progresses.

Table 28. Results from the linear regression analysis for household possession of personal computer against annual income and household savings

1998	Personal Computer				
	Not-normalized		Normalized Coefficient	t	Significance Level
	B	Standard Deviation			
Variable	0.1576	0.0620		2.5410	0.0113
Annual Income - Husband (10,000 yen)	0.0004	0.0001	0.1726	4.2484	0.0000
Annual Income - Wife (10,000 yen)	0.0003	0.0002	0.0549	1.4145	0.1577
Annual Income - Husband and Wife total (10,000 yen)	-0.0017	0.0018	-0.0362	-0.9522	0.3414
Household savings (10,000 yen)	0.0001	0.0001	0.0464	1.1262	0.2605

1999	Not-normalized		Normalized Coefficient	t	Significance Level
	B	Standard Deviation			
	Variable	0.2127	0.0713		2.9827
Annual Income - Husband (10,000 yen)	0.0004	0.0001	0.1473	3.8290	0.0001
Annual Income - Wife (10,000 yen)	0.0005	0.0002	0.0878	2.3747	0.0178
Annual Income - Husband and Wife total (10,000 yen)	0.0122	0.0050	0.0883	2.4215	0.0157
Household savings (10,000 yen)	0.0002	0.0001	0.1130	2.9040	0.0038

2000	Not-normalized		Normalized Coefficient	t	Significance Level
	B	Standard Deviation			
	Variable	0.3473	0.0708		4.9038
Annual Income - Husband (10,000 yen)	0.0005	0.0001	0.1614	4.2619	0.0000
Annual Income - Wife (10,000 yen)	0.0009	0.0002	0.1642	4.5304	0.0000
Annual Income - Husband and Wife total (10,000 yen)	-0.0018	0.0068	-0.0093	-0.2574	0.7969
Household savings (10,000 yen)	0.0001	0.0001	0.0697	1.8341	0.0670

Table 29 shows that the normalized coefficients for annual income – wife are 0.16, 0.15 and 0.09 in 1998, 1999 and 2000, respectively. It indicates that possession of mobile phone is positively correlated with wives' annual income. At the same time, the normalized coefficients for household savings are between -0.12 and -0.14 in the three years, suggesting that it is negatively correlated with household savings.

Table 29. Results from the linear regression analysis for household possession of mobile phone against annual income and household savings

1998	Mobile Phone				
	Not-normalized		Normalized Coefficient	t	Significance Level
	B	Standard Deviation			
Variable	0.9272	0.0678		13.6826	0.0000
Annual Income - Husband (10,000 yen)	0.0001	0.0001	0.0375	0.9217	0.3570
Annual Income - Wife (10,000 yen)	0.0008	0.0002	0.1588	4.0841	0.0000
Annual Income - Husband and Wife total (10,000 yen)	-0.0034	0.0020	-0.0650	-1.7071	0.0883
Household savings (10,000 yen)	-0.0002	0.0001	-0.1497	-3.6320	0.0003

1999	Not-normalized		Normalized Coefficient	t	Significance Level
	B	Standard Deviation			
	Variable	1.0969	0.0727		15.0813
Annual Income - Husband (10,000 yen)	0.0001	0.0001	0.0472	1.2095	0.2269
Annual Income - Wife (10,000 yen)	0.0008	0.0002	0.1532	4.0844	0.0000
Annual Income - Husband and Wife total (10,000 yen)	-0.0045	0.0051	-0.0322	-0.8701	0.3846
Household savings (10,000 yen)	-0.0002	0.0001	-0.1462	-3.7033	0.0002

2000	Not-normalized		Normalized Coefficient	t	Significance Level
	B	Standard Deviation			
	Variable	1.3420	0.0731		18.3509
Annual Income - Husband (10,000 yen)	0.0003	0.0001	0.0993	2.5693	0.0104
Annual Income - Wife (10,000 yen)	0.0005	0.0002	0.0918	2.4790	0.0134
Annual Income - Husband and Wife total (10,000 yen)	0.0092	0.0070	0.0479	1.3009	0.1937
Household savings (10,000 yen)	-0.0002	0.0001	-0.1263	-3.2536	0.0012

E. Panel Analysis 2: Comparison of mean values of the variables between NN and NY after screening of sample

Based on the results of cross section analysis (linear regression analysis), the cases that experienced the life happenings, which turned out to affect the shift of happiness scores were eliminated from the data. The same analysis as Panel Analysis 1 was performed after the exclusion to investigate the effects of elimination of these cases on the exhibition of significant differences between the mean values of variables between NN and NY groups.

Table 30. Comparisons of mean values of ultimate utility and consumption between NN and NY of cloth dryer (1998-1999) – cases eliminated based on variables influencing happiness

Indicators for ultimate utility	NN (738)		NY (23)		S.D.
	Mean	SD	Mean	SD	
Happiness	0.009	0.628	-0.130	0.458	
Life Satisfaction	0.023	0.821	-0.087	1.041	
Living Standard	0.009	0.540	0.000	0.603	

	NN (738)		NY (23)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	-0.05	0.50	-0.22	0.80	+

Household spending allocation for the month of September (1,000 Yen)	NN (738)		NY (23)		S.D.
	Mean	SD	Mean	SD	
Food	4.06	27.97	10.65	21.30	
Housing (Rent/Mortgage)	0.79	46.12	-6.65	28.01	
Water, Gas, Electricity	0.59	8.27	1.09	8.65	
Furniture and Household Appliances	-1.41	14.34	0.09	8.53	
Clothing and Shoes	0.22	18.45	3.87	15.77	
Medical and Insurance	-0.32	19.25	-1.43	13.92	
Transportation	9.67	60.27	6.87	13.11	
Communication	2.99	8.46	1.87	10.99	
Education	1.63	19.78	-2.39	13.06	
Hobby and Leisure	-0.69	26.53	-3.43	20.52	
Going out	-0.89	17.64	-0.09	16.90	
Allowances	-1.09	24.14	-2.17	26.87	

Household possession of durable consumer good	NN (738)		NY (23)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.04	0.39	0.09	0.42	
Cupboard	-0.01	0.49	0.00	0.52	
Microwave	0.01	0.31	0.00	0.30	
Refrigerator	0.01	0.38	-0.04	0.21	
Automatic Dishwasher	0.00	0.19	0.04	0.21	
Vacuum Cleaner	0.04	0.54	0.09	0.51	
Laundry Machine	0.01	0.33	-0.04	0.37	
Cloths Dryer	0.00	0.00	1.00	0.00	
Sewing Machine	0.02	0.35	-0.04	0.21	
Electric Fan	0.03	0.70	0.26	0.75	+
Air Conditioner	0.06	0.75	0.35	0.98	*
Fan Heater	0.02	0.60	-0.09	0.60	
“Kotatsu” Heater	-0.04	0.50	0.04	0.71	
TV Set	0.08	0.73	0.26	0.69	
Stereo Sound System	-0.01	0.50	-0.09	0.42	
CD Radio Cassette Recorder	0.02	0.52	0.30	0.47	***
VCR	-0.02	0.63	-0.04	0.64	
Video Camera	0.03	0.29	-0.09	0.29	*
Telephone	0.02	0.85	0.13	0.92	
Bicycle	0.05	0.85	0.30	1.06	
Car	-0.01	0.47	0.09	0.29	
TV Game	0.12	0.67	0.00	0.30	
Word Processor	-0.01	0.38	0.00	0.43	
Personal Computer	0.12	0.43	0.00	0.52	
FAX	0.06	0.34	0.13	0.46	
Mobile Phone	0.17	0.59	0.30	0.56	

Wife, Working Days	Time-use patterns (minutes)	NN (738)		NY (23)		S.D.
		Mean	SD	Mean	SD	
	Weekdays-Commuting (work/school)	-0.32	30.57	2.48	12.15	
	Work	5.73	148.02	7.78	125.13	
	Study	-3.16	59.15	-18.00	115.01	

	House-Keeping and Taking Care of Children	-22.39	152.54	13.00	115.15	
	Hobby, Leisure and Going out	8.61	133.37	23.35	159.71	
	Sleep, Eat, Personal Hygiene	10.06	168.45	-19.22	116.38	
Wife Weekends/Holidays	Weekdays-Commuting (work/school)	0.42	15.62	0.00	0.00	
	Work	0.34	68.60	31.30	111.33	**
	Study	-2.80	66.49	-0.13	72.59	
	House-Keeping and Taking Care of Children	-13.37	162.69	18.57	104.93	
	Hobby, Leisure and Going out	-2.05	189.41	-5.61	191.81	
	Sleep, Eat, Personal Hygiene	16.71	184.75	-44.13	148.31	+
Husband, Working Days	Weekdays-Commuting (work/school)	-1.91	47.89	-6.05	62.38	
	Work	-2.00	124.45	9.42	57.29	
	Study	1.75	34.25	-15.53	64.91	
	House-Keeping and Taking Care of Children	2.27	73.67	27.37	53.84	+
	Hobby, Leisure and Going out	0.52	104.39	25.63	151.41	
	Sleep, Eat, Personal Hygiene	0.99	119.72	-29.47	142.35	
Husband, Weekends/Holidays	Weekdays-Commuting (work/school)	0.13	6.10	0.00	0.00	
	Work	0.62	88.02	-9.47	45.88	
	Study	2.52	62.78	22.11	94.26	**
	House-Keeping and Taking Care of Children	2.36	154.86	3.16	146.05	
	Hobby, Leisure and Going out	-16.62	231.99	37.74	286.45	
	Sleep, Eat, Personal Hygiene	12.62	223.96	-50.68	234.19	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 31. Comparisons of mean values of ultimate utility and consumption between NN and NY of personal computer (1998-1999) – cases eliminated based on variables influencing happiness

Indicators for ultimate utility	NN (560)		NY (100)		S.D.
	Mean	SD	Mean	SD	
Happiness	0.066	0.653	-0.020	0.586	
Life Satisfaction	0.061	0.846	-0.100	0.810	*
Living Standard	0.005	0.559	0.070	0.555	

	NN (560)		NY (100)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	-0.05	0.50	-0.04	0.40	

Household spending allocation for the month of September (1,000 Yen)	NN (560)		NY (100)		S.D.
	Mean	SD	Mean	SD	
Food	3.06	26.35	7.24	25.81	+
Housing (Rent/Mortgage)	0.19	19.06	0.37	20.82	
Water, Gas, Electricity	0.62	8.72	-2.54	25.61	**
Furniture and Household Appliances	-0.19	16.69	-4.92	34.00	**
Clothing and Shoes	-0.25	17.05	-0.74	20.96	
Medical and Insurance	-1.32	24.75	-1.12	11.00	
Transportation	8.83	47.91	12.77	70.59	
Communication	3.12	9.09	1.73	7.69	+
Education	0.62	20.46	3.96	16.09	+
Hobby and Leisure	-0.40	25.94	-1.81	14.85	
Going out	-1.44	17.77	0.02	17.38	
Allowances	-1.70	24.42	1.75	17.17	

Household possession of durable consumer good	NN (560)		NY (100)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.04	0.38	0.07	0.41	
Cupboard	0.01	0.49	0.03	0.44	
Microwave	-0.01	0.29	0.06	0.34	**
Refrigerator	0.01	0.39	-0.01	0.46	
Automatic Dishwasher	0.00	0.21	0.00	0.20	
Vacuum Cleaner	0.01	0.52	0.14	0.51	**
Laundry Machine	-0.02	0.32	0.06	0.24	**
Cloths Dryer	0.00	0.22	0.00	0.14	
Sewing Machine	0.01	0.35	0.07	0.33	
Electric Fan	0.05	0.71	0.15	0.50	
Air Conditioner	0.08	0.70	0.17	0.91	
Fan Heater	0.03	0.59	0.12	0.62	+
“Kotatsu” Heater	-0.05	0.46	0.10	0.54	**
TV Set	0.08	0.68	0.21	0.82	*
Stereo Sound System	-0.03	0.49	0.13	0.60	***
CD Radio Cassette Recorder	0.04	0.51	0.01	0.59	
VCR	-0.03	0.59	0.13	0.80	*
Video Camera	0.02	0.30	0.06	0.24	
Telephone	0.02	0.86	0.05	0.67	

Bicycle	0.06	0.88	0.20	0.82	+
Car	0.01	0.44	0.12	0.61	**
TV Game	0.14	0.66	0.19	0.68	
Word Processor	0.01	0.31	-0.08	0.44	**
Personal Computer	0.00	0.00	1.01	0.10	***
FAX	0.05	0.34	0.14	0.40	**
Mobile Phone	0.16	0.56	0.23	0.72	

Time-use patterns (minutes)		NN (560)		NY (100)		S.D.
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.66	27.34	0.53	37.56	
	Work	9.31	150.92	0.57	156.13	
	Study	-5.37	50.31	11.95	56.53	***
	House-Keeping and Taking Care of Children	-21.71	147.63	-25.11	184.43	
	Hobby, Leisure and Going out	12.44	133.89	-6.81	149.40	
	Sleep, Eat, Personal Hygiene	2.04	169.69	19.95	163.19	
Wife Weekends/Holidays	Weekdays-Commuting (work/school)	1.12	16.21	-0.59	6.08	
	Work	3.07	69.87	2.47	68.34	
	Study	-3.36	61.47	2.48	65.08	
	House-Keeping and Taking Care of Children	-16.75	163.41	-11.42	159.42	
	Hobby, Leisure and Going out	4.02	189.06	-34.16	216.53	*
	Sleep, Eat, Personal Hygiene	10.62	184.10	37.37	211.98	
Husband, Working Days	Weekdays-Commuting (work/school)	-0.65	48.14	7.68	71.91	
	Work	-3.39	114.41	-2.58	94.11	
	Study	0.45	30.79	2.59	32.77	
	House-Keeping and Taking Care of Children	8.11	74.82	2.79	44.77	
	Hobby, Leisure and Going out	1.37	103.22	-6.52	94.38	
	Sleep, Eat, Personal Hygiene	-2.06	124.57	-7.76	116.19	
Husband, Weekends/Holidays	Weekdays-Commuting (work/school)	0.17	6.98	3.58	29.25	**
	Work	0.50	90.21	20.87	78.92	*
	Study	1.57	37.81	0.83	52.92	
	House-Keeping and Taking Care of Children	6.97	158.43	-8.54	167.37	
	Hobby, Leisure and Going out	-13.27	237.90	-61.62	236.04	+
	Sleep, Eat, Personal Hygiene	5.93	234.06	40.19	240.64	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 32. Comparisons of mean values of ultimate utility and consumption between NN and NY of mobile phone (1998-1999) – cases eliminated based on variables influencing happiness

Indicators for ultimate utility	NN (178)		NY (101)		S.D.
	Mean	SD	Mean	SD	
Happiness	0.03	0.61	0.00	0.65	
Life Satisfaction	-0.03	0.79	0.05	0.85	
Living Standard	0.01	0.57	-0.02	0.47	

	NN (178)		NY (101)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	-0.04	0.36	-0.07	0.75	

Household spending allocation for the month of September (1,000 Yen)	NN (178)		NY (101)		S.D.
	Mean	SD	Mean	SD	
Food	7.33	30.43	5.50	25.41	
Housing (Rent/Mortgage)	5.06	76.49	-7.95	60.55	+
Water, Gas, Electricity	-0.66	8.18	0.40	8.48	
Furniture and Household Appliances	-0.54	12.60	0.37	15.61	
Clothing and Shoes	-1.49	18.14	1.67	18.39	
Medical and Insurance	-1.47	12.84	3.07	31.20	*
Transportation	11.12	75.90	5.47	14.10	
Communication	1.63	5.10	3.88	7.77	***
Education	4.46	26.27	3.75	18.44	
Hobby and Leisure	-1.92	18.53	-0.46	24.20	
Going out	-0.03	17.56	-0.40	15.14	
Allowances	-2.63	27.10	-0.86	18.95	

Household possession of durable consumer good	NN (178)		NY (101)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.07	0.31	0.02	0.49	
Cupboard	0.06	0.47	0.07	0.45	
Microwave	0.04	0.29	-0.02	0.32	+
Refrigerator	0.01	0.36	0.00	0.42	
Automatic Dishwasher	0.01	0.17	-0.05	0.22	**
Vacuum Cleaner	0.10	0.42	0.00	0.51	*

Laundry Machine	0.02	0.30	-0.01	0.33	
Cloths Dryer	0.03	0.20	-0.03	0.26	**
Sewing Machine	0.06	0.30	-0.01	0.26	*
Electric Fan	0.08	0.58	0.10	0.69	
Air Conditioner	0.05	0.83	0.02	0.75	
Fan Heater	0.07	0.55	-0.01	0.50	
“Kotatsu” Heater	0.00	0.41	-0.07	0.45	
TV Set	0.08	0.56	0.10	0.64	
Stereo Sound System	-0.04	0.39	-0.02	0.40	
CD Radio Cassette Recorder	0.10	0.44	0.04	0.51	
VCR	-0.01	0.46	0.13	0.56	**
Video Camera	0.04	0.26	0.02	0.24	
Telephone	0.12	0.82	0.09	0.86	
Bicycle	0.01	0.76	0.10	1.00	
Car	0.02	0.20	-0.03	0.43	
TV Game	0.08	0.68	0.11	0.66	
Word Processor	-0.03	0.32	0.06	0.34	**
Personal Computer	0.09	0.43	0.08	0.39	
FAX	0.02	0.24	0.02	0.32	
Mobile Phone	0.00	0.00	1.16	0.44	***

		NN (178)		NY (101)		S.D.
Time-use patterns (minutes)		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.42	24.59	-3.62	27.32	
	Work	10.93	111.53	7.85	123.38	
	Study	-2.37	49.29	-5.95	64.00	
	House-Keeping and Taking Care of Children	-27.50	137.79	-12.59	149.94	
	Hobby, Leisure and Going out	33.44	112.18	12.74	135.75	
	Sleep, Eat, Personal Hygiene	-13.08	138.62	1.57	157.04	
Wife Weekends/Holidays	Weekdays-Commuting (work/school)	2.03	21.18	-0.03	0.72	
	Work	2.05	38.93	-0.02	70.81	
	Study	7.21	52.63	-6.57	72.44	*
	House-Keeping and Taking Care of Children	-10.88	144.76	-11.49	160.86	
	Hobby, Leisure and Going out	-6.19	169.77	2.21	176.47	
	Sleep, Eat, Personal Hygiene	4.55	178.02	20.22	176.18	
Husband, Working Days	Weekdays-Commuting (work/school)	3.86	50.02	-5.30	57.83	
	Work	-8.18	107.14	19.79	121.12	*
	Study	0.40	28.25	-0.16	20.45	
	House-Keeping and Taking Care of Children	-1.95	55.23	-9.23	76.35	
	Hobby, Leisure and Going out	26.42	103.26	-3.69	130.20	*
	Sleep, Eat, Personal Hygiene	-12.31	101.36	5.53	136.86	
Husband, Weekends/Holidays	Weekdays-Commuting (work/school)	-0.02	0.26	0.04	10.63	
	Work	-13.05	75.73	9.71	65.20	**
	Study	2.72	51.84	-6.38	33.04	
	House-Keeping and Taking Care of Children	11.96	136.34	-19.18	208.65	
	Hobby, Leisure and Going out	-12.77	216.23	20.13	265.73	
	Sleep, Eat, Personal Hygiene	15.76	229.35	-1.15	247.36	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 33. Comparisons of mean values of ultimate utility and consumption between NN and NY of cloth dryer (1999-2000) – cases eliminated based on variables influencing happiness

Indicators for ultimate utility	NN (663)		NY (23)		S.D.
	Mean	SD	Mean	SD	
Happiness	-0.09	0.66	0.04	0.71	
Life Satisfaction	-0.13	0.81	0.22	0.95	**
Living Standard	-0.05	0.53	-0.09	0.73	

	NN (663)		NY (23)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	-0.05	0.50	0.00	0.30	

Household spending allocation for the month of September (1,000 Yen)	NN (663)		NY (23)		S.D.
	Mean	SD	Mean	SD	
Food	0.11	31.33	5.83	29.63	
Housing (Rent/Mortgage)	-1.32	52.80	-3.30	25.18	
Water, Gas, Electricity	0.99	10.43	-0.83	6.85	
Furniture and Household Appliances	0.68	13.52	4.17	29.27	
Clothing and Shoes	1.00	17.01	7.39	22.20	*
Medical and Insurance	-0.03	18.37	-8.39	28.17	**
Transportation	1.38	72.48	-14.87	61.39	
Communication	1.49	9.47	1.48	8.11	

Education	1.03	19.51	-6.17	49.11	+
Hobby and Leisure	-0.18	28.56	-0.48	12.72	
Going out	-0.16	18.90	14.74	27.04	***
Allowances	0.18	19.80	5.13	28.59	

Household possession of durable consumer good	NN (663)		NY (23)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.02	0.39	0.22	0.52	**
Cupboard	0.02	0.53	0.35	0.57	***
Microwave	0.02	0.32	0.09	0.42	
Refrigerator	0.02	0.39	0.17	0.49	*
Automatic Dishwasher	0.01	0.16	0.17	0.39	***
Vacuum Cleaner	0.00	0.47	0.26	0.75	**
Laundry Machine	0.02	0.33	0.17	0.49	**
Cloths Dryer	0.00	0.00	1.00	0.00	
Sewing Machine	0.00	0.33	0.09	0.51	
Electric Fan	0.05	0.72	0.22	0.74	
Air Conditioner	0.05	0.71	1.00	2.02	***
Fan Heater	0.01	0.67	0.26	1.01	*
“Kotatsu” Heater	0.01	0.47	0.00	0.43	
TV Set	0.05	0.70	0.30	0.76	*
Stereo Sound System	-0.02	0.54	0.13	0.34	
CD Radio Cassette Recorder	0.06	0.52	0.09	0.51	
VCR	0.02	0.64	0.39	0.99	***
Video Camera	0.00	0.32	0.00	0.52	
Telephone	0.05	0.83	0.39	0.89	*
Bicycle	0.13	0.88	0.09	1.16	
Car	0.03	0.47	0.13	0.69	
TV Game	0.08	0.63	-0.13	0.97	+
Word Processor	-0.02	0.38	0.04	0.64	
Personal Computer	0.11	0.48	0.30	0.56	*
FAX	0.04	0.33	0.17	0.49	*
Mobile Phone	0.27	0.67	0.35	0.98	

	Time-use patterns (minutes)	NN (663)		NY (23)		S.D.
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	1.31	28.93	-8.17	44.90	+
	Work	17.64	143.24	-34.09	191.14	*
	Study	-2.00	46.05	7.74	48.91	
	House-Keeping and Taking Care of Children	-15.56	139.89	64.48	209.06	***
	Hobby, Leisure and Going out	-2.50	131.35	54.70	175.48	**
	Sleep, Eat, Personal Hygiene	1.28	165.17	-75.26	189.31	**
Wife Weekends/Holidays	Weekdays-Commuting (work/school)	0.86	16.11	0.00	0.00	
	Work	-3.89	78.34	2.61	12.51	
	Study	-2.53	48.19	-8.17	70.51	
	House-Keeping and Taking Care of Children	-9.92	158.93	-5.00	269.93	
	Hobby, Leisure and Going out	16.03	196.11	13.17	183.47	
	Sleep, Eat, Personal Hygiene	-0.63	205.54	-0.26	241.46	
Husband, Working Days	Weekdays-Commuting (work/school)	-3.80	46.61	3.67	36.69	
	Work	7.93	114.38	30.06	221.41	
	Study	1.71	29.01	-9.72	47.00	+
	House-Keeping and Taking Care of Children	-3.74	62.02	-52.94	188.41	***
	Hobby, Leisure and Going out	2.05	108.69	46.00	84.02	*
	Sleep, Eat, Personal Hygiene	-2.77	126.19	-23.06	118.36	
Husband, Weekends/Holidays	Weekdays-Commuting (work/school)	-0.16	6.48	0.00	0.00	
	Work	-1.94	83.55	-10.00	55.41	
	Study	3.80	48.21	13.17	56.43	
	House-Keeping and Taking Care of Children	-15.48	142.19	-9.67	133.80	
	Hobby, Leisure and Going out	26.53	233.20	43.33	151.59	
	Sleep, Eat, Personal Hygiene	-13.51	242.70	-39.83	150.37	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 34. Comparisons of mean values of ultimate utility and consumption between NN and NY of personal computer (1999-2000) – cases eliminated based on variables influencing happiness

Indicators for ultimate utility	NN (416)		NY (107)		S.D.
	Mean	SD	Mean	SD	
Happiness	-0.178	0.685	-0.019	0.658	**
Life Satisfaction	-0.163	0.834	-0.009	0.807	*
Living Standard	-0.065	0.562	0.047	0.539	*

	NN (416)	NY (107)	S.D.
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	Mean	SD	Mean	SD	
Number of Family Members	-0.06	0.41	-0.01	0.50	

Household spending allocation for the month of September (1,000 Yen)	NN (416)		NY (107)		S.D.
	Mean	SD	Mean	SD	
Food	1.99	31.07	0.79	33.19	
Housing (Rent/Mortgage)	2.33	34.73	-3.68	16.21	+
Water, Gas, Electricity	0.37	8.89	0.11	8.49	
Furniture and Household Appliances	-1.02	17.82	0.23	12.23	
Clothing and Shoes	1.06	13.10	0.63	19.57	
Medical and Insurance	-0.71	17.35	1.68	24.92	
Transportation	2.20	71.12	-5.82	97.89	**
Communication	1.17	9.37	3.38	9.00	
Education	1.03	14.88	1.66	36.83	
Hobby and Leisure	-0.64	27.56	-1.83	31.56	
Going out	0.43	20.09	-2.79	17.20	+
Allowances	-0.07	18.15	-1.41	25.09	

Household possession of durable consumer good	NN (416)		NY (107)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.04	0.36	0.04	0.36	
Cupboard	0.04	0.52	0.02	0.49	
Microwave	0.03	0.30	0.03	0.22	
Refrigerator	0.04	0.34	0.01	0.35	
Automatic Dishwasher	0.01	0.18	0.04	0.19	
Vacuum Cleaner	0.02	0.44	0.01	0.52	
Laundry Machine	0.04	0.31	0.03	0.22	
Cloths Dryer	0.00	0.18	0.01	0.26	
Sewing Machine	0.03	0.35	0.02	0.24	
Electric Fan	0.09	0.69	0.05	0.81	
Air Conditioner	0.07	0.62	0.09	0.93	
Fan Heater	0.06	0.63	-0.02	0.79	
“Kotatsu” Heater	0.02	0.46	0.12	0.47	*
TV Set	0.05	0.64	0.10	0.75	
Stereo Sound System	0.01	0.54	0.03	0.54	
CD Radio Cassette Recorder	0.01	0.49	0.10	0.49	*
VCR	0.06	0.60	0.08	0.75	
Video Camera	0.02	0.28	-0.07	0.34	**
Telephone	0.07	0.82	0.07	0.73	
Bicycle	0.11	0.82	0.10	0.94	
Car	0.01	0.48	0.05	0.48	
TV Game	0.11	0.68	-0.01	0.57	*
Word Processor	0.02	0.33	-0.10	0.45	***
Personal Computer	0.00	0.00	1.02	0.14	***
FAX	0.04	0.32	0.07	0.33	
Mobile Phone	0.20	0.59	0.42	0.80	***

		NN (416)		NY (107)		S.D.
		Mean	SD	Mean	SD	
Time-use patterns (minutes)						
Wife, Working Days	Weekdays-Commuting (work/school)	3.42	30.79	0.07	34.07	
	Work	9.29	148.62	-5.39	146.11	
	Study	-2.24	37.98	7.45	46.79	**
	House-Keeping and Taking Care of Children	-14.67	148.81	-20.13	150.72	
	Hobby, Leisure and Going out	2.67	141.23	-6.16	120.09	
	Sleep, Eat, Personal Hygiene	5.56	169.61	22.15	138.36	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	1.22	14.03	0.04	21.81	
	Work	-1.02	84.52	-3.88	67.05	
	Study	-3.50	38.24	1.18	56.01	
	House-Keeping and Taking Care of Children	-17.41	180.43	-20.78	180.75	
	Hobby, Leisure and Going out	17.18	205.89	24.75	169.87	
	Sleep, Eat, Personal Hygiene	4.05	214.56	-2.82	178.29	
Husband, Working Days	Weekdays-Commuting (work/school)	-0.83	48.74	-1.28	45.44	
	Work	4.17	125.53	-6.71	100.82	
	Study	-1.33	21.90	0.75	20.14	
	House-Keeping and Taking Care of Children	-10.19	85.55	-2.51	41.01	
	Hobby, Leisure and Going out	9.59	110.93	4.36	109.46	
	Sleep, Eat, Personal Hygiene	-2.81	128.61	6.06	106.99	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.26	8.25	0.00	0.00	
	Work	-6.74	83.32	4.62	72.21	
	Study	-0.90	36.09	1.62	48.28	
	House-Keeping and Taking Care of Children	-23.31	155.14	-23.06	166.78	
	Hobby, Leisure and Going out	16.06	233.73	26.31	254.97	

Sleep, Eat, Personal Hygiene	15.77	244.89	-9.47	263.95
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(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 35. Comparisons of mean values of ultimate utility and consumption between NN and NY of mobile phone (1999-2000) – cases eliminated based on variables influencing happiness

Indicators for ultimate utility	NN (98)		NY (91)		S.D.
	Mean	SD	Mean	SD	
Happiness	-0.092	0.627	-0.176	0.693	
Life Satisfaction	-0.102	0.711	0.022	0.774	
Living Standard	-0.092	0.539	0.000	0.537	

	NN (98)		NY (91)		S.D.
	Mean	SD	Mean	SD	
Number of Family Members	-0.01	0.10	-0.04	0.29	

Household spending allocation for the month of September (1,000 Yen)	NN (98)		NY (91)		S.D.
	Mean	SD	Mean	SD	
Food	-4.04	32.28	2.54	23.22	+
Housing (Rent/Mortgage)	-4.98	24.12	-12.96	103.39	
Water, Gas, Electricity	0.28	9.73	0.68	8.55	
Furniture and Household Appliances	-0.30	13.39	2.31	16.25	
Clothing and Shoes	0.94	12.42	1.09	15.06	
Medical and Insurance	0.42	9.93	0.22	10.76	
Transportation	-0.69	28.48	-1.05	147.16	
Communication	0.32	4.01	4.16	10.37	***
Education	-1.94	25.61	1.77	11.39	
Hobby and Leisure	1.69	17.87	-2.30	19.01	+
Going out	-2.58	14.90	3.53	26.03	**
Allowances	0.54	13.26	6.71	15.57	***

Household possession of durable consumer good	NN (98)		NY (91)		S.D.
	Mean	SD	Mean	SD	
Dining Set	0.02	0.35	-0.01	0.41	
Cupboard	-0.01	0.34	-0.03	0.50	
Microwave	0.03	0.22	0.00	0.26	
Refrigerator	0.02	0.35	0.00	0.26	
Automatic Dishwasher	0.01	0.18	0.01	0.10	
Vacuum Cleaner	-0.02	0.43	-0.02	0.45	
Laundry Machine	0.03	0.22	0.01	0.24	
Cloths Dryer	-0.03	0.22	0.01	0.18	
Sewing Machine	0.00	0.25	0.03	0.35	
Electric Fan	0.21	0.72	0.04	0.65	*
Air Conditioner	0.11	0.57	0.09	0.71	
Fan Heater	0.00	0.67	-0.01	0.48	
“Kotatsu” Heater	0.10	0.58	-0.03	0.35	*
TV Set	-0.01	0.42	-0.01	0.61	
Stereo Sound System	-0.01	0.44	0.01	0.46	
CD Radio Cassette Recorder	0.05	0.56	0.00	0.54	
VCR	0.04	0.50	0.04	0.54	
Video Camera	-0.02	0.35	0.00	0.30	
Telephone	0.14	0.66	0.20	0.69	
Bicycle	0.09	1.02	0.24	0.82	
Car	-0.01	0.37	0.03	0.31	
TV Game	0.05	0.58	0.08	0.52	
Word Processor	-0.06	0.43	-0.02	0.39	
Personal Computer	0.12	0.48	0.18	0.53	
FAX	0.03	0.34	0.11	0.38	+
Mobile Phone	0.00	0.00	1.25	0.51	***

	NN (98)		NY (91)		S.D.
	Mean	SD	Mean	SD	
Time-use patterns (minutes)					
Wife, Working Days	Weekdays-Commuting (work/school)	2.33	16.43	1.26	24.69
	Work	-0.67	89.67	-5.87	151.33
	Study	0.09	33.20	-3.34	49.02
	House-Keeping and Taking Care of Children	-8.76	147.63	-5.21	173.75
	Hobby, Leisure and Going out	3.36	133.49	-12.33	141.17
	Sleep, Eat, Personal Hygiene	5.86	145.79	24.30	182.35
Wife Weekends/Holidays	Weekends-Commuting (work/school)	-0.59	6.08	2.01	18.87
	Work	0.61	56.82	10.54	85.60
	Study	-6.24	42.62	-3.26	46.88
	House-Keeping and Taking Care of Children	-1.10	149.11	-10.52	162.32

	Hobby, Leisure and Going out	19.02	193.58	5.91	198.03	
	Sleep, Eat, Personal Hygiene	-11.14	177.68	-6.46	195.88	
Husband, Working Days	Weekdays-Commuting (work/school)	0.12	47.98	-2.08	45.32	
	Work	14.55	92.18	2.37	102.76	
	Study	4.30	18.81	-4.58	24.45	**
	House-Keeping and Taking Care of Children	-3.32	44.34	-0.22	49.18	
	Hobby, Leisure and Going out	-9.74	107.17	-7.82	84.13	
	Sleep, Eat, Personal Hygiene	-5.91	91.82	6.51	123.22	
	Weekends-Commuting (work/school)	0.00	0.00	0.00	0.00	
Husband, Weekends/Holidays	Work	1.75	55.24	-2.77	22.33	
	Study	8.15	53.09	-9.20	53.23	*
	House-Keeping and Taking Care of Children	5.46	166.16	-16.58	104.93	
	Hobby, Leisure and Going out	10.13	208.38	38.98	229.82	
	Sleep, Eat, Personal Hygiene	-32.75	258.25	-12.09	234.28	

(+  $p < 0.15$ , \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ )

F. Panel Analysis 3: Comparisons of mean values of the variables between NN and NY after eliminating outliers

By definition, an observation  $y$  that is usually large or small relative to the other values in a data set is called an outlier. The most obvious method for determining whether an observation is an outlier is to calculate its z-score. Another procedure for detecting outliers is to construct a box plot of the sample data. With this method, we constructed intervals similar to the  $\bar{y} \pm 2SD$  and  $\bar{y} \pm 3SD$  intervals of interquartile range instead of the standard deviation (SD).<sup>[8]</sup> We first divided the sample into married and un-married groups and allowed SPSS to identify the cases of outliers per variable of income, expenditure, time-use data, per group. Figure 5 shows an example of the output data of box plot analysis by SPSS in the case of monthly expenditure for food. Lower quartile ( $Q_L$ ) and upper quartiles ( $Q_U$ ) are automatically calculated to obtain the interquartile range ( $IQR = Q_U - Q_L$ ), inner fences of  $1.5(IQR)$  below  $Q_L$  and above  $Q_U$ , and outer fences of  $3(IQR)$  below  $Q_L$  and above  $Q_U$  for the  $y$  values in a data set. In the figure, the numbers above and below the box and whiskers are ID numbers of the cases. The black line in the box is median ( $m$ ), upper and lower ends are IQR, numbers with circles ( $\circ$ ) are suspect outliers that fall between the inner and outer fences, and numbers with asterisks ( $*$ ) are highly suspect outliers that fall outside the outer fences. For this research, only highly suspect outliers were manually removed. The numbers of outliers in the 1998-1999 data and 1999-2000 data were 222 and 49, respectively. The reason for such large difference in number is unclear. The total sample number after preparation of the sample was 1,176. It was suspected that subtraction of 222 samples may make the data intolerable to the statistical analysis. Therefore, the removal of outlier samples was performed only on the 1999-2000 data.

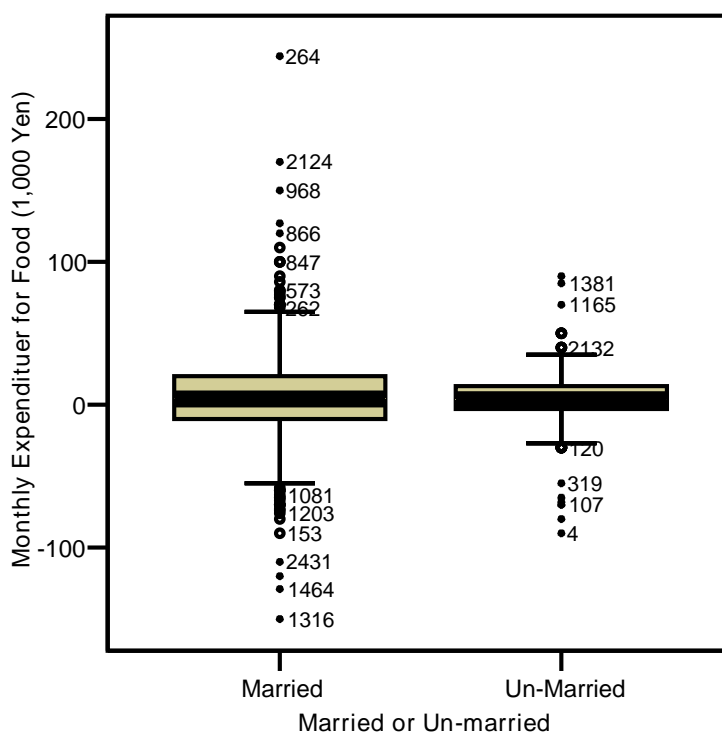


Figure 5. One example of the output data of box plot analysis by SPSS in the case of monthly expenditure for food.

After removing the highly suspected outliers from the data, panel analysis was performed once again for the adopters and non-adopters of three technologies in married and un-married samples separately to see the effects of removing outliers on the robustness of the results. Tables 36-38 show comparisons of mean values of the variables between NN and NY after eliminating outliers in 1999-2000. No significant impacts was observed on distinction between NN and NY in indicators for ultimate utility.

Table 36. Comparisons of mean values of the variables between NN and NY after eliminating outliers -- Cloth dryers in 1999-2000.

1999-2000	MD					UnMD				
	NN (601)		NY (26)		Significant	NN (254)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Indicators for ultimate utility										
Happiness	-0.097	0.654	0.000	0.748		-0.012	0.708	-0.250	0.500	
Life Satisfaction	-0.121	0.800	-0.154	1.156		-0.106	0.889	0.500	0.577	
Living Standard	-0.040	0.543	0.038	0.720		-0.055	0.560	-0.250	0.500	

	MD					UnMD				
	NN (601)		NY (26)		Significant	NN (254)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.07	0.54	0.19	0.49		-0.09	0.72	0.00	0.00	

Household spending allocation for the month of September (1,000 Yen)	MD					UnMD				
	NN (601)		NY (26)		Significant	NN (254)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	0.94	32.78	-0.08	43.50		0.88	18.19	3.75	12.50	
Housing (Rent/Mortgage)	1.28	67.81	-5.50	25.89		0.66	14.99	0.00	0.00	
Water, Gas, Electricity	1.76	11.27	3.81	19.08		0.07	4.66	-0.75	1.50	
Furniture and Household Appliances	0.33	13.05	3.27	28.08		1.53	11.95	5.00	10.00	
Clothing and Shoes	1.03	15.57	4.23	15.77		0.42	18.66	7.50	15.00	
Medical and Insurance	0.30	32.79	-6.19	24.61		1.14	18.31	-11.75	24.85	
Transportation	-0.27	58.71	-42.08	145.99	***	1.33	15.54	-1.75	5.68	
Communication	1.68	10.01	2.42	7.68		1.02	8.62	-2.50	5.00	
Education	0.44	23.28	3.38	19.30		1.26	17.49	2.50	5.00	
Hobby and Leisure	0.00	25.95	1.85	21.68		-1.77	32.10	2.50	5.00	
Going out	0.69	19.60	7.42	24.70	*	-0.96	15.68	22.00	39.74	***
Allowances	0.14	25.95	6.92	32.38		0.79	7.26	1.00	2.00	

Household possession of durable consumer good	MD					UnMD				
	NN (601)		NY (26)		Significant	NN (254)		NY (4)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.39	0.15	0.46	+	0.02	0.43	0.25	0.50	
Cupboard	0.03	0.46	0.27	0.53	***	0.02	0.58	0.25	0.50	
Microwave	0.02	0.25	0.12	0.43	*	0.03	0.43	0.25	0.50	
Refrigerator	0.01	0.37	0.19	0.49	**	0.02	0.44	0.25	0.50	
Automatic Dishwasher	0.02	0.19	0.19	0.40	***	0.00	0.13	0.25	0.50	***
Vacuum Cleaner	0.01	0.43	0.15	0.61	+	0.01	0.54	1.00	0.82	***
Laundry Machine	0.01	0.28	0.15	0.46	**	0.04	0.40	0.50	0.58	**
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.02	0.31	0.08	0.48		-0.01	0.37	0.50	0.58	***
Electric Fan	0.07	0.64	0.08	0.39		0.01	0.74	0.75	1.50	*
Air Conditioner	0.11	0.60	0.96	1.78	***	-0.02	0.90	0.75	2.22	+
Fan Heater	0.02	0.61	0.19	0.69		-0.03	0.68	1.00	1.83	***
"Kotatsu" Heater	-0.03	0.53	0.00	0.40		0.00	0.48	0.25	0.50	
TV Set	0.04	0.66	0.35	0.49	**	0.00	0.72	0.00	1.63	
Stereo Sound System	0.00	0.52	0.12	0.43		-0.02	0.55	0.25	0.50	
CD Radio Cassette Recorder	0.04	0.55	0.04	0.53		0.04	0.50	0.25	0.50	
VCR	0.05	0.61	0.12	0.52		0.01	0.69	1.25	2.06	***
Video Camera	0.02	0.35	0.00	0.49		0.02	0.25	0.25	0.50	*
Telephone	0.08	0.82	0.23	0.59		-0.02	0.81	0.75	1.71	*
Bicycle	0.16	0.93	0.04	0.87		0.00	0.59	0.25	2.06	
Car	0.06	0.53	0.19	0.69		0.02	0.49	-0.25	1.26	
TV Game	0.13	0.69	0.15	0.92		-0.01	0.58	-0.75	1.50	**
Word Processor	-0.01	0.41	0.08	0.56		-0.04	0.40	0.25	0.50	+
Personal Computer	0.14	0.49	0.23	0.51		0.09	0.47	0.25	0.50	
FAX	0.07	0.32	0.12	0.43		0.02	0.37	0.25	0.50	
Mobile Phone	0.30	0.68	0.46	0.81		0.07	0.59	-0.25	1.71	

	Time-use patterns (minutes)	MD					UnMD				
		NN (601)		NY (26)		Significant	NN (254)		NY (4)		Significant
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.78	25.42	-0.19	23.52		0.59	38.75	-60.25	83.72	***
	Work	11.02	165.91	27.42	223.29		2.74	166.61	-255.00	295.47	***
	Study	-0.46	39.90	2.23	39.74		-2.68	59.70	30.00	60.00	
	House-Keeping and Taking Care of Children	-1.49	206.63	38.88	284.08		1.98	79.71	45.00	90.00	
Wife, Weekends/Holiday	Hobby, Leisure and Going out	-9.54	134.63	16.04	157.44		3.58	153.22	238.50	190.06	***
	Sleep, Eat, Personal Hygiene	-2.20	176.21	-78.15	183.36	**	0.15	150.74	1.75	146.17	
	Weekends-Commuting (work/school)	-0.41	6.92	0.00	0.00		1.80	24.33	0.00	0.00	
	Work	-5.49	54.99	0.00	0.00		-8.50	100.37	15.00	30.00	
Husband, Working Days	Study	-0.58	31.73	-4.92	60.75		-6.62	74.02	15.00	30.00	
	House-Keeping and Taking Care of Children	12.63	214.80	39.42	273.99		-2.71	106.24	-45.75	298.95	
	Hobby, Leisure and Going out	-10.05	194.04	-0.12	179.76		29.44	222.15	-60.00	259.23	
	Sleep, Eat, Personal Hygiene	3.28	198.19	-30.23	234.23		-9.59	212.50	89.25	157.80	
Husband, Weekends/Holiday	Weekdays-Commuting (work/school)	-1.03	42.99	-7.17	46.51		N/A	N/A	N/A	N/A	
	Work	-1.98	126.37	17.67	197.71		N/A	N/A	N/A	N/A	
	Study	1.27	37.66	2.46	75.97		N/A	N/A	N/A	N/A	
	House-Keeping and Taking Care of Children	1.36	66.22	-42.00	163.44	***	N/A	N/A	N/A	N/A	
Husband, Weekends/Holiday	Hobby, Leisure and Going out	3.11	112.94	24.04	113.55		N/A	N/A	N/A	N/A	
	Sleep, Eat, Personal Hygiene	#VALUE!	125.73	0.50	136.13		N/A	N/A	N/A	N/A	
	Weekends-Commuting (work/school)	0.21	11.98	0.00	0.00		N/A	N/A	N/A	N/A	
	Work	-0.64	89.84	-5.22	50.89		N/A	N/A	N/A	N/A	
Husband, Weekends/Holiday	Study	2.77	68.41	12.78	44.06		N/A	N/A	N/A	N/A	
	House-Keeping and Taking Care of Children	-5.26	159.42	-18.13	201.69		N/A	N/A	N/A	N/A	
	Hobby, Leisure and Going out	6.25	245.26	-18.26	291.08		N/A	N/A	N/A	N/A	
	Sleep, Eat, Personal Hygiene	-2.37	242.42	28.83	206.82		N/A	N/A	N/A	N/A	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 37. Comparisons of mean values of the variables between NN and NY after eliminating outliers – personal computer in 1999-2000.

1999-2000	MD					UnMD				
	NN (357)		NY (118)		Significant	NN (162)		NY (31)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Indicators for ultimate utility										
Happiness	-0.15	0.69	-0.08	0.59		-0.13	0.72	-0.16	0.69	**
Life Satisfaction	-0.18	0.82	-0.03	0.78	*	-0.10	0.90	-0.10	0.70	
Living Standard	-0.08	0.55	0.10	0.56	***	-0.02	0.62	-0.13	0.56	

	MD					UnMD				
	NN (357)		NY (118)		Significant	NN (162)		NY (31)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.04	0.48	0.05	0.68		-0.07	0.59	-0.10	0.75	

Household spending allocation for the month of September (1,000 Yen)	MD					UnMD				
	NN (357)		NY (118)		Significant	NN (162)		NY (31)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	1.54	34.12	3.56	33.48		0.77	18.28	3.77	22.02	
Housing (Rent/Mortgage)	5.88	65.59	1.68	29.11		-0.43	16.23	0.32	12.20	
Water, Gas, Electricity	1.40	11.47	1.07	10.49		0.22	5.01	-0.13	2.57	
Furniture and Household Appliances	-1.20	21.69	1.40	10.40		0.76	4.89	-2.26	9.04	***
Clothing and Shoes	0.23	12.90	1.12	17.27		1.79	14.39	-2.42	24.40	
Medical and Insurance	-1.71	20.68	-1.35	15.95		1.12	7.91	6.61	44.20	+
Transportation	-1.75	68.33	1.43	14.29		-0.62	13.51	4.81	29.54	+
Communication	1.43	10.38	4.48	9.56	***	0.93	7.96	0.23	6.65	
Education	0.97	17.67	-0.98	33.52		-0.32	6.58	10.39	45.89	***
Hobby and Leisure	0.55	27.19	-1.08	28.75		-3.20	23.93	-0.68	46.82	
Going out	1.25	21.23	-1.67	19.04		-1.00	15.56	-3.45	16.23	
Allowances	0.18	22.68	0.73	29.13		-0.38	7.99	2.97	7.91	**

Household possession of durable consumer good	MD					UnMD				
	NN (357)		NY (118)		Significant	NN (162)		NY (31)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.35	0.08	0.36		0.02	0.42	0.06	0.44	
Cupboard	0.01	0.45	0.03	0.52		0.10	0.57	0.13	0.34	
Microwave	0.02	0.22	0.05	0.26		0.05	0.43	0.10	0.30	
Refrigerator	0.00	0.45	0.03	0.41		0.04	0.44	0.10	0.47	
Automatic Dishwasher	0.01	0.22	0.03	0.22		0.00	0.11	0.03	0.18	
Vacuum Cleaner	0.02	0.39	0.03	0.51		0.02	0.53	0.06	0.57	
Laundry Machine	0.02	0.26	0.03	0.29		0.06	0.41	0.10	0.30	
Cloths Dryer	0.00	0.21	-0.02	0.26		-0.02	0.19	0.03	0.18	+
Sewing Machine	0.04	0.36	0.03	0.28		0.04	0.37	0.00	0.37	
Electric Fan	0.08	0.64	0.00	0.77		0.05	0.74	0.06	0.73	
Air Conditioner	0.10	0.60	0.19	0.83		-0.01	0.76	0.10	1.19	
Fan Heater	0.07	0.66	0.00	0.63		0.02	0.53	-0.16	0.90	+
“Kotatsu” Heater	0.01	0.45	0.01	0.55		0.00	0.42	0.16	0.52	*
TV Set	0.03	0.64	0.11	0.64		0.00	0.70	0.06	1.00	
Stereo Sound System	0.03	0.58	0.05	0.43		-0.02	0.52	0.03	0.71	
CD Radio Cassette Recorder	0.00	0.54	-0.03	0.46		0.04	0.46	0.19	0.60	+
VCR	0.07	0.57	0.07	0.61		0.02	0.59	0.32	1.14	**
Video Camera	0.05	0.36	0.02	0.35		0.03	0.21	-0.03	0.41	+
Telephone	0.08	0.79	0.08	0.67		0.01	0.80	0.26	0.93	
Bicycle	0.14	0.91	0.08	0.88		-0.01	0.61	0.06	0.63	
Car	0.04	0.51	0.05	0.69		-0.01	0.47	0.13	0.67	
TV Game	0.16	0.79	0.10	0.76		0.04	0.56	-0.03	0.48	
Word Processor	0.02	0.33	-0.10	0.46		0.01	0.38	0.03	0.41	
Personal Computer	0.00	0.00	1.01	0.09	***	0.00	0.00	1.03	0.18	***
FAX	0.06	0.32	0.11	0.36		0.02	0.36	0.03	0.31	
Mobile Phone	0.20	0.61	0.45	0.76	***	0.10	0.57	0.10	0.65	

	Time-use patterns (minutes)	MD					UnMD				
		NN (357)		NY (118)		Significant	NN (162)		NY (31)		Significant
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	2.59	24.30	0.55	24.80		3.94	43.88	-7.87	47.40	
	Work	11.58	167.07	-18.23	165.08	*	-3.90	184.44	-36.45	136.01	
	Study	2.86	38.34	1.60	49.57		-2.34	53.51	13.87	57.05	+
	House-Keeping and Taking Care of Children	-10.14	217.82	-19.50	204.92		-0.13	91.15	-25.13	69.09	+
Wife, Weekends/Holiday	Hobby, Leisure and Going out	-6.91	135.92	-2.61	127.24		12.17	164.14	23.10	141.91	
	Sleep, Eat, Personal Hygiene	-0.12	170.82	40.47	157.91	**	-1.73	149.60	34.23	131.55	
	Weekends-Commuting (work/school)	0.15	3.18	-2.00	15.56	**	1.34	19.92	5.81	35.85	
	Work	-2.54	52.93	-7.64	66.82		-9.65	111.15	2.13	32.43	
Husband, Working Days	Study	-0.02	23.37	0.48	35.65		-7.80	62.05	4.06	92.86	
	House-Keeping and Taking Care of Children	6.88	227.01	-10.78	215.13		-5.16	109.63	-21.87	138.82	
	Hobby, Leisure and Going out	-9.76	197.33	-12.66	194.64		32.21	232.39	50.23	183.33	
	Sleep, Eat, Personal Hygiene	6.35	199.56	33.51	197.44		-8.94	221.13	-35.13	138.73	
Husband, Weekends/Holiday	Weekdays-Commuting (work/school)	0.01	43.05	5.76	44.30		N/A	N/A	N/A	N/A	
	Work	-11.06	144.76	-4.16	106.91		N/A	N/A	N/A	N/A	
	Study	1.94	37.57	-0.02	16.63		N/A	N/A	N/A	N/A	
	House-Keeping and Taking Care of Children	-6.83	85.63	-3.09	49.82		N/A	N/A	N/A	N/A	
Husband, Weekends/Holiday	Hobby, Leisure and Going out	15.30	122.77	-3.19	112.31		N/A	N/A	N/A	N/A	
	Sleep, Eat, Personal Hygiene	0.65	132.00	10.41	109.65		N/A	N/A	N/A	N/A	
	Weekends-Commuting (work/school)	0.53	15.14	-0.61	5.98		N/A	N/A	N/A	N/A	
	Work	-6.04	80.24	5.38	74.00		N/A	N/A	N/A	N/A	
Husband, Weekends/Holiday	Study	3.54	40.47	3.03	42.70		N/A	N/A	N/A	N/A	
	House-Keeping and Taking Care of Children	-17.86	162.23	-25.54	197.20		N/A	N/A	N/A	N/A	
	Hobby, Leisure and Going out	-2.49	240.84	7.76	254.78		N/A	N/A	N/A	N/A	
	Sleep, Eat, Personal Hygiene	23.29	237.02	11.06	258.24		N/A	N/A	N/A	N/A	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 38. Comparisons of mean values of the variables between NN and NY after eliminating outliers – Mobile phones in 1999-2000.

Indicators for ultimate utility	MD					UnMD				
	NN (77)		NY (66)		Significant	NN (28)		NY (28)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.091	0.589	-0.121	0.668		-0.071	0.766	-0.071	0.766	
Life Satisfaction	-0.039	0.658	-0.091	0.673		-0.250	0.799	0.107	1.031	
Living Standard	-0.091	0.542	-0.045	0.567		-0.071	0.539	0.000	0.609	

Number of Family Members	MD					UnMD				
	NN (77)		NY (66)		Significant	NN (28)		NY (28)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.06	0.34	0.06	0.43		0.00	0.00	0.04	0.64	

Household spending allocation for the month of September (1,000 Yen)	MD					UnMD				
	NN (77)		NY (66)		Significant	NN (28)		NY (28)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	-2.35	28.49	0.91	22.19		-1.21	18.79	0.29	14.89	
Housing (Rent/Mortgage)	-3.27	30.37	-19.02	121.53		-0.75	4.78	-1.25	13.73	
Water, Gas, Electricity	0.91	10.50	1.06	6.79		0.18	2.20	-0.89	5.35	
Furniture and Household Appliances	-0.61	14.20	2.65	22.18		2.39	6.49	0.43	4.53	
Clothing and Shoes	1.00	12.09	-0.82	11.56		3.29	10.68	0.46	14.91	
Medical and Insurance	-0.94	9.98	1.05	8.01		0.25	10.64	-1.04	9.14	
Transportation	-3.99	34.00	0.06	11.43		1.93	10.95	-1.54	13.02	
Communication	0.08	4.40	2.80	4.60	***	0.86	1.82	1.18	4.35	
Education	1.26	14.51	0.32	14.71		1.18	4.68	0.68	2.02	
Hobby and Leisure	2.13	18.70	-7.35	24.17	***	1.68	20.30	1.07	15.71	
Going out	-1.44	16.09	8.21	29.04	**	-1.46	8.36	1.36	18.58	
Allowances	2.26	15.16	8.45	17.64	**	1.46	9.98	-0.21	1.03	

Household possession of durable consumer good	MD					UnMD				
	NN (77)		NY (66)		Significant	NN (28)		NY (28)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	-0.03	0.32	0.03	0.43		0.11	0.50	-0.07	0.38	
Cupboard	-0.09	0.40	0.02	0.41	+	0.14	0.45	0.07	0.26	
Microwave	0.00	0.16	0.05	0.27		0.14	0.36	0.07	0.26	
Refrigerator	0.00	0.32	0.00	0.25		0.11	0.31	0.11	0.42	
Automatic Dishwasher	0.00	0.00	0.05	0.21	*	-0.04	0.19	0.04	0.19	
Vacuum Cleaner	-0.06	0.44	0.03	0.46		0.07	0.38	-0.04	0.33	
Laundry Machine	0.00	0.16	0.02	0.21		0.07	0.26	0.07	0.26	
Cloths Dryer	-0.04	0.25	0.02	0.28		0.00	0.00	-0.04	0.19	
Sewing Machine	0.00	0.28	0.06	0.35		0.04	0.33	0.14	0.45	
Electric Fan	0.16	0.56	0.08	0.69		0.11	0.69	0.32	0.67	
Air Conditioner	0.05	0.46	0.27	0.80	**	0.14	0.52	0.07	0.72	
Fan Heater	0.00	0.69	0.00	0.46		-0.11	0.42	0.07	0.38	*
“Kotatsu” Heater	0.05	0.48	-0.20	0.95	**	0.14	0.59	0.04	0.19	
TV Set	-0.06	0.47	0.06	0.46	+	0.00	0.27	0.07	0.60	
Stereo Sound System	-0.05	0.48	0.02	0.48		0.07	0.47	0.07	0.38	
CD Radio Cassette Recorder	0.01	0.60	0.05	0.54		0.11	0.42	0.00	0.47	
VCR	0.05	0.48	-0.02	0.45		0.04	0.51	0.14	0.65	
Video Camera	0.00	0.32	0.02	0.37		0.00	0.00	0.14	0.36	**
Telephone	0.12	0.81	0.21	0.67		-0.04	0.58	0.07	0.54	
Bicycle	0.14	1.02	0.30	0.88		-0.11	0.42	0.25	0.44	***
Car	-0.03	0.43	0.09	0.42	+	0.11	0.31	0.07	0.38	
TV Game	0.05	0.63	0.18	0.74		0.11	0.31	0.00	0.38	
Word Processor	-0.01	0.34	-0.02	0.41		-0.14	0.52	0.00	0.47	
Personal Computer	0.05	0.51	0.27	0.60	**	0.04	0.43	0.14	0.85	
FAX	0.05	0.36	0.12	0.37		0.00	0.27	0.11	0.42	
Mobile Phone	0.00	0.00	1.33	0.56	***	0.00	0.00	1.04	0.19	***

Time-use patterns (minutes)	MD					UnMD				
	NN (77)		NY (66)		Significant	NN (28)		NY (28)		Significant
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Weekdays-Commuting (work/school)	-0.01	13.17	0.20	17.81		3.93	22.60	1.75	43.42	
Work	-14.74	137.72	16.29	130.96		3.64	45.34	-70.43	240.81	+
Study	0.13	33.66	-7.18	26.89		-0.14	39.45	16.89	66.45	
House-Keeping and Taking Care of Children	-6.47	208.34	15.48	226.79		-6.25	71.69	10.57	86.01	
Hobby, Leisure and Going out	-3.65	133.91	-32.74	157.81		23.71	159.11	45.25	167.92	
Sleep, Eat, Personal Hygiene	23.34	155.53	3.86	170.13		-15.25	162.71	9.46	152.96	
Weekends-Commuting (work/school)	0.00	0.00	0.05	0.37		-2.07	11.36	0.18	0.94	
Work	-6.27	39.63	-0.88	12.87		19.29	81.74	0.11	0.57	
Study	1.56	13.86	-5.36	34.65	+	-38.68	88.14	10.82	49.11	**
House-Keeping and Taking Care of Children	-4.42	198.58	46.38	222.22		10.71	65.43	3.89	67.04	
Hobby, Leisure and Going out	3.13	218.52	-39.23	201.93		25.50	183.61	57.71	207.29	
Sleep, Eat, Personal Hygiene	4.60	193.78	-0.14	163.52		-10.89	195.52	-70.79	194.06	
Weekdays-Commuting (work/school)	-3.62	40.77	0.70	28.66		N/A	N/A	N/A	N/A	
Work	9.57	99.75	-8.30	177.35		N/A	N/A	N/A	N/A	
Study	2.22	18.26	-0.94	39.59		N/A	N/A	N/A	N/A	
House-Keeping and Taking Care of Children	2.63	54.69	12.30	65.56		N/A	N/A	N/A	N/A	
Hobby, Leisure and Going out	-12.76	96.17	-5.49	114.72		N/A	N/A	N/A	N/A	
Sleep, Eat, Personal Hygiene	-5.86	107.85	1.73	128.23		N/A	N/A	N/A	N/A	
Weekends-Commuting (work/school)	0.00	0.00	-3.84	30.62		N/A	N/A	N/A	N/A	
Work	2.39	54.80	-6.71	62.01		N/A	N/A	N/A	N/A	
Study	9.73	54.38	-4.81	59.27		N/A	N/A	N/A	N/A	
House-Keeping and Taking Care of Children	20.28	166.71	-8.57	168.13		N/A	N/A	N/A	N/A	
Hobby, Leisure and Going out	-8.77	222.13	20.08	249.54		N/A	N/A	N/A	N/A	
Sleep, Eat, Personal Hygiene	-29.47	251.52	4.71	225.94		N/A	N/A	N/A	N/A	

(+ p<0.15, \* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

### 3.2. Analysis on the Combined Data of 1998-1999 and 1999-2000

The analyses were performed on two datasets of 1998-1999 and 1999-2000 separately. However, the differences between the results from 1998-1999 and 1999-2000 tend to be large. For example, the changes of happiness between NN and NY for cloth dryer and personal computers are positive sign in 1998-1999 and negative in 1999-2000, and there was no consistency in signs of the results between two datasets. Also, the observations of NY cases for cloth dryer became small after elimination of the cases. In order to perform t-test, at least 30 cases are necessary to have a valid result in significance. Therefore, it was decided to increase the sample size by combining the two sets of data (1998-1999 and 1999-2000) as performed in FY2003. It was expected that more robust results and perhaps few more significant differences would be observed by combining the data.

#### 3.2.1. Data Preparation

This is the continuation of the methods that was undertaken for the previous section. In specific, we took the datasets that were used for the first set of analysis before elimination of any cases based on the results of linear regression analysis or box plot to identify outliers. In other words, the case numbers of the data was 1,176. The modification and the statistical analysis were conducted as follows:

- a. Disaggregate the combined datasets (1998-1999 and 1999-2000) into each panel.
- b. Added new variables of “purchase of household durable consumer goods within a year” in 1999 and 2000.
- c. Combined all the separated data, keeping the sample ID numbers. The structure of the combined dataset is shown in Table 39.
- d. The variables which have the values for “shifts” between the values in y-1 and y, (a.k.a. change in 1998-1999 and 1999-2000) were also combined.
- e. Checked the numbers of observations for NN, NY, YY and YN for the validity of data preparation.
- f. Use this dataset for the analysis.
- g. The sample size was 2,352 ( $2 \times 1,176$ ).

Table 39. The structure of the combined dataset used for this analysis.

ID	Panel	NN and NY	Variables particular for the year	Variables to show the shift between y-1 and y
1 2 3 :	6	Not used for analysis	Not used for analysis	Not used for analysis
1 2 3 :	7	NN (7-6) NY (7-6)	Values (7)	Values (7-6)
1 2 3 :	8	NN (8-7) NY (8-7)	Values (8)	Values (8-7)

#### 3.2.2. Analysis

##### A. Cross Sectional View of Combined Data

The numbers of observations and mean values and standard deviation (SD) of all the variables were calculated to check the characteristics of the combined data. It helps acquire the whole image of the sample as well as extract some important aspects for further analyses.

##### B. Panel View of Combined Data

The number of the observations for adopters (NY) and non-adopters (NN) of each technology, and mean value and standard deviation (SD) of all the “differences” of values were calculated to check the characteristics of the sample data. It helps acquire the sample image for further analyses. Moreover, the obtained values will be used in the process of delivering CO<sub>2</sub> emission from consumption activities.

### C. Panel Analysis 1: Comparisons of mean values of the variables between non-adopters (NN) and adopters (NY) of the three technologies

Using this combined data, the differences (or changes) of the mean values for happiness, life satisfaction, consumption patterns and time-use were compared between non-adopters (NN) and adopters (NY) of the three technologies. The analysis was performed at significance levels of  $p < 0.15$ ,  $p < 0.1$ ,  $p < 0.05$  and  $p < 0.01$ . No modification was made on the data before the analysis.

### D. Cross Section Analysis: Linear regression analysis

Multi-linear regression analyses were performed on the combined data to find out the correlations between happiness, possession of cloth dryer, personal computer and mobile phone, against the life happenings on combined data. This analysis was performed separately by type and category of dependent variables (i.e. type of housing, employment status, etc.) in the same way as done previously.

### E. Panel Analysis 2: Comparison of mean values of the variables between NN and NY after screening of sample

An attempt was made on this combined data to observe significant differences between results by screening the sample. In the previously reported analyses (on separate data sets), the cases that experienced the life events that affect the shift of happiness in the concerning year were eliminated from the data before the analysis. However, no elimination was performed on this combined data. Instead, based on the results of cross section analysis, the cases were first stratified into two groups: (1) that experienced the life events that affect the shift of happiness scores, and (2) that did not experience them. Then, these groups were separated into NN and NY with respect to adoption of technologies. This procedure enables to analyze the effects of two variables at once, such as life event and adoption of technology. The analyses were performed at the significance levels of  $p < 0.1$  and  $p < 0.05$ .

### F. Panel Analysis 3: Comparisons of mean values of the variables between NN and NY of the cases which experienced no happiness-shifting life happenings

Our work of FY2003 remained some room for improvements. The NN and NY values contained all the events factors in the results; therefore, we could not differentiate the factors of adopting a new technology and these life event factors behind the results. This new method enables to have more robust analysis because the events factors are disaggregated from the last year's results. First of all, based on the results of multi-linear regression analysis, we identified ten most affecting life events to happiness, possession of cloth dryer, personal computer, and mobile phone, separately at the significance level of  $p < 0.05$ . The results will be shown in the subsequent section. We then used the affecting life events to divide the sample into homogeneous sub-groups for further analysis. The NN, NY, YY and YN stand for those who never experienced, those who experienced in the concerning year (y) but not previous year (y-1), those who experienced in both years and those who experienced in y-1 but not in y, respectively.

Table 40 shows events that affect the change of happiness and possession of three technologies. Significance level was  $p < 0.05$  and positive sign (+) means  $NN < NY$  in the concerning variable; negative sign (-) means  $NN > NY$ . From the table it was found that two events, such as "Husband moved out for business reason" and "working" had no effects on any of the valuables. We used the rest of the life events to separate the observations of the differences between NN and NY. For cloth dryer, only two events ("started a new hobby" and "living in a detached single family house") were significant; and four events ("got married," "started a new hobby," "took responsibility as a chairperson of an organization" and "have a full-time position") were influential to possession of personal computer, four events ("got married," "gave birth to a child," "entrance exam. and enrollment," and "living in an own condominium or house") were influencing the possession of mobile phone.

Table 40. Events that affect happiness and the possession of three technologies

	Got married	Gave birth to a child	Husband moved out for business reason	Started a new hobby	Took responsibility as a chairperson of an organization	Entrance Exam. and enrollment	Working	Have a full-time position	Living in a detached single family house	Living in an own condominium or house	Number of influencing variables
Happiness	+										1
Cloths Dryer				-					+		2
Personal Computer	+			+	+			+			4
Mobile Phone	+	-				+				+	4

Significant different at  $p < 0.05$  between NN and NY (+: increase; -: decrease)

Secondly, the sample was disaggregated by life events, and the mean and SD of consumption variables were compared between NN and NY of adopted technologies of the cases that had any of the events. An example calculation of mean and SD for consumption-related variables for cloth dryer NN and NY by disaggregating the sample by influencing life vents are shown in Table 41. The numbers of observations (n) for some events were very small, and in some cases, only 1 or 0 case was observed. The results of far left column are the most interested because this group of cases never experienced any of the happiness-shifting life events. This transparent analysis was performed on cases of adopting personal computer and mobile phone as well.

Table 41. Example calculation of mean and SD for consumption-related variables for cloth dryer NN and NY by disaggregating the sample by influencing life vents.

	Started a new hobby															
	NN								NY							
	Moved to a house				Significant				Moved to a house				Significant			
	NN		NY		NN		NY		NN		NY		NN		NY	
	656	14	40	7	12	0	2	0	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Food	1.52	28.38	-8.57	50.54	11.80	30.49	21.29	33.54	3.58	15.83			-2.00	21.21		
Housing (Rent/Mortgage)	1.68	21.17	-2.21	10.18	-36.53	51.02	-43.29	32.26	-0.75	5.45			-45.50	31.82		
Water, Gas, Electricity	0.96	9.30	-0.07	7.23	6.13	10.25	1.71	7.65	0.00	4.71			-15.00	7.07		
Furniture and Household Appliances	-0.17	11.54	0.50	12.96	2.88	24.71	16.86	51.42	2.00	4.90			0.50	0.71		
Clothing and Shoes	1.17	15.33	8.21	17.39	7.00	17.87	-6.14	12.88	12.92	11.72			-5.00	14.14		
Medical and Insurance	-0.05	20.60	-3.50	18.84	7.60	27.00	-1.14	6.23	-3.25	13.63			0.00	0.00		
Transportation	6.40	89.05	-65.93	195.08	24.50	150.40	3.43	19.73	-8.75	31.81			3.00	8.49		
Communication	2.38	8.77	2.29	8.31	4.53	11.60	2.14	3.72	5.33	24.33			-1.50	0.71		
Education	1.70	15.34	3.79	15.56	-3.20	16.63	-1.00	18.43	2.08	12.12			5.00	7.07		
Hobby and Leisure	0.28	28.62	7.07	33.07	0.07	13.40	-7.43	13.85	4.08	13.15			0.00	0.00		
Going out	0.30	19.71	7.50	31.36	-2.20	17.86	13.00	19.60	1.25	11.12			-1.50	2.12		
Allowances	0.21	24.23	12.79	36.05	-0.10	19.92	0.57	34.52	-4.08	16.22			2.50	3.54		
Dining Set	0.01	0.32	0.07	0.27	0.25	0.59	0.57	0.53	0.00	0.00			-1.00	0.00		
Cupboard	-0.02	0.33	-0.07	0.27	0.00	0.45	0.71	0.49	0.00	0.00			-0.50	0.71		
Microwave	0.00	0.24	0.07	0.27	0.03	0.36	0.29	0.49	0.00	0.00			0.00	0.00		
Refrigerator	0.00	0.22	0.14	0.36	0.08	0.27	0.43	0.53	0.00	0.00			0.00	0.00		
Automatic Dishwasher	0.00	0.19	0.00	0.00	0.08	0.35	0.57	0.53	0.08	0.29			0.00	0.00		
Vacuum Cleaner	0.01	0.37	0.36	0.63	0.23	0.70	0.57	0.53	0.08	0.51			0.00	0.00		
Laundry Machine	0.00	0.21	0.07	0.27	0.00	0.23	0.43	0.53	0.00	0.00			0.00	0.00		
Cloths Dryer	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00			0.00	0.00		
Sewing Machine	0.02	0.32	0.07	0.47	0.13	0.40	0.14	0.36	0.00	0.00			0.00	0.00		
Electric Fan	0.04	0.46	0.14	0.53	0.36	0.87	0.43	0.53	0.00	0.45			0.00	0.00		
Air Conditioner	0.02	0.52	0.29	1.27	0.85	1.31	3.14	1.86	0.33	0.49			1.00	1.41		
Fan Heater	0.01	0.44	0.57	1.09	0.30	1.07	0.29	0.76	0.17	0.39			0.00	0.00		
*Kotatsu Heater	-0.02	0.35	0.07	0.27	0.00	0.51	0.00	0.58	0.08	0.29			0.00	0.00		
TV Set	0.04	0.45	0.43	0.65	0.55	1.01	0.57	0.53	-0.08	0.29			0.50	0.71		
Stereo Sound System	0.02	0.43	0.14	0.53	0.05	0.60	-0.14	0.38	-0.17	0.39			-0.50	0.71		
CD Radio Cassette Recorder	0.03	0.50	-0.07	0.47	-0.10	0.59	0.43	0.53	0.17	0.58			0.00	0.00		
VCR	0.00	0.55	0.43	1.16	0.20	1.04	0.29	0.49	0.00	0.43			-0.50	0.71		
Video Camera	0.03	0.29	0.00	0.00	0.10	0.44	0.00	0.00	0.08	0.29			0.00	0.00		
Telephone	0.03	0.64	0.57	0.94	0.18	1.03	1.00	0.58	0.17	0.58			0.00	0.00		
Bicycle	0.10	0.76	0.21	1.12	0.18	1.32	0.57	0.79	0.00	0.43			-0.50	0.71		
Car	0.02	0.36	0.21	0.70	0.23	0.42	0.14	0.38	0.00	0.00			0.00	0.00		
TV Game	0.09	0.68	0.00	0.96	0.18	0.68	0.14	0.38	0.08	0.51			-0.50	0.71		
Word Processor	-0.01	0.34	0.14	0.53	0.03	0.48	0.29	0.76	0.00	0.00			0.00	0.00		
Personal Computer	0.11	0.44	0.07	0.47	0.20	0.46	0.57	0.53	0.00	0.00			0.50	0.71		
FAX	0.04	0.31	0.14	0.53	0.05	0.39	0.29	0.49	0.00	0.00			0.50	0.71		
Mobile Phone	0.19	0.61	0.29	0.73	0.20	0.65	1.14	0.90	0.00	0.43			1.00	0.00		

Started a new hobby	No	No	No	Yes
Moved to a house	No	Yes	No	Yes

### 3.2.3. Results

#### A. Cross Sectional View of Combined Data

Tables 42 shows frequencies of variables of the combined data. The grey shadowed boxes indicate the observations fall between 1-10, meaning insignificant.

Table 42. Frequencies of variables of the combined data

Single or Married	
Married	1748
Single	604

Happiness	
1	21
2	102
3	344
4	1401
5	484

Life Satisfaction	
1	69
2	295
3	623
4	1145
5	220

Life Standard	
1	66
2	520
3	1413
4	342
5	11

Life Happenings	
Gave a birth	154
Took parent(s) along home	13
Return of a family member	6
Increase for other reason	26
A family member transferred	14
A family member moved out	40
Loss by death	24
Loss for other reason	26
MD and left family	57
Divorced or separated	10
Left for an independent life	29
Started to live with parents	22
Found a new job	175
Changed job	179
Quit job	128
Enrolled to a (graduate or professional) school	17
Started a new lesson/training	201
Took a leadership of a committee or organization	378
Illness requiring an operation or hospitalization	41
Depression/other psychiatric symptoms	31
Loan/credit card related trouble	12
Accident/disaster	66
Other	105
Traffic accidents	48
Fire	0
Accidents while at work	0
Burglary or theft	48
Suffering from products	3
Bankruptcy	7
Other	9
Transferred	70
Vol. retirement or lost job	99
Business bankrupts	11
Illness requiring hospitalization or operation	107
Depression or other psychiatric problems	23
Credit card/loan-related trouble	19
Accident/disaster	66
Entrance exam and enrollment	270
Others	75
Big expenditure	167
Income cut or depreciation of properties	88
Heavy burden on taking care	58
Lost good relationships with other family members	32
Depression	98
Devoiced or separated	2
Others	26

Relationship with the new born baby within a year	
First Child	57
Second Child	66
Third Child	31

Number of Family Members	
1	117
2	255
3	502
4	661
5	386
6	275
7	121
8	30
9	5

Type of Housing (Dummy)	
A House	1353
Dual house	39
Reinforced-concrete apartment	805
Wooden apartment	154

Ownership of housing	
Own house	1508
Rent private apartment	447
Rent public apartment	235
Company/school owned housing	160

Employment Status	
Wife – Employed	1421
Wife – Unemployed	18
Wife – Student	10
Wife – Housekeeper	860
Wife – Full-time position	649
Wife – Part-time position	535
Wife – Contractor	61
Husband – Employed	1715
Husband – Unemployed	8
Husband – Student	0
Husband – Full-time position	1432
Husband – Part-time position	14
Husband – Contractor	13

Table 43 shows mean values and standard deviation (SD) for numerical values of the combined data.

Table 43. Mean values and standard deviation (SD) for numerical values of the combined data

Indicators for ultimate utility	Mean	SD
Happiness	3.946	0.777
Life Satisfaction	3.490	0.930
Living Standard	2.878	0.695

Household spending allocation for the month of September (1,000 Yen)	Mean	SD
Food	57.75	38.40
Housing (Rent/Mortgage)	21.71	49.43
Water, Gas, Electricity	16.77	13.67
Furniture and Household Appliances	4.42	12.98
Clothing and Shoes	11.88	15.23
Medical and Insurance	6.76	19.50
Transportation	18.51	55.21
Communication	9.53	9.05
Education	15.38	25.35
Hobby and Leisure	11.06	20.77
Going out	11.66	16.59
Allowances	23.76	27.57

Total Annual Income (10,000 yen)	Mean	SD
Husband	557.28	275.89
Wife (or Self)	146.69	172.38
House business	0.49	4.83

Other member in the household	188.29	408.54
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Household Savings and Stock	Mean	SD
Household Saving	432.65	544.28
Household Stock Possession	275.50	381.06

Household possession of durable consumer good	Mean	SD
Dining Set	0.62	0.51
Cupboard	1.08	0.72
Microwave	0.88	0.40
Refrigerator	1.05	0.59
Automatic Dishwasher	0.08	0.28
Vacuum Cleaner	1.18	0.66
Laundry Machine	0.92	0.44
Cloths Dryer	0.21	0.41
Sewing Machine	0.68	0.57
Electric Fan	1.45	1.14
Air Conditioner	1.70	1.39
Fan Heater	1.03	1.03
“Kotatsu” Heater	0.81	0.77
TV Set	1.99	1.15
Stereo Sound System	0.65	0.63
CD Radio Cassette Recorder	0.78	0.64
VCR	1.40	0.87
Video Camera	0.59	0.57
Telephone	1.80	1.10
Bicycle	1.89	1.55
Car	1.27	0.86
TV Game	1.24	1.26
Word Processor	0.41	0.56
Personal Computer	0.56	0.77
FAX	0.42	0.51
Mobile Phone	1.26	0.83

Purchase of household durable consumer goods within a year	Mean	SD
Dining Set	0.03	0.18
Cupboard	0.03	0.18
Microwave	0.05	0.21
Refrigerator	0.08	0.28
Automatic Dishwasher	0.01	0.10
Vacuum Cleaner	0.09	0.29
Laundry Machine	0.06	0.24
Cloths Dryer	0.01	0.10
Sewing Machine	0.03	0.17
Electric Fan	0.11	0.37
Air Conditioner	0.13	0.50
Fan Heater	0.05	0.23
“Kotatsu” Heater	0.02	0.14
TV Set	0.12	0.36
Stereo Sound System	0.04	0.20
CD Radio Cassette Recorder	0.05	0.22
VCR	0.09	0.33
Video Camera	0.06	0.23
Telephone	0.10	0.44
Bicycle	0.19	0.46
Car	0.15	0.38
TV Game	0.11	0.34
Word Processor	0.01	0.12
Personal Computer	0.15	0.38
FAX	0.06	0.25
Mobile Phone	0.33	0.61

	Time-use patterns (minutes)	Mean	SD
Wife, Working Days	Weekdays-Commuting (work/school)	19.90	40.45
	Work	261.07	235.45
	Study	12.01	48.01
	House-Keeping and Taking Care of Children	335.58	270.18
	Hobby, Leisure and Going out	149.45	132.71
	Sleep, Eat, Personal Hygiene	628.05	149.03
Wife Weekends/Holidays	Weekends-Commuting (work/school)	1.47	13.29
	Work	11.58	61.83
	Study	13.99	47.17
	House-Keeping and Taking Care of Children	377.03	256.52

	Hobby, Leisure and Going out	311.40	211.71
	Sleep, Eat, Personal Hygiene	714.56	176.14
Husband, Working Days	Weekdays-Commuting (work/school)	53.38	58.63
	Work	596.79	134.21
	Study	9.11	31.45
	House-Keeping and Taking Care of Children	34.83	62.87
	Hobby, Leisure and Going out	114.86	106.85
	Sleep, Eat, Personal Hygiene	592.78	118.13
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.73	9.66
	Work	20.14	77.18
	Study	17.30	58.36
	House-Keeping and Taking Care of Children	169.57	182.85
	Hobby, Leisure and Going out	438.05	230.33
	Sleep, Eat, Personal Hygiene	785.02	203.37

## B. Panel View of Combined Data

Table 44 and Figure 6 show the frequencies for NN, NY, YY and YN in the combined sample. They are basically used for the same intention. The observations for NY increased to 61, 297 and 243 for cloth dryer, personal computer and mobile phone, respectively. The number for cloth dryer NY is far above 30, the level where statistical significance becomes valid.

Table 44. The frequencies for NN, NY, YY and YN in the combined sample

	NN	NY	YY	YN	Total
Cloth Dryer	1808	61	428	55	2352
Personal Computer	1244	297	752	59	2352
Mobile Phone	344	243	1715	50	2352

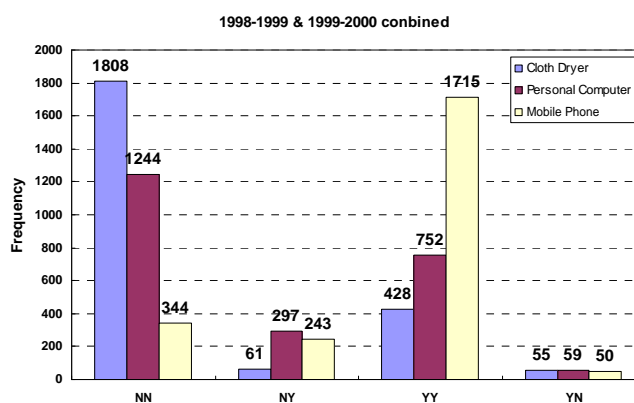


Figure 6. The frequencies for NN, NY, YY and YN in the combined sample of 1998-1999 and 1999-2000.

## C. Panel Analysis 1: Comparisons of mean values of the variables between non-adopters (NN) and adopters (NY) of the three technologies

Explanation: Table 45-47 show the comparisons of mean values and standard deviation (SD) of the variables between non-adopters (NN) and adopters (NY) of the three technologies on combined data.

Table 45. Comparisons of mean values and standard deviation (SD) of the variables between non-adopters (NN) and adopters (NY) on combined data - Cloth Dryer

Indicators for ultimate utility	NN (1808)		NY (61)		Significant
	Mean	SD	Mean	SD	
Happiness	-0.034	0.676	-0.082	0.614	
Life Satisfaction	-0.043	0.846	-0.033	1.032	
Living Standard	-0.018	0.562	-0.016	0.671	

	NN (1808)		NY (61)		Significant
	Mean	SD	Mean	SD	
Number of Family Members	0.02	0.62	-0.03	0.68	0.68

Household spending allocation for the month of September (1,000 Yen)	NN (1808)		NY (61)		Significant
	Mean	SD	Mean	SD	
Food	2.88	29.02	8.03	33.95	
Housing (Rent/Mortgage)	1.36	50.23	-2.56	27.99	
Water, Gas, Electricity	1.12	9.46	2.92	14.00	
Furniture and Household Appliances	-0.31	13.35	2.11	19.34	
Clothing and Shoes	0.57	17.22	4.02	18.50	
Medical and Insurance	0.17	25.17	-4.48	20.42	
Transportation	5.05	63.78	-12.44	99.23	**
Communication	2.42	9.22	1.87	8.70	
Education	1.33	22.48	-2.64	31.26	
Hobby and Leisure	-0.38	26.68	0.87	24.14	
Going out	-0.71	18.60	4.26	23.74	**
Allowances	0.02	23.35	1.39	27.37	

	NN (1808)	NY (61)	Significant
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Household possession of durable consumer good	Mean	SD	Mean	SD	
Dining Set	0.03	0.40	0.18	0.47	***
Cupboard	0.01	0.49	0.21	0.58	***
Microwave	0.02	0.31	0.11	0.41	**
Refrigerator	0.02	0.38	0.11	0.41	**
Automatic Dishwasher	0.01	0.19	0.13	0.34	***
Vacuum Cleaner	0.03	0.50	0.25	0.62	***
Laundry Machine	0.02	0.33	0.13	0.46	**
Cloths Dryer	0.00	0.00	1.00	0.00	
Sewing Machine	0.01	0.35	0.05	0.38	
Electric Fan	0.05	0.68	0.23	0.67	**
Air Conditioner	0.07	0.72	0.66	1.46	***
Fan Heater	0.02	0.63	0.16	0.80	*
“Kotatsu” Heater	-0.02	0.52	0.03	0.55	
TV Set	0.06	0.69	0.36	0.78	***
Stereo Sound System	0.00	0.51	0.03	0.45	
CD Radio Cassette Recorder	0.03	0.53	0.15	0.54	*
VCR	0.02	0.63	0.16	0.82	*
Video Camera	0.03	0.31	0.00	0.41	
Telephone	0.04	0.84	0.28	0.92	**
Bicycle	0.08	0.85	0.26	1.05	
Car	0.03	0.51	0.15	0.60	*
TV Game	0.10	0.67	0.08	0.80	
Word Processor	-0.01	0.39	0.03	0.52	
Personal Computer	0.13	0.46	0.15	0.63	
FAX	0.06	0.35	0.16	0.49	**
Mobile Phone	0.21	0.63	0.34	0.77	

Purchase of household possession of durable consumer good within a year	NN (1808)		NY (61)		Significant
	Mean	SD	Mean	SD	
Dining Set	0.03	0.18	0.00	0.00	
Cupboard	0.03	0.19	0.05	0.22	
Microwave	0.05	0.21	0.03	0.18	
Refrigerator	0.08	0.28	0.10	0.30	
Automatic Dishwasher	0.01	0.09	0.00	0.00	
Vacuum Cleaner	0.08	0.28	0.23	0.43	***
Laundry Machine	0.06	0.24	0.08	0.28	
Cloths Dryer	0.01	0.09	0.02	0.13	
Sewing Machine	0.03	0.16	0.07	0.25	*
Electric Fan	0.12	0.38	0.07	0.31	
Air Conditioner	0.13	0.51	0.13	0.43	
Fan Heater	0.04	0.20	0.03	0.18	
“Kotatsu” Heater	0.02	0.13	0.00	0.00	
TV Set	0.12	0.33	0.12	0.32	
Stereo Sound System	0.04	0.19	0.03	0.18	
CD Radio Cassette Recorder	0.05	0.22	0.05	0.22	
VCR	0.09	0.31	0.13	0.34	
Video Camera	0.06	0.24	0.02	0.13	
Telephone	0.09	0.43	0.08	0.38	
Bicycle	0.19	0.46	0.18	0.39	
Car	0.16	0.39	0.15	0.36	
TV Game	0.11	0.34	0.13	0.34	
Word Processor	0.01	0.11	0.03	0.18	
Personal Computer	0.15	0.37	0.17	0.38	
FAX	0.06	0.25	0.08	0.28	
Mobile Phone	0.33	0.61	0.32	0.50	

	Time-use patterns (minutes)	NN (1808)		NY (61)		Significant
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-0.39	30.51	-4.05	30.38	
	Work	0.56	164.27	-4.02	203.84	
	Study	-2.06	52.64	-2.84	76.98	
	House-Keeping and Taking Care of Children	1.72	182.31	37.26	210.59	
	Hobby, Leisure and Going out	-0.46	139.06	30.39	158.72	**
	Sleep, Eat, Personal Hygiene	0.62	170.71	-53.21	159.76	*
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.29	16.60	0.00	0.00	
	Work	-2.48	73.17	12.74	69.39	
	Study	-1.90	56.76	-4.11	61.83	
	House-Keeping and Taking Care of Children	10.04	189.43	38.62	212.96	
	Hobby, Leisure and Going out	-6.65	197.78	-10.97	179.07	

Husband, Working Days	Sleep, Eat, Personal Hygiene	0.24	199.41	-35.39	187.24	
	Weekdays-Commuting (work/school)	-1.49	46.51	-4.83	51.92	
	Work	-0.68	122.75	14.06	144.55	
	Study	1.10	35.11	-5.02	67.91	
	House-Keeping and Taking Care of Children	1.89	70.30	-10.43	125.54	
	Hobby, Leisure and Going out	2.18	108.12	25.28	124.51	
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	-1.65	125.38	-17.91	133.23	
	Weekends-Commuting (work/school)	0.05	9.79	0.00	0.00	
	Work	-1.07	89.35	-6.52	46.01	
	Study	1.17	66.49	12.85	70.31	
	House-Keeping and Taking Care of Children	4.78	164.75	-6.41	172.50	
	Hobby, Leisure and Going out	-3.07	241.28	14.17	276.69	
Sleep, Eat, Personal Hygiene	-1.09	234.35	-11.74	212.14		

(\* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 46. Comparisons of mean values and standard deviation (SD) of the variables between non-adopters (NN) and adopters (NY) on combined data - Personal Computer

Indicators for ultimate utility	NN (1244)		NY (297)		Significant
	Mean	SD	Mean	SD	
Happiness	-0.040	0.710	-0.030	0.630	
Life Satisfaction	-0.040	0.870	-0.070	0.810	
Living Standard	-0.030	0.570	0.040	0.600	*

	NN (1244)		NY (297)		Significant
	Mean	SD	Mean	SD	
Number of Family Members	0.01	0.57	0.01	0.67	

Household spending allocation for the month of September (1,000 Yen)	NN (1244)		NY (297)		Significant
	Mean	SD	Mean	SD	
Food	2.73	28.47	5.38	29.63	
Housing (Rent/Mortgage)	2.02	38.80	2.70	28.95	
Water, Gas, Electricity	0.90	9.69	0.45	16.98	
Furniture and Household Appliances	-1.17	31.17	-1.07	22.15	
Clothing and Shoes	0.32	15.90	-0.30	19.21	
Medical and Insurance	-0.80	22.43	-0.36	19.98	
Transportation	5.46	60.09	3.44	73.24	
Communication	2.39	9.55	3.07	8.54	
Education	0.98	21.27	1.41	30.51	
Hobby and Leisure	-0.23	25.43	-0.97	25.89	
Going out	-0.80	19.02	-2.15	18.84	
Allowances	-0.51	21.90	1.91	22.33	*

Household possession of durable consumer good	NN (1244)		NY (297)		Significant
	Mean	SD	Mean	SD	
Dining Set	0.03	0.38	0.09	0.40	**
Cupboard	0.02	0.48	0.06	0.49	
Microwave	0.01	0.30	0.07	0.32	***
Refrigerator	0.01	0.41	0.03	0.43	
Automatic Dishwasher	0.00	0.20	0.02	0.21	*
Vacuum Cleaner	0.02	0.48	0.09	0.52	**
Laundry Machine	0.01	0.32	0.06	0.30	***
Cloths Dryer	0.00	0.21	0.00	0.23	
Sewing Machine	0.02	0.36	0.05	0.33	
Electric Fan	0.06	0.67	0.08	0.69	
Air Conditioner	0.07	0.66	0.18	0.91	**
Fan Heater	0.05	0.61	0.02	0.71	
“Kotatsu” Heater	-0.02	0.46	0.05	0.56	**
TV Set	0.05	0.65	0.14	0.80	*
Stereo Sound System	0.00	0.51	0.08	0.54	**
CD Radio Cassette Recorder	0.02	0.51	0.00	0.52	
VCR	0.01	0.59	0.13	0.75	***
Video Camera	0.04	0.31	0.02	0.33	
Telephone	0.04	0.83	0.09	0.80	
Bicycle	-0.09	0.86	0.13	0.84	
Car	0.03	0.49	0.09	0.63	*
TV Game	0.13	0.70	0.12	0.71	
Word Processor	0.01	0.33	-0.08	0.47	***
Personal Computer	0.00	0.00	1.02	0.13	***
FAX	0.05	0.34	0.11	0.39	***
Mobile Phone	0.18	0.60	0.30	0.74	***

Purchase of household possession of durable consumer good within a year	NN (1244)		NY (297)		Significant
	Mean	SD	Mean	SD	
Dining Set	0.03	0.17	0.04	0.20	
Cupboard	0.03	0.17	0.03	0.19	
Microwave	0.04	0.20	0.05	0.23	
Refrigerator	0.08	0.27	0.11	0.32	
Automatic Dishwasher	0.01	0.10	0.01	0.10	
Vacuum Cleaner	0.08	0.27	0.10	0.32	
Laundry Machine	0.06	0.24	0.07	0.26	
Cloths Dryer	0.01	0.10	0.01	0.10	
Sewing Machine	0.03	0.17	0.02	0.15	
Electric Fan	0.10	0.35	0.15	0.40	**
Air Conditioner	0.12	0.41	0.26	0.88	***
Fan Heater	0.05	0.24	0.06	0.24	
“Kotatsu” Heater	0.01	0.11	0.04	0.25	***
TV Set	0.11	0.32	0.14	0.49	
Stereo Sound System	0.04	0.21	0.03	0.20	
CD Radio Cassette Recorder	0.04	0.20	0.05	0.22	
VCR	0.09	0.30	0.11	0.46	
Video Camera	0.05	0.23	0.04	0.20	
Telephone	0.09	0.43	0.13	0.52	
Bicycle	0.19	0.46	0.18	0.42	
Car	0.15	0.38	0.17	0.42	
TV Game	0.11	0.33	0.12	0.37	
Word Processor	0.01	0.10	0.01	0.10	
Personal Computer	0.15	0.36	0.18	0.42	
FAX	0.06	0.23	0.07	0.25	
Mobile Phone	0.33	0.61	0.35	0.62	

	Time-use patterns (minutes)	NN (1244)		NY (297)		Significant
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.77	30.04	-1.05	33.71	
	Work	0.32	163.41	-27.24	177.13	**
	Study	-2.48	47.65	7.52	54.80	***
	House-Keeping and Taking Care of Children	-0.08	183.20	1.30	206.15	
	Hobby, Leisure and Going out	3.80	140.69	-2.38	139.56	
	Sleep, Eat, Personal Hygiene	-2.02	168.82	25.12	167.39	**
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.96	14.88	-1.00	21.26	*
	Work	-0.88	76.74	-0.60	60.89	
	Study	-2.39	51.44	2.87	57.72	
	House-Keeping and Taking Care of Children	4.43	191.50	7.09	200.88	
	Hobby, Leisure and Going out	-2.25	199.84	-23.54	201.28	
	Sleep, Eat, Personal Hygiene	-0.61	200.90	14.81	201.54	
Husband, Working Days	Weekdays-Commuting (work/school)	-0.66	46.22	5.40	56.89	
	Work	-4.74	127.87	-2.20	99.58	
	Study	0.43	32.90	0.67	25.45	
	House-Keeping and Taking Care of Children	0.18	81.28	1.50	48.32	
	Hobby, Leisure and Going out	8.20	112.19	-6.09	104.14	
	Sleep, Eat, Personal Hygiene	-2.49	130.17	2.33	115.85	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.29	10.83	0.95	17.95	
	Work	-3.82	86.94	11.11	72.78	**
	Study	1.17	40.44	-0.86	61.96	
	House-Keeping and Taking Care of Children	1.37	166.63	-7.57	190.53	
	Hobby, Leisure and Going out	-7.41	240.74	-24.48	253.40	
	Sleep, Eat, Personal Hygiene	9.46	234.76	18.09	249.69	

(\* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

Table 47. Comparisons of mean values and standard deviation (SD) of the variables between non-adopters (NN) and adopters (NY) on combined data - Mobile Phone

Indicators for ultimate utility	NN (344)		NY (243)		Significant
	Mean	SD	Mean	SD	
Happiness	-0.020	0.650	-0.070	0.670	
Life Satisfaction	-0.060	0.770	0.020	0.850	
Living Standard	-0.020	0.560	0.000	0.550	
	NN (344)		NY (243)		Significant

	Mean	SD	Mean	SD	
Number of Family Members	0.04	0.38	0.00	0.71	

Household spending allocation for the month of September (1,000 Yen)	NN (344)		NY (243)		Significant
	Mean	SD	Mean	SD	
Food	3.81	29.19	4.60	26.08	
Housing (Rent/Mortgage)	1.80	57.57	-6.18	76.31	
Water, Gas, Electricity	0.26	8.47	1.24	8.94	
Furniture and Household Appliances	0.04	12.57	1.22	17.03	
Clothing and Shoes	-0.51	16.11	1.48	15.87	
Medical and Insurance	-0.36	15.21	1.58	21.57	
Transportation	5.56	58.17	3.31	91.00	
Communication	1.17	4.77	4.00	9.67	***
Education	1.44	25.37	2.11	14.79	
Hobby and Leisure	0.08	19.74	-2.51	22.20	
Going out	-1.03	18.58	0.61	21.16	
Allowances	-1.33	22.42	3.31	18.27	***

Household possession of durable consumer good	NN (344)		NY (243)		Significant
	Mean	SD	Mean	SD	
Dining Set	0.05	0.35	0.02	0.46	
Cupboard	0.02	0.45	0.04	0.48	
Microwave	0.04	0.27	0.02	0.32	
Refrigerator	0.01	0.33	0.02	0.38	
Automatic Dishwasher	0.01	0.15	0.00	0.21	
Vacuum Cleaner	0.05	0.42	0.01	0.49	
Laundry Machine	0.03	0.27	0.02	0.31	
Cloths Dryer	0.01	0.22	0.00	0.25	
Sewing Machine	0.04	0.30	0.01	0.33	
Electric Fan	0.13	0.61	0.10	0.65	
Air Conditioner	0.06	0.72	0.10	0.72	
Fan Heater	0.06	0.59	0.02	0.49	
“Kotatsu” Heater	0.03	0.55	-0.06	0.61	*
TV Set	0.06	0.53	0.07	0.61	
Stereo Sound System	-0.02	0.42	0.01	0.44	
CD Radio Cassette Recorder	0.09	0.48	0.02	0.51	
VCR	0.01	0.47	0.08	0.57	
Video Camera	0.01	0.29	0.04	0.30	
Telephone	0.12	0.76	0.12	0.82	
Bicycle	0.04	0.81	0.20	0.93	*
Car	0.02	0.31	0.08	0.44	**
TV Game	0.05	0.66	0.11	0.62	
Word Processor	-0.03	0.37	0.00	0.37	
Personal Computer	0.09	0.46	0.17	0.54	**
FAX	0.03	0.28	0.07	0.37	*
Mobile Phone	0.00	0.00	1.19	0.46	***

Purchase of household possession of durable consumer good within a year	NN (344)		NY (243)		Significant
	Mean	SD	Mean	SD	
Dining Set	0.03	0.18	0.03	0.18	
Cupboard	0.03	0.18	0.03	0.18	
Microwave	0.05	0.21	0.03	0.18	
Refrigerator	0.07	0.26	0.08	0.27	
Automatic Dishwasher	0.01	0.08	0.00	0.07	
Vacuum Cleaner	0.11	0.32	0.08	0.29	
Laundry Machine	0.06	0.24	0.06	0.24	
Cloths Dryer	0.02	0.13	0.00	0.07	
Sewing Machine	0.02	0.13	0.04	0.21	
Electric Fan	0.09	0.29	0.14	0.47	
Air Conditioner	0.09	0.35	0.08	0.35	
Fan Heater	0.05	0.21	0.03	0.18	
“Kotatsu” Heater	0.02	0.12	0.01	0.11	
TV Set	0.12	0.33	0.14	0.37	
Stereo Sound System	0.05	0.22	0.03	0.18	
CD Radio Cassette Recorder	0.05	0.21	0.03	0.17	
VCR	0.07	0.27	0.09	0.34	
Video Camera	0.06	0.23	0.05	0.21	
Telephone	0.12	0.52	0.09	0.40	
Bicycle	0.23	0.50	0.17	0.41	
Car	0.16	0.39	0.13	0.35	
TV Game	0.12	0.35	0.11	0.32	
Word Processor	0.01	0.11	0.00	0.07	
Personal Computer	0.14	0.35	0.12	0.34	

FAX	0.05	0.22	0.08	0.29	
Mobile Phone	0.34	0.60	0.34	0.59	

Time-use patterns (minutes)		NN (344)		NY (243)		Significant
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.34	21.51	-1.74	27.48	
	Work	1.05	115.22	-14.40	166.64	
	Study	-0.87	49.22	-4.24	52.25	
	House-Keeping and Taking Care of Children	-4.62	171.18	11.19	184.41	
	Hobby, Leisure and Going out	16.16	122.66	-1.15	149.64	
	Sleep, Eat, Personal Hygiene	-10.80	150.98	11.01	167.97	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.17	20.29	0.26	12.90	
	Work	0.35	44.30	2.50	71.36	
	Study	3.32	54.99	-2.91	59.00	
	House-Keeping and Taking Care of Children	6.42	171.80	11.70	189.13	
	Hobby, Leisure and Going out	-1.56	181.91	-16.52	194.16	
	Sleep, Eat, Personal Hygiene	-10.28	188.12	5.19	196.71	
Husband, Working Days	Weekdays-Commuting (work/school)	2.80	46.24	-3.14	48.80	
	Work	-0.98	99.36	4.27	142.15	
	Study	0.66	26.10	-0.79	30.64	
	House-Keeping and Taking Care of Children	-0.71	61.77	-3.25	70.52	
	Hobby, Leisure and Going out	11.92	103.57	-6.16	118.66	
	Sleep, Eat, Personal Hygiene	-9.54	105.36	10.07	134.21	*
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.01	0.19	-1.84	20.86	
	Work	-7.21	67.66	0.73	59.03	
	Study	3.43	53.30	-10.58	65.42	**
	House-Keeping and Taking Care of Children	16.01	158.55	-7.78	187.46	
	Hobby, Leisure and Going out	-7.95	222.23	16.94	252.87	
	Sleep, Eat, Personal Hygiene	-3.82	237.38	2.53	235.08	

(\* p<0.1, \*\* p<0.05, \*\*\* p<0.01)

#### D. Cross Section Analysis: Linear regression analysis

Cross section analysis (Multi-linear regression analysis) for correlations between life events and happiness and possession of cloth dryer, personal computer and mobile phone is shown in Table 48. This analysis was performed in the purpose of identifying life happening and status variables which deeply affect the shift of happiness and possession of three technologies. These variables will be chosen for further analysis of comparisons of happiness and consumption patten shifts between NN and NY of three technologies.

Irokawa (1999) utilized the same procedure to evaluate correlations between variables and states that Beta of >0.2 or <-0.2 is considered as indication of strong correlation between dependent and independent variables. Considering Beta > |0.2| as an indicator for correlation and its significance at p < 0.05, the life happenings and status variables correlated with happiness are: depression (-), wife-employed (+), wife-housekeeper (+), and company/school owned housing (-); for possession of cloth dryer, depression (+), annual income-wife or self (+), and wife-housekeeper (+); for possession of personal computer, took a leadership of a committee or organization (+), expenditure of communication (+), hobby and leisure (+), wife-employed (+); wife-housekeeper, and change in household savings in a year (-); and for possession of mobile phone, bankruptcy (+), big expenditure (+), expenditure for communication (+), annual income – wife or self (+), wife-employed (+), wife-housekeeper (+), wife-contractor (+), and husband-contractor. Considering the number of observations for each variable, the life events and status variables which we decided to use for the further analysis are: (1) gave birth to a child; (2) married and left family; (3) depression (spiritually depressed); (4) annual income: husband; (5) annual income: wife or self; (6) wife employed; (7) wife housekeeper; (8) own house; and (9) company/school owned housing. Some variables, such as “gave birth to a child” and “Married and left family were not as correlated with the independent variables, however, they were included as tested variables because of rather high observation and potential of shifting one’s consumption pattern.

Table 48. Results from the multi-linear regression analysis for happiness, possession of cloth dryer, personal computer and mobile phone

	Frequency	Happiness				Cloth Dryer				Personal Computer				Mobile Phone					
		Beta	t	Sig. Lev.	p<0.05	Beta	t	Sig. Lev.	p<0.05	Beta	t	Sig. Lev.	p<0.05	Beta	t	Sig. Lev.	p<0.05		
Life changes in member of family members	Gave birth to a child (*)	154	0.080	3.904	0.000	**	-0.019	-0.906	0.365		-0.024	-1.147	0.251		-0.024	-1.152	0.249		
	Took parent(s) along home	13	-0.018	-0.873	0.383		0.049	2.380	0.017	**	0.027	1.298	0.194		0.030	1.449	0.147		
	Return of a family member	6	0.004	0.194	0.847		-0.024	-1.149	0.251		-0.008	-0.370	0.711		0.009	0.442	0.658		
	Increase for other reason	26	-0.025	-1.229	0.219		-0.037	-1.790	0.074		-0.004	-0.185	0.853		0.001	0.036	0.971		
	A family member transferred	14	0.008	0.406	0.685		-0.028	-1.372	0.170		0.028	1.329	0.184		0.053	2.537	0.011	**	
	A family member moved out	40	-0.022	-1.063	0.288		-0.037	-1.781	0.075		-0.037	-1.791	0.073		0.019	0.923	0.356		
	Loss by death	24	0.016	0.783	0.434		0.084	4.089	0.000	**	-0.003	-0.139	0.889		0.015	0.739	0.460		
	Loss for other reason	26	0.001	0.069	0.945		-0.019	-0.945	0.345		-0.012	-0.581	0.562		-0.001	-0.054	0.957		
	Married and left family (*)	57	0.087	4.235	0.000	**	-0.048	-2.339	0.019	**	0.015	0.726	0.468		0.033	1.611	0.107		
	Divorced or separated	10	-0.054	-2.601	0.009	**	-0.036	-1.713	0.087		-0.030	-1.413	0.158		-0.032	-1.520	0.129		
	Left for an independent life	29	-0.004	-0.213	0.831		-0.021	-1.039	0.299		-0.022	-1.078	0.281		-0.042	-2.057	0.040	**	
	Started to live with parents	22	0.010	0.473	0.636		0.006	0.303	0.762		-0.009	-0.416	0.677		-0.019	-0.891	0.373		
Happenings to self	Found a new job	175	-0.013	-0.600	0.549		-0.019	-0.921	0.357		-0.024	-1.166	0.244		0.030	1.417	0.157		
	Changed job	179	-0.009	-0.446	0.656		-0.030	-1.460	0.145		-0.015	-0.724	0.469		0.047	2.251	0.024	**	
	Quit job	128	0.002	0.089	0.929		-0.003	-0.155	0.877		0.008	0.402	0.688		0.030	1.445	0.149		
	Enrolled to a (graduate or professional) school	17	-0.036	-1.727	0.084		-0.015	-0.743	0.458		0.046	2.234	0.026	**	-0.010	-0.495	0.621		
	Started a new lesson/training	201	0.030	1.465	0.143		-0.026	-1.248	0.212		0.057	2.787	0.005	**	-0.011	-0.541	0.588		
	Took a leadership of a committee or organization	378	0.009	0.421	0.674		0.052	2.517	0.012	**	0.109	5.298	0.000	**	0.024	1.149	0.251		
	Illness requiring an operation or hospitalization	41	-0.005	-0.262	0.793		0.001	0.050	0.960		-0.014	-0.655	0.512		-0.007	-0.349	0.727		
	Depression/other psychiatric symptoms	31	-0.010	-0.479	0.632		-0.031	-1.463	0.144		-0.011	-0.518	0.605		-0.013	-0.613	0.540		
	Loan/credit card related trouble	12	-0.032	-1.536	0.125		0.011	0.530	0.596		0.005	0.249	0.804		-0.013	-0.609	0.543		
	Accident/disaster	66	-0.055	-2.680	0.007	**	0.022	1.066	0.287		-0.006	-0.312	0.755		0.006	0.270	0.787		
Accidents, disasters, and consumer troubles	Other	105	0.003	0.150	0.881		0.043	2.063	0.039	**	0.010	0.489	0.625		-0.006	-0.287	0.774		
	Traffic accidents	48	-0.062	-0.280	0.781		0.075	0.333	0.740		0.159	0.705	0.483		0.406	1.883	0.064		
	Burglary or theft	3	0.184	1.066	0.290		-0.052	-0.295	0.769		0.013	0.073	0.942		0.177	1.046	0.299		
	Bankruptcy	7	-0.074	-0.470	0.640		0.040	0.250	0.803		0.118	0.732	0.466		0.364	2.356	0.021	**	
	Other	9	-0.101	-0.640	0.524		-0.001	-0.009	0.993		0.064	0.392	0.696		0.050	0.325	0.746		
	Happenings involving family	Transferred	70	0.005	0.221	0.825		-0.021	-1.010	0.313		0.048	2.335	0.020	**	0.046	2.249	0.025	**
		Vol. retirement or lost job	99	-0.017	-0.819	0.413		-0.037	-1.750	0.080		-0.036	-1.742	0.082		0.013	0.619	0.536	
		Business bankrupts	11	0.006	0.309	0.757		0.032	1.505	0.132		0.027	1.301	0.193		0.014	0.653	0.514	
		Illness requiring hospitalization or operation	107	-0.023	-1.135	0.256		-0.007	-0.360	0.719		-0.018	-0.860	0.390		0.009	0.414	0.679	
		Depression or other psychiatric problems	23	-0.023	-1.102	0.271		0.036	1.722	0.085		-0.024	-1.136	0.256		-0.020	-0.955	0.340	
Credit card/loan-related trouble		19	-0.062	-2.918	0.004	**	-0.005	-0.213	0.831		-0.012	-0.561	0.575		-0.022	-1.047	0.295		
Accident/disaster		66	-0.013	-0.620	0.535		0.005	0.254	0.799		0.006	0.295	0.768		0.030	1.434	0.152		
Entrance exam and enrollment		270	0.026	1.272	0.204		0.050	2.433	0.015	**	0.053	2.588	0.010	**	0.097	4.699	0.000	**	
Others	75	-0.004	-0.201	0.841		-0.014	-0.667	0.505		-0.016	-0.796	0.426		-0.020	-0.954	0.340			
Life changes	Big expenditure	167	-0.042	-1.081	0.280		0.035	0.883	0.378		0.022	0.553	0.580		0.117	2.966	0.003	**	
	Income cut or depreciation of properties	88	-0.087	-2.203	0.028	**	-0.051	-1.282	0.200		-0.099	-2.456	0.014	**	-0.019	-0.480	0.632		
	Heavy burden on taking care	58	0.009	0.229	0.819		0.012	0.293	0.769		-0.030	-0.760	0.448		-0.061	-1.533	0.126		
	Lost good relationships with other family members	32	-0.113	-2.737	0.006	**	-0.005	-0.113	0.910		0.000	0.005	0.996		-0.027	-0.639	0.523		
	Depression (*)	98	-0.136	-3.234	0.001	**	0.113	2.629	0.009	**	-0.040	-0.928	0.354		0.021	0.488	0.626		
	Divorced or separated	2																	
	Others	26	0.021	0.550	0.582		-0.044	-1.104	0.270		0.002	0.054	0.957		-0.047	-1.192	0.234		

(Continued)

Household spending allocation for the month of September (1,000 Yen)	Food		-0.019	-0.777	0.437		0.080	3.343	0.001		0.069	2.879	0.004	**	0.048	2.139	0.033	**
	Housing (Rent/Mortgage)		0.029	1.366	0.172		-0.046	-2.238	0.025		-0.013	-0.655	0.513		-0.009	-0.451	0.652	
	Water, Gas, Electricity		0.022	0.904	0.366		0.127	5.364	0.000		-0.008	-0.324	0.746		0.097	4.338	0.000	**
	Furniture and Household Appliances		0.017	0.792	0.429		0.091	4.425	0.000		0.051	2.480	0.013	**	-0.018	-0.918	0.359	
	Clothing and Shoes		0.016	0.737	0.461		-0.004	-0.213	0.832		0.013	0.621	0.535		0.031	1.596	0.111	
	Medical and Insurance		-0.004	-0.190	0.850		-0.013	-0.665	0.506		0.043	2.103	0.036	**	-0.014	-0.758	0.449	
	Transportation		0.016	0.787	0.431		0.004	0.208	0.835		0.006	0.307	0.759		0.013	0.696	0.486	
	Communication		-0.032	-1.510	0.131		0.004	0.183	0.855		0.113	5.425	0.000	**	0.297	15.220	0.000	**
	Education		0.001	0.045	0.964		0.062	2.841	0.005		0.049	2.221	0.026	**	0.071	3.431	0.001	**
	Hobby and Leisure		0.012	0.572	0.567		0.031	1.546	0.122		0.113	5.568	0.000	**	-0.032	-1.673	0.095	
	Going out		0.038	1.827	0.068		0.017	0.826	0.409		0.025	1.220	0.223		0.016	0.825	0.409	
	Allowances		0.022	0.967	0.334		0.036	1.637	0.102		0.043	1.960	0.050		0.093	4.517	0.000	**
Annual income: husband ( 10,000 yen ) (*)	Annual income: husband ( 10,000 yen ) (*)		0.096	3.623	0.000	**	0.054	2.056	0.040	**	7.727	0.000		0.050	1.910	0.056		
	Annual income: wife or self ( 10,000 yen ) (*)		-0.057	-2.170	0.030	**	0.102	3.858	0.000	**	6.092	0.000		0.108	4.093	0.000	**	
	Annual income: household business ( 10,000 yen )		0.037	1.384	0.166		-0.031	-1.179	0.239		1.561	0.119		-0.001	-0.044	0.965		
	Annual income: other family member ( 10,000 yen )		-0.029	-1.099	0.272		0.042	1.590	0.112		0.608	0.543		0.064	2.432	0.015	**	
	Household savings (10,000 yen)		-0.135	-1.781	0.076		-0.042	-0.546	0.586		0.060	0.784	0.434		-0.083	-1.091	0.277	
	Household stock possession (10,000 yen)		0.149	1.971	0.050		-0.030	-0.394	0.694		-0.063	-0.819	0.414		0.147	1.940	0.054	
Employment Situation (Dummy)	Wife - Employed (*)	1421	0.234	3.125	0.002	**	0.102	1.352	0.177		0.177	2.344	0.019	**	0.253	3.358	0.001	**
	Wife - Unemployed	18	0.092	3.803	0.000	**	-0.020	-0.822	0.411		0.059	2.436	0.015	**	0.076	3.141	0.002	**
	Wife - Student	10	0.033	1.437	0.151		0.001	0.049	0.961		0.063	2.778	0.006	**	0.001	0.056	0.955	
	Wife - Housekeeper (*)	860	0.342	4.583	0.000	**	0.210	2.806	0.005	**	0.225	3.003	0.003	**	0.171	2.283	0.023	**
	Wife - Full-time position	649																
	Wife - Part-time position	535	-0.026	-0.909	0.364		0.018	0.607	0.544		-0.081	-2.791	0.005	**	0.070	2.435	0.015	**
	Wife - Contractor	61	-0.038	-1.323	0.186		0.041	1.414	0.158		0.001	0.028	0.977		0.101	3.507	0.000	**
	Husband - Full-time position	1432									0.050	1.907	0.057					
	Husband - Part-time position	14	-0.058	-2.206	0.028	**	0.007	0.257	0.798		-0.069	-2.637	0.008	**	0.070	2.435	0.015	**
	Husband - Contractor	13	-0.002	-0.061	0.952		0.028	1.059	0.290		-0.007	-0.250	0.802		0.101	3.507	0.000	**
Type of Housing (Dummy)	A House	1353	-0.683	-1.381	0.167		0.293	0.597	0.551		0.358	0.723	0.470		0.172	0.348	0.728	
	Dual house	39	-0.202	-1.566	0.118		0.089	0.690	0.490		0.077	0.595	0.552		0.063	0.489	0.625	
	Reinforced-concrete apartment	805	-0.623	-1.313	0.189		0.203	0.431	0.667		0.367	0.774	0.439		0.122	0.258	0.797	
	Wooden apartment	154	-0.329	-1.326	0.185		0.047	0.193	0.847		0.160	0.643	0.520		0.047	0.188	0.851	
Ownership of housing (Dummy)	Own house (*)	1508	-0.656	-1.936	0.053		-0.309	-0.915	0.360		0.377	1.121	0.263		0.164	0.484	0.629	
	Rent private apartment	447	-0.508	-1.828	0.068		-0.345	-1.247	0.212		0.262	0.949	0.343		0.120	0.431	0.667	
	Rent public apartment	235	-0.447	-2.102	0.036	**	-0.275	-1.299	0.194		0.112	0.529	0.597		0.083	0.391	0.696	
	Company/school owned housing (*)	160	-0.316	-1.767	0.077		-0.178	-1.001	0.317		0.243	1.367	0.172		0.015	0.085	0.932	
	Change in the annual income in a year: husband ( 10,000 yen )		0.007	0.238	0.812		0.001	0.037	0.970		-0.022	-0.743	0.457		0.020	0.674	0.501	
	Change in the annual income in a year: wife or self ( 10,000 yen )		-0.008	-0.288	0.773		-0.019	-0.649	0.516		0.018	0.622	0.534		-0.033	-1.145	0.252	
	Change in the annual income in a year: household business ( 10,000 yen )		0.011	0.368	0.713		-0.032	-1.105	0.269		-0.003	-0.111	0.912		0.026	0.892	0.373	
	Change in the annual income in a year: other family member ( 10,000 yen )		-0.022	-0.772	0.441		0.026	0.879	0.380		-0.023	-0.795	0.427		0.006	0.206	0.837	
	Change in household savings in a year (10,000 yen)		0.043	0.518	0.605		-0.015	-0.184	0.854		-0.189	-2.302	0.023	**	-0.020	-0.242	0.809	
	Change in household possession of stock in a year (10,000 yen)		-0.111	-1.337	0.183		-0.016	-0.195	0.845		0.072	0.880	0.380		0.046	0.548	0.585	

- Double asterisks (\*\*) indicates statistically different (S.D.) at  $p < 0.05$  level
- Variables with an asterisks (\*) means that these variables have been chosen for sub? grouping of the sample for further analysis.

E. Panel Analysis 2: Comparison of mean values of the variables between NN and NY after screening of sample

Comparisons of mean and SD for happiness, life satisfaction, living standard and consumption variables between NN and NY of technologies after stratifying the sample into sub-groups are shown in Tables 49-51. Our interest are comparisons of NN and NY in “Others” group because this group is basically not affected by the life event, although they may be affected by other life events that are hidden (or invisible) in these results.

Table 49-a. Comparisons of mean and SD between NN and NY of cloth dryer after stratifying the sample into sub-groups by life events – Gave birth to a child

Indicators for ultimate utility	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1683)		NY (58)		Sig.	NN (125)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.030	0.680	-0.070	0.620		-0.060	0.670	-0.330	0.580	
Life Satisfaction	-0.040	0.840	0.020	1.020		-0.060	0.890	-1.000	1.000	
Living Standard	-0.030	0.560	-0.020	0.690		0.090	0.580	0.000	0.000	

	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1683)		NY (58)		Sig.	NN (125)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	-0.06	0.55	-0.09	0.66		1.02	0.60	1.00	0.00	

Household spending allocation for the month of September (1,000 Yen)	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1683)		NY (58)		Sig.	NN (125)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.03	29.33	8.28	34.48		0.78	24.51	3.33	25.66	
Housing (Rent/Mortgage)	1.62	51.46	-2.52	28.70		-2.06	28.84	-3.33	5.77	
Water, Gas, Electricity	1.04	9.38	2.83	14.29		2.20	10.52	4.67	7.57	
Furniture and Household Appliances	-0.26	13.55	2.00	19.81		-1.00	10.35	4.33	5.13	
Clothing and Shoes	0.52	17.58	4.10	18.87		1.18	11.43	2.33	10.79	
Medical and Insurance	0.24	23.17	-4.67	20.67		-0.76	44.15	-0.67	17.79	
Transportation	5.48	63.44	-12.97	101.78	**	-0.85	68.22	-2.33	2.08	
Communication	2.37	9.18	1.53	8.75		3.06	9.82	8.33	4.73	
Education	1.23	21.22	-2.67	32.07		2.71	35.41	-2.00	3.46	
Hobby and Leisure	-0.30	27.36	0.93	24.65		-1.39	14.58	-0.33	13.05	
Going out	-0.90	18.55	4.10	24.32	**	1.82	19.12	7.33	6.43	
Allowances	0.10	22.89	2.09	27.56		-1.12	28.99	-12.00	23.30	

Household possession of durable consumer good	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1683)		NY (58)		Sig.	NN (125)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.40	0.19	0.48	**	0.09	0.40	0.00	0.00	
Cupboard	0.01	0.50	0.22	0.59	**	0.02	0.38	0.00	0.00	
Microwave	0.02	0.32	0.12	0.42	**	0.00	0.22	0.00	0.00	
Refrigerator	0.02	0.39	0.10	0.41		-0.02	0.28	0.33	0.58	**
Automatic Dishwasher	0.01	0.18	0.14	0.35	**	0.02	0.20	0.00	0.00	
Vacuum Cleaner	0.03	0.50	0.24	0.63	***	0.02	0.40	0.33	0.58	
Laundry Machine	0.02	0.33	0.14	0.48	**	0.02	0.25	0.00	0.00	
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.01	0.34	0.03	0.37		0.02	0.39	0.33	0.58	
Electric Fan	0.05	0.69	0.24	0.68	**	0.09	0.44	0.00	0.00	
Air Conditioner	0.07	0.73	0.66	1.49	**	0.06	0.61	0.67	0.58	*
Fan Heater	0.01	0.63	0.16	0.81	*	0.18	0.53	0.33	0.58	
“Kotatsu” Heater	-0.02	0.51	0.03	0.56		-0.06	0.63	0.00	0.00	
TV Set	0.05	0.70	0.38	0.79	**	0.10	0.51	0.00	0.00	
Stereo Sound System	0.00	0.51	0.02	0.44		0.03	0.42	0.33	0.58	
CD Radio Cassette Recorder	0.03	0.53	0.17	0.53	**	-0.02	0.52	-0.33	0.58	
VCR	0.01	0.63	0.16	0.83		0.06	0.56	0.33	0.58	
Video Camera	0.02	0.30	0.00	0.42		0.12	0.37	0.00	0.00	
Telephone	0.04	0.84	0.29	0.92	**	0.05	0.76	0.00	1.00	
Bicycle	0.09	0.86	0.28	1.06		0.06	0.63	0.00	1.00	
Car	0.04	0.51	0.16	0.62	*	0.00	0.48	0.00	0.00	
TV Game	0.11	0.67	0.03	0.72		0.08	0.67	1.00	1.73	**
Word Processor	-0.01	0.39	0.03	0.53		-0.06	0.39	0.00	0.00	
Personal Computer	0.13	0.46	0.14	0.63		0.08	0.43	0.33	0.58	
FAX	0.06	0.35	0.17	0.50	**	0.06	0.30	0.00	0.00	

Mobile Phone	0.22	0.64	0.34	0.78		0.10	0.54	0.33	0.58
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	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1683)		NY (58)		Sig.	NN (125)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Purchase of household possession of durable consumer good within a year										
Dining Set	0.03	0.18	0.00	0.00		0.02	0.16	0.00	0.00	
Cupboard	0.03	0.19	0.05	0.23		0.00	0.00	0.00	0.00	
Microwave	0.05	0.22	0.04	0.19		0.02	0.13	0.00	0.00	
Refrigerator	0.08	0.28	0.11	0.31		0.07	0.26	0.00	0.00	
Automatic Dishwasher	0.01	0.09	0.00	0.00		0.01	0.09	0.00	0.00	
Vacuum Cleaner	0.09	0.29	0.23	0.42	**	0.04	0.20	0.33	0.58	**
Laundry Machine	0.06	0.24	0.09	0.29		0.02	0.16	0.00	0.00	
Cloths Dryer	0.01	0.10	0.02	0.13		0.00	0.00	0.00	0.00	
Sewing Machine	0.03	0.16	0.07	0.26	**	0.02	0.16	0.00	0.00	
Electric Fan	0.12	0.39	0.07	0.32		0.08	0.28	0.00	0.00	
Air Conditioner	0.13	0.51	0.14	0.44		0.11	0.53	0.00	0.00	
Fan Heater	0.04	0.20	0.04	0.19		0.03	0.18	0.00	0.00	
“Kotatsu” Heater	0.02	0.13	0.00	0.00		0.02	0.16	0.00	0.00	
TV Set	0.12	0.34	0.12	0.33		0.07	0.26	0.00	0.00	
Stereo Sound System	0.04	0.19	0.04	0.19		0.05	0.22	0.00	0.00	
CD Radio Cassette Recorder	0.05	0.22	0.05	0.23		0.06	0.23	0.00	0.00	
VCR	0.09	0.31	0.14	0.35		0.07	0.28	0.00	0.00	
Video Camera	0.06	0.24	0.02	0.13		0.07	0.26	0.00	0.00	
Telephone	0.10	0.44	0.09	0.39		0.03	0.22	0.00	0.00	
Bicycle	0.20	0.47	0.19	0.40		0.13	0.36	0.00	0.00	
Car	0.16	0.39	0.16	0.37		0.11	0.32	0.00	0.00	
TV Game	0.12	0.35	0.12	0.33		0.10	0.33	0.33	0.58	
Word Processor	0.01	0.11	0.04	0.19		0.02	0.16	0.00	0.00	
Personal Computer	0.15	0.37	0.16	0.37		0.15	0.42	0.33	0.58	
FAX	0.07	0.25	0.09	0.29		0.04	0.20	0.00	0.00	
Mobile Phone	0.33	0.61	0.33	0.51		0.34	0.60	0.00	0.00	

		Others ( 2198 )					Gave a birth ( 154 )				
		NN (1683)		NY (58)		Sig.	NN (125)		NY (3)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
	Time-use patterns (minutes)										
Wife, Working Days	Weekdays-Commuting (work/school)	0.20	30.40	-4.26	31.16		-8.42	31.02	0.00	0.00	
	Work	8.37	155.88	1.98	203.66		-104.21	227.18	-120.00	207.85	
	Study	-1.99	54.10	-2.98	78.98		-2.91	26.08	0.00	0.00	
	House-Keeping and Taking Care of Children	-20.00	152.24	32.98	210.44	**	293.27	278.36	120.00	240.00	
	Hobby, Leisure and Going out	5.60	135.03	29.90	156.36		-81.70	165.23	40.00	242.49	
	Sleep, Eat, Personal Hygiene	7.46	167.03	-53.90	161.42	**	-91.27	192.36	-40.00	151.00	
Wife Weekends/Holidays	Weekdays-Commuting (work/school)	0.31	17.20	0.00	0.00		-0.02	0.18	0.00	0.00	
	Work	-2.34	74.95	13.40	71.13		-4.35	42.72	0.00	0.00	
	Study	-1.90	58.55	-4.33	63.43		-2.00	21.56	0.00	0.00	
	House-Keeping and Taking Care of Children	-10.41	163.07	42.69	212.62	**	285.02	283.11	-40.00	249.80	*
	Hobby, Leisure and Going out	4.08	191.62	-15.67	178.86		-150.86	222.28	80.00	192.87	*
	Sleep, Eat, Personal Hygiene	9.89	195.53	-35.16	190.01	*	-129.52	206.36	-40.00	151.00	
Husband, Working Days	Weekdays-Commuting (work/school)	-1.45	47.22	-2.41	50.68		-1.83	39.45	-40.33	69.00	
	Work	-0.64	123.50	19.05	147.63		-0.99	115.97	-59.00	58.51	
	Study	1.94	34.90	-4.00	69.72		-6.75	36.18	-20.00	34.64	
	House-Keeping and Taking Care of Children	-0.19	67.74	-11.18	129.81		21.33	88.91	0.67	1.15	
	Hobby, Leisure and Going out	2.88	107.51	24.34	117.49		-4.34	113.97	39.00	243.85	
	Sleep, Eat, Personal Hygiene	-0.08	122.09	-23.34	131.54		-16.34	152.68	61.67	161.58	
Husband, Weekends/Holidays	Weekdays-Commuting (work/school)	-0.06	6.12	0.00	0.00		1.10	25.36	0.00	0.00	
	Work	-1.01	91.40	-6.98	47.59		-1.62	67.65	0.00	0.00	
	Study	3.09	57.26	15.14	71.82		-16.72	121.72	-20.00	34.64	
	House-Keeping and Taking Care of Children	-5.86	151.10	-8.26	178.25		103.72	238.48	20.00	34.64	
	Hobby, Leisure and Going out	1.15	235.23	23.53	272.59		-42.31	289.93	-120.00	364.97	
	Sleep, Eat, Personal Hygiene	3.39	230.95	-20.93	201.36		-42.76	261.32	120.00	364.97	

(\* p<0.1, \*\* p<0.05)

Table 49-b. Comparisons of mean and SD between NN and NY of cloth dryer after stratifying the sample into sub-groups by life events – Got married

Indicators for ultimate utility	Others(2295)					Got Married (57)				
	NN (1758)		NY (58)		Sig.	NN (50)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.040	0.680	-0.090	0.630		0.220	0.550	0.000	0.000	
Life Satisfaction	-0.040	0.850	-0.030	1.060		0.000	0.760	0.000	0.000	
Living Standard	-0.020	0.550	0.020	0.630		-0.040	0.810	-0.670	1.150	

Number of Family Members	Others(2295)					Got Married (57)				
	NN (1758)		NY (58)		Sig.	NN (50)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.02	0.55	0.00	0.62		-0.28	1.78	-0.67	1.53	

Household spending allocation for the month of September (1,000 Yen)	Others(2295)					Got Married (57)				
	NN (1758)		NY (58)		Sig.	NN (50)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.16	28.77	5.86	32.71		28.32	26.45	50.00	36.06	
Housing (Rent/Mortgage)	0.23	50.04	-5.10	24.53		41.20	40.16	46.67	50.33	
Water, Gas, Electricity	0.80	9.30	0.83	7.43		12.44	8.38	43.33	41.63	**
Furniture and Household Appliances	-0.44	13.34	2.22	19.83		4.26	13.33	0.00	0.00	
Clothing and Shoes	0.81	17.05	4.60	18.68	*	-7.82	20.92	-7.33	11.02	
Medical and Insurance	0.10	25.46	-4.95	20.38		2.78	10.19	4.67	23.35	
Transportation	4.95	64.57	-14.98	100.20	**	8.50	22.75	36.67	73.71	*
Communication	2.35	9.18	1.72	8.75		4.90	10.48	4.67	8.96	
Education	1.41	22.77	-2.78	32.07		-1.50	5.85	0.00	0.00	
Hobby and Leisure	-0.43	26.93	1.43	24.57		1.56	15.70	-10.00	10.00	
Going out	-0.52	18.49	5.34	22.31	**	-7.40	21.04	-16.67	45.09	
Allowances	-0.61	23.00	1.47	28.08		21.98	25.19	0.00	0.00	

Household possession of durable consumer good	Others(2295)					Got Married (57)				
	NN (1758)		NY (58)		Sig.	NN (50)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.02	0.38	0.14	0.44	**	0.40	0.64	1.00	0.00	
Cupboard	0.00	0.48	0.17	0.57	**	0.38	0.60	1.00	0.00	*
Microwave	0.01	0.30	0.07	0.37		0.36	0.48	1.00	0.00	**
Refrigerator	0.01	0.37	0.09	0.39		0.26	0.69	0.67	0.58	
Automatic Dishwasher	0.01	0.19	0.10	0.31	**	0.00	0.00	0.67	0.58	**
Vacuum Cleaner	0.03	0.49	0.21	0.61	**	0.20	0.70	1.00	0.00	*
Laundry Machine	0.01	0.31	0.09	0.43	*	0.38	0.53	1.00	0.00	*
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.01	0.34	0.03	0.37		0.02	0.47	0.33	0.58	
Electric Fan	0.05	0.68	0.24	0.68	**	0.06	0.82	0.00	0.00	
Air Conditioner	0.06	0.71	0.64	1.48	**	0.30	0.99	1.00	1.00	
Fan Heater	0.02	0.62	0.16	0.81		-0.02	0.96	0.33	0.58	
“Kotatsu” Heater	-0.02	0.52	0.05	0.54		-0.06	0.68	-0.33	0.58	
TV Set	0.05	0.68	0.33	0.76	**	0.34	0.94	1.00	1.00	
Stereo Sound System	-0.01	0.50	0.03	0.46		0.24	0.66	0.00	0.00	
CD Radio Cassette Recorder	0.03	0.52	0.16	0.52	*	-0.14	0.64	0.00	1.00	
VCR	0.01	0.62	0.14	0.80		0.20	0.78	0.67	1.15	
Video Camera	0.02	0.30	-0.03	0.37		0.20	0.40	0.67	0.58	*
Telephone	0.04	0.83	0.24	0.84		0.06	1.08	1.00	2.00	
Bicycle	0.08	0.84	0.21	1.02		0.14	0.90	1.33	1.15	**
Car	0.02	0.49	0.09	0.54		0.50	0.89	1.33	0.58	
TV Game	0.10	0.66	0.03	0.77		0.30	0.74	1.00	1.00	
Word Processor	-0.01	0.39	0.05	0.51		-0.04	0.53	-0.33	0.58	
Personal Computer	0.12	0.45	0.10	0.58		0.46	0.61	1.00	1.00	
FAX	0.05	0.34	0.14	0.44	*	0.30	0.54	0.67	1.15	
Mobile Phone	0.20	0.63	0.31	0.78		0.60	0.73	1.00	0.00	

Purchase of household possession of durable consumer good within a year	Others(2295)					Got Married (57)				
	NN (1758)		NY (58)		Sig.	NN (50)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.18	0.00	0.00		0.06	0.24	0.00	0.00	
Cupboard	0.03	0.19	0.05	0.23		0.02	0.14	0.00	0.00	
Microwave	0.05	0.22	0.04	0.19		0.00	0.00	0.00	0.00	
Refrigerator	0.08	0.28	0.09	0.29		0.10	0.31	0.33	0.58	
Automatic Dishwasher	0.01	0.09	0.00	0.00		0.02	0.14	0.00	0.00	
Vacuum Cleaner	0.08	0.28	0.25	0.43	**	0.08	0.28	0.00	0.00	
Laundry Machine	0.06	0.24	0.09	0.29		0.04	0.20	0.00	0.00	
Cloths Dryer	0.01	0.09	0.02	0.13		0.00	0.00	0.00	0.00	
Sewing Machine	0.03	0.16	0.07	0.26	**	0.02	0.14	0.00	0.00	

Electric Fan	0.12	0.38	0.07	0.32		0.14	0.41	0.00	0.00	
Air Conditioner	0.13	0.50	0.14	0.44		0.18	0.88	0.00	0.00	
Fan Heater	0.04	0.20	0.04	0.19		0.04	0.20	0.00	0.00	
“Kotatsu” Heater	0.02	0.13	0.00	0.00		0.00	0.00	0.00	0.00	
TV Set	0.12	0.34	0.12	0.33		0.12	0.33	0.00	0.00	
Stereo Sound System	0.04	0.19	0.02	0.13		0.06	0.24	0.33	0.58	*
CD Radio Cassette Recorder	0.05	0.22	0.05	0.23		0.02	0.14	0.00	0.00	
VCR	0.09	0.31	0.12	0.33		0.06	0.24	0.33	0.58	*
Video Camera	0.06	0.24	0.02	0.13		0.04	0.20	0.00	0.00	
Telephone	0.09	0.43	0.09	0.39		0.10	0.37	0.00	0.00	
Bicycle	0.20	0.46	0.19	0.40		0.14	0.41	0.00	0.00	
Car	0.16	0.39	0.16	0.37		0.20	0.46	0.00	0.00	
TV Game	0.11	0.34	0.14	0.35		0.14	0.41	0.00	0.00	
Word Processor	0.01	0.11	0.04	0.19		0.02	0.14	0.00	0.00	
Personal Computer	0.15	0.37	0.18	0.38		0.18	0.39	0.00	0.00	
FAX	0.06	0.25	0.07	0.26		0.04	0.20	0.33	0.58	**
Mobile Phone	0.33	0.61	0.33	0.51		0.33	0.63	0.00	0.00	

		Others(2295)				Got Married (57)					
		NN (1758)		NY (58)		Sig.	NN (50)		NY (3)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Time-use patterns (minutes)										
	Weekdays-Commuting (work/school)	-0.05	30.00	-2.26	29.32		-12.58	43.52	-38.67	36.09	
	Work	6.44	156.25	-0.09	192.83		-205.38	273.56	-80.00	421.43	
	Study	-2.25	52.48	-4.02	78.53		4.68	58.01	20.00	34.64	
	House-Keeping and Taking Care of Children	-4.21	176.30	23.72	204.94		209.82	256.02	299.00	159.32	
	Hobby, Leisure and Going out	-0.63	137.40	29.90	159.56	*	5.58	190.13	40.00	173.21	
Wife Weekends/Holidays	Sleep, Eat, Personal Hygiene	0.17	170.54	-42.60	146.10	*	16.24	177.55	-258.33	301.68	**
	Weekends-Commuting (work/school)	0.47	16.26	0.00	0.00		-6.12	25.23	0.00	0.00	
	Work	-2.10	72.75	13.40	71.13		-15.98	86.75	0.00	0.00	
	Study	-1.64	56.61	-4.33	63.43		-11.08	62.05	0.00	0.00	
	House-Keeping and Taking Care of Children	5.10	186.07	24.07	206.29		185.96	223.31	320.00	151.00	
	Hobby, Leisure and Going out	-2.97	195.67	-7.40	180.80		-137.29	228.33	-80.00	151.00	
Husband, Working Days	Sleep, Eat, Personal Hygiene	0.62	196.09	-24.81	185.98		-13.29	296.72	-240.00	0.00	
	Weekdays-Commuting (work/school)	-1.49	46.51	-4.83	51.92		N/A	N/A	N/A	N/A	N/A
	Work	-0.68	122.75	14.06	144.55		N/A	N/A	N/A	N/A	N/A
	Study	1.10	35.11	-5.02	67.91		N/A	N/A	N/A	N/A	N/A
	House-Keeping and Taking Care of Children	1.89	70.30	-10.43	125.54		N/A	N/A	N/A	N/A	N/A
	Hobby, Leisure and Going out	2.18	108.12	25.28	124.51		N/A	N/A	N/A	N/A	N/A
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	-1.65	125.38	-17.91	133.23		N/A	N/A	N/A	N/A	N/A
	Weekends-Commuting (work/school)	0.05	9.79	0.00	0.00		N/A	N/A	N/A	N/A	N/A
	Work	-1.07	89.35	-6.52	46.01		N/A	N/A	N/A	N/A	N/A
	Study	1.17	66.49	12.85	70.31		N/A	N/A	N/A	N/A	N/A
	House-Keeping and Taking Care of Children	4.78	164.75	-6.41	172.50		N/A	N/A	N/A	N/A	N/A
	Hobby, Leisure and Going out	-3.07	241.28	14.17	276.69		N/A	N/A	N/A	N/A	N/A
Sleep, Eat, Personal Hygiene	-1.09	234.35	-11.74	212.14		N/A	N/A	N/A	N/A	N/A	

(\* p<0.1, \*\* p<0.05)

Table 49-c. Comparisons of mean and SD between NN and NY of cloth dryer after stratifying the sample into sub-groups by life events – Spiritually depressed

Indicators for ultimate utility	Others (547)				Sig.	Spiritually Depressed (98)				Sig.
	NN (423)		NY (12)			NN (64)		NY (3)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.030	0.690	0.000	0.600		-0.220	0.930	-0.330	0.580	
Life Satisfaction	-0.040	0.840	-0.250	1.290		-0.330	0.960	0.330	0.580	
Living Standard	-0.010	0.540	0.080	0.510		-0.250	0.760	-0.330	0.580	

Number of Family Members	Others (547)				Sig.	Spiritually Depressed (98)				Sig.
	NN (423)		NY (12)			NN (64)		NY (3)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.01	0.62	0.17	0.58		0.00	0.53	0.00	0.00	

	Others (547)				Sig.	Spiritually Depressed (98)				Sig.
	NN (423)		NY (12)			NN (64)		NY (3)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	

Household spending allocation for the month of September (1,000 Yen)	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.66	29.04	12.92	15.39		7.00	31.18	14.00	30.79	
Housing (Rent/Mortgage)	4.68	71.30	-13.42	28.22		1.11	17.66	0.00	0.00	
Water, Gas, Electricity	1.00	9.92	11.08	26.98	**	1.61	12.46	3.67	4.73	
Furniture and Household Appliances	-0.27	17.71	-0.75	6.51		0.20	5.76	8.67	15.01	**
Clothing and Shoes	-0.35	17.69	-0.42	12.52		2.20	12.35	-16.67	15.28	**
Medical and Insurance	3.16	42.95	0.58	1.98		-4.28	34.03	-7.67	8.08	
Transportation	6.30	62.62	6.33	15.95		12.16	89.32	15.00	23.43	
Communication	2.17	8.54	0.92	4.83		1.36	7.82	-1.33	3.21	
Education	0.36	33.01	3.33	19.75		2.64	33.20	-8.67	14.15	
Hobby and Leisure	-1.11	28.98	-11.17	26.23		2.50	19.02	26.33	73.15	*
Going out	0.26	17.63	3.00	27.27		-2.09	17.02	-3.67	10.02	
Allowances	0.01	23.87	6.42	37.33		0.95	17.55	-10.00	14.00	

Household possession of durable consumer good	Others (547)					Spiritually Depressed (98)				
	NN (423)		NY (12)		Sig.	NN (64)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.34	0.25	0.62	**	0.02	0.33	0.33	0.58	
Cupboard	0.00	0.48	0.25	0.45	*	0.00	0.47	0.67	1.15	**
Microwave	0.01	0.31	0.08	0.29		0.06	0.30	0.33	0.58	
Refrigerator	0.00	0.40	0.25	0.45	**	0.00	0.36	0.33	0.58	
Automatic Dishwasher	0.01	0.19	0.25	0.45	**	0.00	0.18	0.00	0.00	
Vacuum Cleaner	0.04	0.50	0.25	0.45		0.06	0.39	0.33	0.58	
Laundry Machine	0.04	0.33	0.08	0.51		0.05	0.33	0.33	0.58	
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.02	0.33	0.08	0.29		-0.02	0.33	0.00	0.00	
Electric Fan	0.06	0.74	0.00	0.60		0.00	0.53	0.33	0.58	
Air Conditioner	0.09	0.69	0.67	1.61	**	0.11	0.74	1.00	1.73	*
Fan Heater	0.08	0.65	0.33	0.65		0.02	0.55	0.33	0.58	
“Kotatsu” Heater	0.02	0.50	0.00	0.00		0.11	0.74	0.00	0.00	
TV Set	0.10	0.75	0.25	0.45		0.03	0.56	1.00	1.73	**
Stereo Sound System	0.01	0.54	-0.08	0.51		0.02	0.45	0.33	0.58	
CD Radio Cassette Recorder	-0.01	0.50	0.33	0.49	**	0.08	0.51	0.33	0.58	
VCR	0.00	0.65	0.25	0.45		0.11	0.62	-0.33	0.58	
Video Camera	0.03	0.33	0.08	0.29		0.05	0.33	0.00	0.00	
Telephone	0.06	0.88	0.42	1.00		0.14	0.94	0.33	0.58	
Bicycle	0.12	0.95	0.08	1.38		0.11	0.99	0.33	0.58	
Car	0.04	0.49	0.25	0.62		0.00	0.50	0.33	0.58	
TV Game	0.03	0.73	0.08	0.29		0.17	0.79	0.33	0.58	
Word Processor	-0.02	0.43	0.17	0.39		0.09	0.39	0.33	0.58	
Personal Computer	0.15	0.47	-0.08	0.67	*	0.09	0.34	0.33	0.58	
FAX	0.07	0.34	0.17	0.39		0.06	0.43	0.33	0.58	
Mobile Phone	0.27	0.70	0.33	0.49		0.23	0.75	0.33	0.58	

Purchase of household possession of durable consumer good within a year	Others (547)					Spiritually Depressed (98)				
	NN (423)		NY (12)		Sig.	NN (64)		NY (3)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.21	0.00	0.00		0.05	0.21	0.00	0.00	
Cupboard	0.04	0.19	0.00	0.00		0.06	0.30	0.33	0.58	
Microwave	0.05	0.21	0.00	0.00		0.08	0.27	0.33	0.58	
Refrigerator	0.09	0.28	0.08	0.29		0.08	0.27	0.00	0.00	
Automatic Dishwasher	0.01	0.10	0.00	0.00		0.02	0.13	0.00	0.00	
Vacuum Cleaner	0.11	0.32	0.17	0.39		0.05	0.21	0.00	0.00	
Laundry Machine	0.06	0.25	0.08	0.29		0.10	0.30	0.00	0.00	
Cloths Dryer	0.01	0.10	0.08	0.29	**	0.03	0.18	0.00	0.00	
Sewing Machine	0.02	0.14	0.08	0.29		0.00	0.00	0.00	0.00	
Electric Fan	0.12	0.40	0.00	0.00		0.14	0.43	0.00	0.00	
Air Conditioner	0.12	0.48	0.08	0.29		0.10	0.35	0.67	1.15	**
Fan Heater	0.04	0.20	0.00	0.00		0.05	0.21	0.00	0.00	
“Kotatsu” Heater	0.02	0.16	0.00	0.00		0.02	0.13	0.00	0.00	
TV Set	0.11	0.33	0.17	0.39		0.08	0.27	0.33	0.58	
Stereo Sound System	0.04	0.21	0.08	0.29		0.00	0.00	0.00	0.00	
CD Radio Cassette Recorder	0.03	0.18	0.00	0.00		0.03	0.18	0.00	0.00	
VCR	0.07	0.25	0.00	0.00		0.11	0.32	0.33	0.58	
Video Camera	0.07	0.26	0.00	0.00		0.05	0.21	0.00	0.00	
Telephone	0.07	0.38	0.17	0.58		0.13	0.58	0.33	0.58	
Bicycle	0.20	0.49	0.17	0.39		0.24	0.47	0.33	0.58	
Car	0.12	0.34	0.17	0.39		0.27	0.48	0.00	0.00	
TV Game	0.15	0.38	0.08	0.29		0.16	0.37	0.00	0.00	
Word Processor	0.02	0.13	0.00	0.00		0.06	0.25	0.00	0.00	

Personal Computer	0.16	0.37	0.33	0.49		0.11	0.32	0.33	0.58
FAX	0.08	0.29	0.08	0.29		0.06	0.25	0.00	0.00
Mobile Phone	0.34	0.65	0.17	0.39		0.25	0.51	0.67	0.58

		Others (547)				Spiritually Depressed (98)					
Time-use patterns (minutes)		NN (423)		NY (12)		Sig.	NN (64)		NY (3)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-0.27	25.69	-15.42	57.44	*	1.97	37.00	-0.33	0.58	
	Work	2.45	154.72	-119.75	186.96	**	11.27	148.54	19.00	32.91	
	Study	-2.18	49.98	-4.75	53.75		-10.20	55.88	21.00	33.81	
	House-Keeping and Taking Care of Children	-4.67	179.91	104.92	111.87	**	-19.47	154.98	-77.67	90.78	
	Hobby, Leisure and Going out	6.88	138.99	90.17	203.02	**	9.92	118.67	61.00	1.73	
	Sleep, Eat, Personal Hygiene	-0.79	171.55	-59.67	185.35		1.45	135.31	-41.00	93.31	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	-1.18	14.89	0.00	0.00		0.98	7.85	0.00	0.00	
	Work	-8.86	66.77	0.00	0.00		-10.43	88.21	-1.00	1.73	
	Study	-2.60	51.16	-5.00	59.77		-1.75	45.51	-20.00	34.64	
	House-Keeping and Taking Care of Children	12.44	187.67	75.08	217.32		3.14	160.34	-19.00	139.44	
	Hobby, Leisure and Going out	1.00	194.40	19.83	136.29		5.81	151.55	40.00	124.90	
	Sleep, Eat, Personal Hygiene	0.23	195.51	-94.42	154.38	*	-7.19	174.02	0.00	57.00	
Husband, Working Days	Weekdays-Commuting (work/school)	-6.46	51.28	5.60	81.20		14.68	68.70	0.00	.	
	Work	-13.03	146.11	-17.90	55.33		-27.06	149.23	2.00	.	
	Study	3.31	41.03	-41.50	78.88	**	0.16	37.39	0.00	.	
	House-Keeping and Taking Care of Children	6.05	71.82	41.40	61.92		-0.19	55.16	-1.00	.	
	Hobby, Leisure and Going out	6.66	116.06	35.50	132.82		46.29	119.69	0.00	.	
	Sleep, Eat, Personal Hygiene	2.64	126.04	-12.30	93.45		-19.94	121.72	-55.00	.	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.37	8.10	0.00	0.00		-0.03	0.18	0.00	.	
	Work	-1.50	86.01	6.00	18.97		-17.58	171.41	0.00	.	
	Study	1.11	48.94	-0.30	80.01		0.10	57.97	0.00	.	
	House-Keeping and Taking Care of Children	12.84	166.21	65.60	156.10		-32.65	167.91	-57.00	.	
	Hobby, Leisure and Going out	-4.28	231.94	-12.70	243.88		36.52	228.12	120.00	.	
	Sleep, Eat, Personal Hygiene	-6.48	231.73	-47.80	196.77		11.90	203.03	-63.00	.	

(\* p<0.1, \*\* p<0.05)

Table 49-d. Comparisons of mean and SD between NN and NY of cloth dryer after stratifying the sample into sub-groups by life events – Wife’s working

Indicators for ultimate utility	Others (931)				Sig.	Wife - Working (1421)			
	NN (670)		NY (28)			NN (1138)		NY (33)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Happiness	-0.050	0.640	-0.180	0.670		-0.020	0.700	0.000	0.560
Life Satisfaction	-0.030	0.810	-0.040	1.290		-0.050	0.870	-0.030	0.770
Living Standard	-0.020	0.580	0.110	0.420		-0.020	0.550	-0.120	0.820

Number of Family Members	Others (931)				Sig.	Wife - Working (1421)			
	NN (670)		NY (28)			NN (1138)		NY (33)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
	0.12	0.64	0.18	0.48		-0.05	0.60	-0.21	0.78

Household spending allocation for the month of September (1,000 Yen)	Others (931)				Sig.	Wife - Working (1421)			
	NN (670)		NY (28)			NN (1138)		NY (33)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Food	2.78	32.38	13.61	24.61	*	2.93	26.86	3.30	39.99
Housing (Rent/Mortgage)	3.43	42.24	-0.79	34.46		0.15	54.37	-4.06	21.50
Water, Gas, Electricity	1.52	11.03	1.61	8.63		0.89	8.40	4.03	17.38
Furniture and Household Appliances	-1.00	12.09	4.89	26.24	**	0.09	14.03	-0.24	10.37
Clothing and Shoes	-0.21	14.82	0.04	13.70		1.03	18.48	7.39	21.40
Medical and Insurance	0.14	27.00	-5.29	23.81		0.19	24.04	-3.79	17.40
Transportation	4.09	67.76	8.54	25.70		5.61	61.34	-30.24	131.12
Communication	2.38	9.46	2.07	5.67		2.44	9.09	1.70	10.72

Education	2.36	23.47	0.00	10.05		0.73	21.87	-4.88	41.67	
Hobby and Leisure	-0.38	18.17	4.11	32.56		-0.38	30.61	-1.88	13.46	
Going out	-0.05	19.53	4.75	28.86		-1.10	18.02	3.85	18.81	
Allowances	-0.65	25.00	-4.29	19.28		0.41	22.33	6.21	32.23	

Household possession of durable consumer good	Others (931)					Wife - Working (1421)				
	NN (670)		NY (28)		Sig.	NN (1138)		NY (33)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.39	0.14	0.45		0.03	0.40	0.21	0.48	**
Cupboard	0.02	0.42	0.14	0.45		0.01	0.53	0.27	0.67	**
Microwave	0.04	0.27	0.11	0.31		0.02	0.34	0.12	0.48	*
Refrigerator	0.01	0.32	0.14	0.36	**	0.02	0.42	0.09	0.46	
Automatic Dishwasher	0.01	0.20	0.18	0.39	**	0.01	0.18	0.09	0.29	**
Vacuum Cleaner	0.06	0.47	0.21	0.57	*	0.02	0.51	0.27	0.67	**
Laundry Machine	0.04	0.27	0.07	0.47		0.02	0.36	0.18	0.46	**
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.02	0.33	0.00	0.27		0.01	0.36	0.09	0.46	
Electric Fan	0.07	0.58	0.07	0.54		0.03	0.73	0.36	0.74	**
Air Conditioner	0.10	0.64	0.43	1.57	**	0.05	0.77	0.85	1.35	**
Fan Heater	0.04	0.58	-0.07	0.54		0.01	0.65	0.36	0.93	**
“Kotatsu” Heater	0.00	0.56	-0.07	0.47		-0.04	0.50	0.12	0.60	*
TV Set	0.09	0.65	0.14	0.59		0.04	0.71	0.55	0.87	**
Stereo Sound System	0.01	0.48	0.04	0.51		-0.01	0.52	0.03	0.39	
CD Radio Cassette Recorder	0.02	0.53	0.14	0.45		0.03	0.52	0.15	0.62	
VCR	0.03	0.60	0.04	0.69		0.01	0.65	0.27	0.91	**
Video Camera	0.06	0.32	-0.11	0.50	**	0.01	0.30	0.09	0.29	
Telephone	0.09	0.83	0.46	0.88	**	0.01	0.84	0.12	0.93	
Bicycle	0.13	0.93	0.21	0.83		0.06	0.79	0.30	1.21	*
Car	0.03	0.49	0.04	0.58		0.04	0.52	0.24	0.61	**
TV Game	0.12	0.68	0.04	0.96		0.09	0.65	0.12	0.65	
Word Processor	-0.02	0.39	0.11	0.57	*	-0.01	0.39	-0.03	0.47	
Personal Computer	0.15	0.48	0.07	0.81		0.11	0.45	0.21	0.42	
FAX	0.07	0.32	0.11	0.42		0.05	0.36	0.21	0.55	**
Mobile Phone	0.21	0.63	0.39	0.83		0.22	0.64	0.30	0.73	

Purchase of household possession of durable consumer good within a year	Others (931)					Wife - Working (1421)				
	NN (670)		NY (28)		Sig.	NN (1138)		NY (33)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.18	0.00	0.00		0.03	0.18	0.00	0.00	
Cupboard	0.03	0.16	0.07	0.27		0.04	0.20	0.03	0.17	
Microwave	0.05	0.22	0.04	0.19		0.05	0.21	0.03	0.17	
Refrigerator	0.07	0.26	0.04	0.19		0.09	0.29	0.15	0.36	
Automatic Dishwasher	0.00	0.06	0.00	0.00		0.01	0.10	0.00	0.00	
Vacuum Cleaner	0.08	0.28	0.26	0.45	**	0.08	0.28	0.21	0.42	**
Laundry Machine	0.06	0.23	0.07	0.27		0.06	0.24	0.09	0.29	
Cloths Dryer	0.01	0.11	0.04	0.19		0.01	0.08	0.00	0.00	
Sewing Machine	0.03	0.17	0.04	0.19		0.02	0.16	0.09	0.29	**
Electric Fan	0.13	0.42	0.07	0.27		0.12	0.36	0.06	0.35	
Air Conditioner	0.09	0.40	0.04	0.19		0.15	0.57	0.21	0.55	
Fan Heater	0.04	0.19	0.04	0.19		0.04	0.21	0.03	0.17	
“Kotatsu” Heater	0.02	0.13	0.00	0.00		0.02	0.13	0.00	0.00	
TV Set	0.11	0.32	0.11	0.32		0.12	0.34	0.12	0.33	
Stereo Sound System	0.03	0.18	0.04	0.19		0.04	0.20	0.03	0.17	
CD Radio Cassette Recorder	0.04	0.20	0.04	0.19		0.05	0.23	0.06	0.24	
VCR	0.06	0.28	0.15	0.36		0.10	0.32	0.12	0.33	
Video Camera	0.06	0.24	0.00	0.00		0.06	0.24	0.03	0.17	
Telephone	0.08	0.38	0.07	0.38		0.10	0.46	0.09	0.38	
Bicycle	0.19	0.45	0.07	0.27		0.20	0.47	0.27	0.45	
Car	0.16	0.40	0.15	0.36		0.15	0.38	0.15	0.36	
TV Game	0.12	0.35	0.15	0.36		0.11	0.34	0.12	0.33	
Word Processor	0.01	0.11	0.00	0.00		0.01	0.11	0.06	0.24	**
Personal Computer	0.16	0.38	0.22	0.42		0.15	0.37	0.12	0.33	
FAX	0.06	0.25	0.07	0.27		0.06	0.25	0.09	0.29	
Mobile Phone	0.35	0.63	0.33	0.55		0.31	0.59	0.30	0.47	

Time-use patterns (minutes)	Others (931)					Wife - Working (1421)				
	NN (670)		NY (28)		Sig.	NN (1138)		NY (33)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Weekdays-Commuting (work/school)	-5.71	23.59	-11.00	36.75		2.73	33.54	1.85	22.64	
Work	-69.22	168.85	-90.11	181.68		41.54	146.86	69.03	195.11	
Study	3.21	56.74	-21.39	99.63	**	-5.15	49.85	12.91	46.70	**

	House-Keeping and Taking Care of Children	38.20	240.10	94.25	208.11		-19.69	133.05	-11.09	203.37	
	Hobby, Leisure and Going out	22.44	165.78	78.93	197.66	*	-13.90	118.69	-10.79	102.27	
	Sleep, Eat, Personal Hygiene	15.05	199.44	-41.04	145.46		-7.85	150.77	-63.55	172.52	**
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.71	10.95	0.00	0.00		0.04	19.17	0.00	0.00	
	Work	-3.17	35.16	0.00	0.00		-2.07	88.26	23.55	93.63	
	Study	-2.97	44.04	-15.07	47.94		-1.27	63.09	5.18	70.96	
	House-Keeping and Taking Care of Children	29.16	232.81	53.68	221.70		-1.25	157.36	25.85	207.84	
	Hobby, Leisure and Going out	-17.85	198.39	10.54	186.37		-0.03	197.21	-29.21	173.40	
	Sleep, Eat, Personal Hygiene	-7.92	196.09	-49.14	153.30		5.06	201.28	-23.73	213.55	
	Husband, Working Days	Weekdays-Commuting (work/school)	-0.05	47.60	-9.48	61.18		-2.92	45.39	0.45	39.64
Work		-0.71	125.55	38.68	188.24		-0.65	120.01	-13.91	61.08	
Study		-0.44	31.47	-21.64	63.75	**	2.63	38.35	13.86	68.95	
House-Keeping and Taking Care of Children		3.00	81.17	-23.88	166.73		0.78	57.54	4.86	47.89	
Hobby, Leisure and Going out		-0.15	96.21	23.64	148.34		4.50	118.84	27.14	93.81	
Sleep, Eat, Personal Hygiene		-0.39	120.78	-9.48	135.70		-2.89	129.90	-27.50	132.89	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.21	11.13	0.00	0.00		-0.11	8.24	0.00	0.00	
	Work	-0.92	89.10	2.40	32.31		-1.21	89.67	-17.14	57.37	
	Study	-2.12	65.20	9.36	56.65		4.47	67.66	17.00	85.08	
	House-Keeping and Taking Care of Children	12.10	182.20	-16.72	210.94		-2.58	144.90	5.86	115.18	
	Hobby, Leisure and Going out	-1.84	240.18	-5.20	297.91		-4.30	242.57	37.24	254.41	
	Sleep, Eat, Personal Hygiene	-6.52	235.08	16.64	224.84		4.37	233.69	-45.52	195.92	

(\* p<0.1, \*\* p<0.05)

Table 49-e. Comparisons of mean and SD between NN and NY of cloth dryer after stratifying the sample into sub-groups by life events – Wife’s work - housekeeper

Indicators for ultimate utility	Others (1492)					Wife - House keeper (860)				
	NN (1203)		NY (35)		Sig.	NN (605)		NY (26)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.020	0.700	-0.030	0.570		-0.050	0.630	-0.150	0.670	
Life Satisfaction	-0.050	0.870	0.000	0.770		-0.030	0.800	-0.080	1.320	
Living Standard	-0.020	0.560	-0.110	0.800		-0.020	0.560	0.120	0.430	

Number of Family Members	Others (1492)					Wife - House keeper (860)				
	NN (1203)		NY (35)		Sig.	NN (605)		NY (26)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	-0.04	0.61	-0.20	0.76		0.13	0.62	0.19	0.49	

Household spending allocation for the month of September (1,000 Yen)	Others (1492)					Wife - House keeper (860)				
	NN (1203)		NY (35)		Sig.	NN (605)		NY (26)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.80	26.69	3.83	38.90		3.03	33.20	13.69	25.49	
Housing (Rent/Mortgage)	0.11	53.25	-3.83	20.88		3.85	43.55	-0.85	35.82	
Water, Gas, Electricity	0.94	8.26	3.80	16.89	*	1.49	11.49	1.73	8.96	
Furniture and Household Appliances	0.00	13.72	-0.23	10.06		-0.95	12.58	5.27	27.24	**
Clothing and Shoes	0.73	18.37	7.54	20.91	**	0.24	14.68	-0.73	13.64	
Medical and Insurance	0.12	23.54	-3.51	16.92		0.29	28.15	-5.77	24.68	
Transportation	5.29	59.77	-28.51	127.40	**	4.56	71.14	9.19	26.59	
Communication	2.40	9.11	1.60	10.40		2.45	9.45	2.23	5.86	
Education	0.74	21.64	-4.31	40.51		2.51	24.04	-0.38	10.24	
Hobby and Leisure	-0.51	31.03	-1.49	13.22		-0.12	14.59	4.04	33.81	
Going out	-1.12	17.88	5.57	21.96	**	0.11	19.93	2.50	26.29	
Allowances	0.28	22.47	5.97	31.29		-0.49	25.03	-4.77	19.94	

Household possession of durable consumer good	Others (1492)					Wife - House keeper (860)				
	NN (1203)		NY (35)		Sig.	NN (605)		NY (26)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.40	0.23	0.49	**	0.04	0.39	0.12	0.43	
Cupboard	0.01	0.53	0.29	0.67	**	0.01	0.40	0.12	0.43	
Microwave	0.02	0.35	0.11	0.47		0.02	0.23	0.12	0.33	**

Refrigerator	0.02	0.42	0.11	0.47		0.00	0.29	0.12	0.33	*
Automatic Dishwasher	0.01	0.18	0.11	0.32	**	0.01	0.19	0.15	0.37	**
Vacuum Cleaner	0.02	0.51	0.29	0.67	**	0.05	0.46	0.19	0.57	
Laundry Machine	0.02	0.37	0.20	0.47	**	0.02	0.23	0.04	0.45	
Cloths Dryer	0.00	0.00	1.00	0.00	.	0.00	0.00	1.00	0.00	.
Sewing Machine	0.01	0.36	0.09	0.45		0.02	0.32	0.00	0.28	
Electric Fan	0.03	0.73	0.31	0.76	**	0.08	0.55	0.12	0.52	
Air Conditioner	0.05	0.77	0.77	1.35	**	0.10	0.63	0.50	1.61	**
Fan Heater	0.01	0.65	0.31	0.93	**	0.03	0.59	-0.04	0.53	
“Kotatsu” Heater	-0.03	0.50	0.11	0.58	*	0.00	0.55	-0.08	0.48	
TV Set	0.04	0.71	0.46	0.95	**	0.09	0.67	0.23	0.43	
Stereo Sound System	0.00	0.53	0.06	0.42		0.00	0.47	0.00	0.49	
CD Radio Cassette Recorder	0.03	0.52	0.14	0.60		0.02	0.54	0.15	0.46	
VCR	0.01	0.65	0.31	0.90	**	0.02	0.60	-0.04	0.66	
Video Camera	0.01	0.30	0.11	0.32	*	0.05	0.32	-0.15	0.46	**
Telephone	0.02	0.85	0.14	0.91		0.09	0.82	0.46	0.90	**
Bicycle	0.06	0.79	0.23	1.24		0.14	0.94	0.31	0.74	
Car	0.04	0.52	0.17	0.71		0.02	0.50	0.12	0.43	
TV Game	0.09	0.65	0.06	0.73		0.13	0.69	0.12	0.91	
Word Processor	-0.01	0.39	-0.03	0.45		-0.02	0.39	0.12	0.59	*
Personal Computer	0.11	0.45	0.23	0.43		0.16	0.49	0.04	0.82	
FAX	0.06	0.36	0.20	0.53	**	0.07	0.32	0.12	0.43	
Mobile Phone	0.22	0.64	0.23	0.81		0.21	0.63	0.50	0.71	**

	Others (1492)					Wife - House keeper (860)				
	NN (1203)		NY (35)		Sig.	NN (605)		NY (26)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Purchase of household possession of durable consumer good within a year										
Dining Set	0.03	0.18	0.00	0.00		0.03	0.18	0.00	0.00	
Cupboard	0.03	0.20	0.03	0.17		0.03	0.17	0.08	0.28	
Microwave	0.04	0.21	0.03	0.17		0.05	0.23	0.04	0.20	
Refrigerator	0.09	0.28	0.14	0.36		0.08	0.27	0.04	0.20	
Automatic Dishwasher	0.01	0.10	0.00	0.00		0.00	0.04	0.00	0.00	
Vacuum Cleaner	0.08	0.28	0.23	0.43	**	0.09	0.29	0.24	0.44	**
Laundry Machine	0.06	0.25	0.09	0.28		0.05	0.22	0.08	0.28	
Cloths Dryer	0.01	0.09	0.00	0.00		0.01	0.10	0.04	0.20	
Sewing Machine	0.02	0.16	0.09	0.28	**	0.03	0.17	0.04	0.20	
Electric Fan	0.12	0.36	0.09	0.37		0.12	0.41	0.04	0.20	
Air Conditioner	0.15	0.58	0.23	0.55		0.09	0.35	0.00	0.00	
Fan Heater	0.04	0.21	0.06	0.24		0.04	0.19	0.00	0.00	
“Kotatsu” Heater	0.02	0.13	0.00	0.00		0.02	0.13	0.00	0.00	
TV Set	0.12	0.34	0.14	0.36		0.11	0.32	0.08	0.28	
Stereo Sound System	0.04	0.21	0.03	0.17		0.03	0.17	0.04	0.20	
CD Radio Cassette Recorder	0.05	0.22	0.06	0.24		0.04	0.20	0.04	0.20	
VCR	0.10	0.32	0.11	0.32		0.06	0.27	0.16	0.37	*
Video Camera	0.06	0.24	0.03	0.17		0.05	0.23	0.00	0.00	
Telephone	0.10	0.45	0.09	0.37		0.09	0.40	0.08	0.40	
Bicycle	0.20	0.47	0.26	0.44		0.19	0.45	0.08	0.28	
Car	0.15	0.38	0.17	0.38		0.16	0.40	0.12	0.33	
TV Game	0.11	0.34	0.14	0.36		0.12	0.35	0.12	0.33	
Word Processor	0.01	0.12	0.06	0.24	**	0.01	0.10	0.00	0.00	
Personal Computer	0.14	0.37	0.14	0.36		0.16	0.39	0.20	0.41	
FAX	0.06	0.25	0.09	0.28		0.06	0.24	0.08	0.28	
Mobile Phone	0.31	0.59	0.34	0.54		0.36	0.63	0.28	0.46	

	Others (1492)					Wife - House keeper (860)				
	NN (1203)		NY (35)		Sig.	NN (605)		NY (26)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Time-use patterns (minutes)										
Weekdays-Commuting (work/school)	1.33	35.13	-3.49	37.77		-3.84	17.59	-4.81	16.56	
Work	26.54	167.53	35.94	233.40		-51.25	144.32	-57.81	142.78	
Study	-2.47	57.69	15.60	48.86	*	-1.22	40.76	-27.65	99.30	**
House-Keeping and Taking Care of Children	-14.20	139.70	-5.31	199.93		33.48	243.26	94.58	214.77	
Hobby, Leisure and Going out	-7.96	129.46	12.03	136.87		14.51	155.50	55.12	184.04	
Sleep, Eat, Personal Hygiene	-4.46	157.99	-54.77	172.62	*	10.75	193.34	-51.12	143.96	
Weekends/Holiday										
Weekdays-Commuting (work/school)	0.49	20.12	0.00	0.00		-0.10	4.34	0.00	0.00	
Work	-2.51	87.26	22.20	91.00	*	-2.41	29.52	0.00	0.00	
Study	-0.69	64.24	4.89	68.85		-4.31	37.69	-16.23	49.62	
House-Keeping and Taking Care of Children	0.73	157.17	15.80	220.85		28.54	240.08	69.35	201.98	

Husband, Working Days	Hobby, Leisure and Going out	-1.79	200.76	-20.69	177.31		-16.29	191.54	2.12	184.09	
	Sleep, Eat, Personal Hygiene	4.19	202.98	-20.66	210.72		-7.60	192.06	-55.23	151.80	
	Weekdays-Commuting (work/school)	-2.26	45.05	0.45	39.64		-0.66	48.05	-9.48	61.18	
	Work	-0.81	119.60	-13.91	61.08		-0.53	126.15	38.68	188.24	
	Study	3.12	39.94	13.86	68.95		-1.07	28.91	-21.64	63.75	**
	House-Keeping and Taking Care of Children	0.66	56.85	4.86	47.89		3.21	82.38	-23.88	166.73	
	Hobby, Leisure and Going out	3.49	118.21	27.14	93.81		0.77	96.20	23.64	148.34	
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	-2.71	130.07	-27.50	132.89		-0.50	120.25	-9.48	135.70	
	Weekends-Commuting (work/school)	-0.20	8.46	0.00	0.00		0.32	11.04	0.00	0.00	
	Work	-0.78	90.06	-17.14	57.37		-1.37	88.67	2.40	32.31	
	Study	5.80	79.64	17.00	85.08		-3.76	48.33	9.36	56.65	
	House-Keeping and Taking Care of Children	-0.92	145.87	5.86	115.18		10.84	182.64	-16.72	210.94	
	Hobby, Leisure and Going out	-6.32	242.42	37.24	254.41		0.40	240.22	-5.20	297.91	
	Sleep, Eat, Personal Hygiene	3.05	234.10	-45.52	195.92		-5.49	234.74	16.64	224.84	

(\* p<0.1, \*\* p<0.05)

Table 49-f. Comparisons of mean and SD between NN and NY of cloth dryer after stratifying the sample into sub-groups by life events – Housing situation – own house

Indicators for ultimate utility	Others (844)				Sig.	Own House (1508)				Sig.
	NN (698)		NY (16)			NN (1110)		NY (45)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.030	0.700	-0.060	0.770		-0.040	0.660	-0.090	0.560	
Life Satisfaction	-0.040	0.890	-0.060	1.240		-0.050	0.820	-0.020	0.970	
Living Standard	-0.030	0.600	-0.060	0.770		-0.010	0.540	0.000	0.640	

Number of Family Members	Others (844)				Sig.	Own House (1508)				Sig.
	NN (698)		NY (16)			NN (1110)		NY (45)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	-0.02	0.71	-0.25	0.93		0.04	0.55	0.04	0.56	

Household spending allocation for the month of September (1,000 Yen)	Others (844)				Sig.	Own House (1508)				Sig.
	NN (698)		NY (16)			NN (1110)		NY (45)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.14	27.96	-6.50	48.64		3.35	29.68	13.20	25.71	**
Housing (Rent/Mortgage)	5.84	22.91	9.25	24.96		-1.45	61.33	-6.76	28.06	
Water, Gas, Electricity	1.34	8.17	1.38	10.98		0.99	10.19	3.47	15.00	
Furniture and Household Appliances	-0.12	12.63	-1.25	12.09		-0.44	13.79	3.31	21.32	*
Clothing and Shoes	0.84	16.23	4.19	17.77		0.39	17.82	3.96	18.95	
Medical and Insurance	-0.01	20.95	-8.38	29.79		0.29	27.50	-3.09	16.08	
Transportation	5.09	78.45	-63.06	185.40	**	5.02	52.54	5.56	21.11	
Communication	2.38	9.71	3.19	9.39		2.45	8.91	1.40	8.51	
Education	1.00	23.11	2.13	11.28		1.54	22.09	-4.33	35.75	*
Hobby and Leisure	-0.06	25.00	8.63	29.63		-0.58	27.69	-1.89	21.59	
Going out	-0.62	19.44	9.44	29.03	**	-0.77	18.05	2.42	21.64	
Allowances	0.24	22.11	5.38	24.43		-0.12	24.11	-0.02	28.46	

Household possession of durable consumer good	Others (844)				Sig.	Own House (1508)				Sig.
	NN (698)		NY (16)			NN (1110)		NY (45)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.34	0.13	0.34		0.04	0.43	0.20	0.50	**
Cupboard	0.00	0.37	0.13	0.50		0.02	0.55	0.24	0.61	**
Microwave	0.04	0.29	0.13	0.50		0.02	0.32	0.11	0.38	*
Refrigerator	0.02	0.31	0.19	0.40	**	0.02	0.42	0.09	0.42	
Automatic Dishwasher	0.00	0.16	0.00	0.00		0.01	0.20	0.18	0.39	**
Vacuum Cleaner	0.03	0.38	0.25	0.58	**	0.03	0.56	0.24	0.65	**
Laundry Machine	0.04	0.29	0.06	0.44		0.02	0.35	0.16	0.47	**
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.01	0.32	0.06	0.44		0.01	0.36	0.04	0.37	
Electric Fan	0.04	0.53	0.00	0.37		0.05	0.76	0.31	0.73	**
Air Conditioner	0.02	0.55	0.13	0.81		0.09	0.82	0.84	1.59	**
Fan Heater	0.02	0.50	0.13	0.72		0.02	0.70	0.18	0.83	
“Kotatsu” Heater	-0.01	0.39	-0.13	0.34		-0.03	0.59	0.09	0.60	
TV Set	0.05	0.49	0.37	0.62	**	0.06	0.79	0.36	0.83	**

Stereo Sound System	0.02	0.47	0.19	0.54		-0.01	0.53	-0.02	0.40	
CD Radio Cassette Recorder	0.00	0.52	0.00	0.63		0.04	0.53	0.20	0.50	*
VCR	0.04	0.56	0.25	0.77		0.01	0.67	0.13	0.84	
Video Camera	0.04	0.30	-0.06	0.57		0.02	0.32	0.02	0.34	
Telephone	0.03	0.71	0.19	0.75		0.05	0.91	0.31	0.97	*
Bicycle	0.08	0.81	0.38	0.81		0.09	0.87	0.22	1.13	
Car	0.03	0.42	0.25	0.68	**	0.04	0.56	0.11	0.57	
TV Game	0.11	0.70	0.13	1.02		0.10	0.64	0.07	0.72	
Word Processor	-0.02	0.36	0.00	0.52		-0.01	0.41	0.04	0.52	
Personal Computer	0.10	0.43	0.00	0.73		0.14	0.48	0.20	0.59	
FAX	0.06	0.33	0.25	0.68	**	0.06	0.36	0.13	0.40	
Mobile Phone	0.19	0.64	0.19	0.54		0.23	0.63	0.40	0.84	

	Others (844)					Own House (1508)				
	NN (698)		NY (16)		Sig.	NN (1110)		NY (45)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Purchase of household possession of durable consumer good within a year										
Dining Set	0.03	0.16	0.00	0.00		0.04	0.19	0.00	0.00	
Cupboard	0.03	0.19	0.07	0.26		0.03	0.18	0.04	0.21	
Microwave	0.04	0.20	0.00	0.00		0.05	0.22	0.04	0.21	
Refrigerator	0.07	0.26	0.13	0.35		0.09	0.29	0.09	0.29	
Automatic Dishwasher	0.01	0.09	0.00	0.00		0.01	0.09	0.00	0.00	
Vacuum Cleaner	0.08	0.29	0.20	0.41		0.08	0.28	0.24	0.43	**
Laundry Machine	0.06	0.24	0.07	0.26		0.06	0.24	0.09	0.29	
Cloths Dryer	0.01	0.09	0.00	0.00		0.01	0.09	0.02	0.15	
Sewing Machine	0.02	0.16	0.00	0.00		0.03	0.16	0.09	0.29	**
Electric Fan	0.11	0.39	0.00	0.00		0.13	0.37	0.09	0.36	
Air Conditioner	0.13	0.55	0.13	0.35		0.13	0.49	0.13	0.46	
Fan Heater	0.04	0.21	0.00	0.00		0.04	0.20	0.04	0.21	
“Kotatsu” Heater	0.02	0.15	0.00	0.00		0.01	0.11	0.00	0.00	
TV Set	0.12	0.34	0.00	0.00		0.11	0.33	0.16	0.37	
Stereo Sound System	0.04	0.21	0.07	0.26		0.03	0.19	0.02	0.15	
CD Radio Cassette Recorder	0.04	0.21	0.00	0.00		0.05	0.22	0.07	0.25	
VCR	0.09	0.32	0.07	0.26		0.09	0.30	0.16	0.37	
Video Camera	0.06	0.23	0.00	0.00		0.06	0.24	0.02	0.15	
Telephone	0.10	0.45	0.00	0.00		0.09	0.42	0.11	0.44	
Bicycle	0.18	0.43	0.13	0.35		0.20	0.48	0.20	0.40	
Car	0.16	0.40	0.07	0.26		0.15	0.38	0.18	0.39	
TV Game	0.12	0.35	0.13	0.35		0.11	0.34	0.13	0.34	
Word Processor	0.01	0.11	0.00	0.00		0.01	0.11	0.04	0.21	*
Personal Computer	0.15	0.38	0.33	0.49	*	0.15	0.37	0.11	0.32	
FAX	0.05	0.23	0.07	0.26		0.07	0.26	0.09	0.29	
Mobile Phone	0.33	0.63	0.33	0.49		0.32	0.59	0.31	0.51	

		Others (844)					Own House (1508)				
		NN (698)		NY (16)		Sig.	NN (1110)		NY (45)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Time-use patterns (minutes)											
Weekdays-Commuting (work/school)		-1.21	32.41	3.63	14.27		0.11	29.26	-6.78	34.06	
Work		-7.53	178.85	78.56	237.72	*	5.64	154.28	-33.38	184.47	*
Study		-0.95	48.60	-11.25	131.85		-2.75	55.03	0.16	46.04	
House-Keeping and Taking Care of Children		17.43	209.24	15.00	305.08		-8.13	162.50	45.18	168.82	**
Hobby, Leisure and Going out		-3.90	150.98	-14.94	110.26		1.70	131.06	46.51	170.86	**
Sleep, Eat, Personal Hygiene		-3.53	179.56	-67.63	186.73		3.22	164.94	-48.09	151.05	**
Weekends/Holidays											
Weekdays-Commuting (work/school)		-0.10	14.97	0.00	0.00		0.53	17.54	0.00	0.00	
Work		-5.15	83.44	30.00	120.00	*	-0.81	65.93	6.60	38.86	
Study		-3.40	54.37	3.56	14.25		-0.97	58.21	-6.84	71.52	
House-Keeping and Taking Care of Children		25.60	212.67	56.44	206.08		0.32	172.71	32.29	217.28	
Hobby, Leisure and Going out		-19.67	208.24	-26.25	117.72		1.50	190.60	-5.53	197.19	
Sleep, Eat, Personal Hygiene		2.96	205.03	-63.75	165.08		-1.46	195.89	-25.31	195.25	
Husband, Working Days											
Weekdays-Commuting (work/school)		-0.36	44.06	-0.31	80.03		-2.17	47.95	-6.56	37.64	
Work		2.41	134.71	37.00	258.01		-2.55	114.95	5.29	68.06	
Study		0.40	40.50	27.46	83.57	**	1.52	31.42	-17.44	57.56	**
House-Keeping and Taking Care of Children		1.82	68.85	-59.92	219.07	**	1.93	71.21	8.50	56.43	
Hobby, Leisure and Going out		1.29	107.93	-19.15	96.57		2.72	108.31	42.26	130.93	**

Husband. Weekends/Holidays	Sleep, Eat, Personal Hygiene	-4.84	135.40	14.92	147.07		0.29	118.96	-30.47	127.64	
	Weekends-Commuting (work/school)	0.14	15.41	0.00	0.00		-0.01	3.07	0.00	0.00	
	Work	-2.02	114.78	5.00	17.32		-0.48	69.42	-10.59	52.16	
	Study	2.39	57.56	5.00	17.32		0.42	71.44	15.62	81.31	
	House-Keeping and Taking Care of Children	11.03	172.37	-19.75	185.02		0.95	159.90	-1.71	170.52	
	Hobby, Leisure and Going out	-17.60	238.87	-75.50	273.94		5.83	242.48	45.82	274.64	
	Sleep, Eat, Personal Hygiene	6.05	221.78	94.25	214.58		-5.45	241.77	-49.15	201.22	

(\* p<0.1, \*\* p<0.05)

Table 49-g. Comparisons of mean and SD between NN and NY of cloth dryer after stratifying the sample into sub-groups by life events – Housing situation – company/school owned housing

Indicators for ultimate utility	Others (2117)					Company/school owned housing (235)				
	NN (1608)		NY (57)		Sig.	NN (200)		NY (4)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.040	0.660	-0.110	0.620		-0.010	0.770	0.250	0.500	
Life Satisfaction	-0.050	0.830	-0.070	1.050		0.010	0.940	0.500	0.580	
Living Standard	-0.020	0.550	-0.050	0.670		-0.030	0.660	0.500	0.580	

Number of Family Members	Others (2117)					Company/school owned housing (235)				
	NN (1608)		NY (57)		Sig.	NN (200)		NY (4)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
	0.02	0.63	-0.04	0.71		-0.01	0.56	0.00	0.00	

Household spending allocation for the month of September (1,000 Yen)	Others (2117)					Company/school owned housing (235)				
	NN (1608)		NY (57)		Sig.	NN (200)		NY (4)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.18	29.42	10.75	26.46	*	0.44	25.50	-30.75	88.52	**
Housing (Rent/Mortgage)	1.27	53.04	-2.25	28.77		2.13	13.90	-7.00	14.00	
Water, Gas, Electricity	1.18	9.54	2.67	14.40		0.69	8.81	6.50	5.57	
Furniture and Household Appliances	-0.31	13.91	1.70	19.75		-0.32	7.52	8.00	12.11	**
Clothing and Shoes	0.49	17.79	4.35	18.86		1.19	11.73	-0.75	13.25	
Medical and Insurance	0.17	26.37	-4.60	21.12		0.19	11.69	-2.75	3.77	
Transportation	5.22	67.18	-1.88	43.96		3.63	22.19	-163.00	358.48	**
Communication	2.44	9.31	2.16	8.90		2.24	8.48	-2.25	3.30	
Education	1.43	23.21	-2.79	32.35		0.58	15.45	-0.50	0.58	
Hobby and Leisure	-0.36	27.94	-1.32	20.21		-0.50	12.52	32.00	51.53	**
Going out	-0.73	18.90	5.44	23.58	**	-0.59	15.95	-12.50	22.22	
Allowances	0.04	24.09	0.30	25.45		-0.14	16.31	17.00	50.45	*

Household possession of durable consumer good	Others (2117)					Company/school owned housing (235)				
	NN (1608)		NY (57)		Sig.	NN (200)		NY (4)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.40	0.19	0.48	**	-0.01	0.35	0.00	0.00	
Cupboard	0.01	0.51	0.23	0.60	**	-0.01	0.36	0.00	0.00	
Microwave	0.02	0.32	0.12	0.43	**	0.02	0.29	0.00	0.00	
Refrigerator	0.02	0.39	0.12	0.43	**	0.00	0.28	0.00	0.00	
Automatic Dishwasher	0.01	0.18	0.14	0.35	**	-0.01	0.20	0.00	0.00	
Vacuum Cleaner	0.03	0.51	0.25	0.63	**	0.03	0.37	0.25	0.50	
Laundry Machine	0.03	0.33	0.14	0.48	**	0.01	0.29	0.00	0.00	
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.01	0.34	0.05	0.40		0.02	0.40	0.00	0.00	
Electric Fan	0.04	0.70	0.25	0.69	**	0.08	0.53	0.00	0.00	
Air Conditioner	0.07	0.75	0.70	1.50	**	0.02	0.47	0.00	0.00	
Fan Heater	0.02	0.63	0.14	0.79		0.02	0.63	0.50	1.00	
“Kotatsu” Heater	-0.02	0.53	0.04	0.57		-0.01	0.40	0.00	0.00	
TV Set	0.06	0.71	0.37	0.79	**	0.05	0.56	0.25	0.50	
Stereo Sound System	0.00	0.51	0.02	0.44		-0.01	0.49	0.25	0.50	
CD Radio Cassette Recorder	0.03	0.53	0.18	0.54	**	0.04	0.53	-0.25	0.50	
VCR	0.01	0.63	0.18	0.83	*	0.04	0.64	0.00	0.82	
Video Camera	0.03	0.31	0.00	0.42		0.04	0.26	0.00	0.00	
Telephone	0.05	0.85	0.25	0.91	*	0.03	0.73	0.75	0.96	*
Bicycle	0.08	0.86	0.25	1.07		0.13	0.75	0.50	0.58	
Car	0.03	0.52	0.18	0.60	**	0.04	0.41	-0.25	0.50	
TV Game	0.10	0.66	0.05	0.81		0.10	0.74	0.50	0.58	
Word Processor	-0.02	0.39	0.02	0.52		0.03	0.37	0.25	0.50	
Personal Computer	0.14	0.47	0.16	0.65		0.04	0.33	0.00	0.00	
FAX	0.06	0.36	0.18	0.50	**	0.04	0.27	0.00	0.00	

Mobile Phone	0.22	0.62	0.37	0.77	*	0.14	0.72	0.00	0.82	
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	Others (2117)					Company/school owned housing (235)				
	NN (1608)		NY (57)		Sig.	NN (200)		NY (4)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Purchase of household possession of durable consumer good within a year										
Dining Set	0.03	0.17	0.00	0.00		0.02	0.14	0.00	0.00	
Cupboard	0.04	0.22	0.00	0.00		0.01	0.10	0.25	0.50	**
Microwave	0.05	0.22	0.00	0.00		0.02	0.14	0.00	0.00	
Refrigerator	0.07	0.26	0.09	0.30		0.06	0.24	0.25	0.50	
Automatic Dishwasher	0.01	0.09	0.00	0.00		0.01	0.10	0.00	0.00	
Vacuum Cleaner	0.07	0.26	0.27	0.47	**	0.12	0.34	0.00	0.00	
Laundry Machine	0.05	0.22	0.09	0.30		0.08	0.28	0.00	0.00	
Cloths Dryer	0.01	0.10	0.00	0.00		0.01	0.07	0.00	0.00	
Sewing Machine	0.02	0.16	0.00	0.00		0.03	0.16	0.00	0.00	
Electric Fan	0.11	0.40	0.00	0.00		0.11	0.38	0.00	0.00	
Air Conditioner	0.15	0.60	0.09	0.30		0.10	0.41	0.25	0.50	
Fan Heater	0.04	0.21	0.00	0.00		0.04	0.21	0.00	0.00	
"Kotatsu" Heater	0.02	0.14	0.00	0.00		0.03	0.17	0.00	0.00	
TV Set	0.12	0.34	0.00	0.00		0.12	0.34	0.00	0.00	
Stereo Sound System	0.05	0.22	0.09	0.30		0.03	0.17	0.00	0.00	
CD Radio Cassette Recorder	0.04	0.20	0.00	0.00		0.05	0.22	0.00	0.00	
VCR	0.09	0.33	0.09	0.30		0.09	0.32	0.00	0.00	
Video Camera	0.06	0.23	0.00	0.00		0.06	0.24	0.00	0.00	
Telephone	0.12	0.51	0.00	0.00		0.04	0.25	0.00	0.00	
Bicycle	0.15	0.39	0.09	0.30		0.24	0.51	0.25	0.50	
Car	0.16	0.40	0.09	0.30		0.16	0.41	0.00	0.00	
TV Game	0.12	0.34	0.18	0.40		0.14	0.36	0.00	0.00	
Word Processor	0.02	0.13	0.00	0.00		0.01	0.07	0.00	0.00	
Personal Computer	0.15	0.39	0.18	0.40		0.15	0.36	0.75	0.50	**
FAX	0.05	0.21	0.09	0.30		0.07	0.26	0.00	0.00	
Mobile Phone	0.35	0.64	0.27	0.47		0.29	0.60	0.50	0.58	

		Others (2117)					Company/school owned housing (235)				
		NN (1608)		NY (57)		Sig.	NN (200)		NY (4)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Time-use patterns (minutes)										
	Weekdays-Commuting (work/school)	-0.28	30.20	-4.35	31.42		-1.35	32.94	0.25	0.50	
	Work	1.63	165.99	-20.09	172.22		-8.03	149.81	225.00	450.00	**
	Study	-2.35	53.94	-3.04	79.68		0.28	40.80	0.00	0.00	
	House-Keeping and Taking Care of Children	1.59	181.09	56.58	175.44	**	2.78	192.27	-238.00	452.02	**
	Hobby, Leisure and Going out	-1.00	135.48	30.44	164.07	*	3.88	165.31	29.75	36.72	
Wife Weekends/Holidays	Sleep, Eat, Personal Hygiene	0.36	169.50	-54.81	164.28	**	2.71	180.49	-30.50	77.21	
	Weekends-Commuting (work/school)	0.36	16.61	0.00	0.00		-0.32	16.52	0.00	0.00	
	Work	-2.11	72.46	13.63	71.74		-5.44	78.74	0.00	0.00	
	Study	-1.91	58.88	-4.40	63.99		-1.85	35.66	0.00	0.00	
	House-Keeping and Taking Care of Children	11.52	188.24	33.91	211.50		-1.77	198.83	105.75	256.15	
	Hobby, Leisure and Going out	-7.67	198.04	-7.53	182.41		1.53	195.95	-60.00	129.61	
Husband, Working Days	Sleep, Eat, Personal Hygiene	-0.67	199.13	-33.72	191.36		7.57	202.04	-59.25	129.62	
	Weekdays-Commuting (work/school)	-1.77	46.88	-9.18	45.76		0.94	43.28	59.00	102.19	**
	Work	-0.47	118.09	16.34	149.03		-2.43	157.87	-19.33	35.23	
	Study	1.45	34.43	-12.18	52.11	**	-1.95	40.52	100.00	173.21	**
	House-Keeping and Taking Care of Children	2.32	70.48	-12.43	129.37		-1.80	68.89	19.00	35.51	
	Hobby, Leisure and Going out	0.01	108.19	29.80	126.64	*	20.93	106.12	-41.00	68.43	
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	-0.37	119.66	-11.11	133.29		-12.64	167.02	-117.67	101.69	
	Weekends-Commuting (work/school)	0.06	10.36	0.00	0.00		0.00	0.00	0.00	0.00	
	Work	-1.71	94.20	-6.82	47.04		4.31	21.83	0.00	0.00	
	Study	1.36	69.63	13.43	71.87		-0.48	28.90	0.00	0.00	
	House-Keeping and Taking Care of Children	5.81	165.80	-14.95	163.64		-3.87	155.97	181.50	337.29	
	Hobby, Leisure and Going out	-1.73	240.96	24.43	269.31		-14.36	244.60	-211.50	468.81	
Sleep, Eat, Personal Hygiene	-2.93	233.70	-14.86	214.93		14.40	240.17	57.00	169.71		

(\* p<0.1, \*\* p<0.05)

Table 49-h. Comparisons of mean and SD between NN and NY of cloth dryer after stratifying the sample into sub-groups by life events – Husband's annual income > 5 million Yen

Indicators for ultimate utility	Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
	NN (652)		NY (26)		Sig.	NN (608)		NY (25)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.070	0.710	-0.230	0.710		-0.050	0.600	0.120	0.440	
Life Satisfaction	-0.050	0.900	-0.190	1.230		-0.060	0.730	0.080	0.810	
Living Standard	-0.020	0.580	0.040	0.660		-0.010	0.540	-0.080	0.700	

Number of Family Members	Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
	NN (652)		NY (26)		Sig.	NN (608)		NY (25)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.11	0.64	0.12	0.43		0.03	0.49	0.00	0.65	

Household spending allocation for the month of September (1,000 Yen)	Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
	NN (652)		NY (26)		Sig.	NN (608)		NY (25)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.78	32.07	2.27	43.21		3.23	32.75	13.88	28.54	
Housing (Rent/Mortgage)	0.88	22.03	-2.62	22.96		2.01	82.58	-5.12	36.40	
Water, Gas, Electricity	1.38	10.21	5.85	19.01	**	1.72	11.53	0.16	9.42	
Furniture and Household Appliances	-0.42	15.29	-0.46	7.02		-0.68	13.55	3.76	28.71	
Clothing and Shoes	0.65	13.30	2.23	11.52		0.91	17.65	6.76	24.22	
Medical and Insurance	-0.02	29.97	-10.04	24.54	*	0.28	26.62	2.04	15.44	
Transportation	5.41	51.61	-28.58	137.38	**	7.48	95.25	-0.60	66.74	
Communication	2.67	9.51	1.08	6.29		2.46	9.82	5.12	7.48	
Education	1.69	18.41	-9.04	43.92	**	1.91	30.25	2.56	18.76	
Hobby and Leisure	0.17	27.54	0.96	26.46		-0.21	20.37	0.60	25.38	
Going out	-0.99	17.72	-0.62	23.73		0.65	20.82	7.16	22.49	
Allowances	-0.07	21.69	4.35	26.41		-0.31	32.82	-1.44	33.57	

Household possession of durable consumer good	Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
	NN (652)		NY (26)		Sig.	NN (608)		NY (25)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.06	0.39	0.12	0.43		0.02	0.38	0.20	0.50	**
Cupboard	0.04	0.44	0.12	0.43		-0.02	0.47	0.24	0.60	**
Microwave	0.02	0.25	0.08	0.27		0.01	0.24	0.12	0.44	**
Refrigerator	0.02	0.32	0.00	0.28		-0.01	0.35	0.24	0.44	**
Automatic Dishwasher	0.00	0.21	0.08	0.27	*	0.01	0.18	0.20	0.41	**
Vacuum Cleaner	0.03	0.41	0.04	0.60		0.02	0.48	0.28	0.54	**
Laundry Machine	0.02	0.30	0.12	0.43		0.02	0.26	0.04	0.45	
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.03	0.32	0.00	0.40		0.01	0.31	0.08	0.28	
Electric Fan	0.09	0.62	0.12	0.59		0.03	0.63	0.28	0.61	*
Air Conditioner	0.10	0.58	0.19	0.94		0.08	0.69	1.04	1.74	**
Fan Heater	0.04	0.64	-0.04	0.53		0.03	0.60	0.16	0.75	
“Kotatsu” Heater	-0.04	0.42	0.12	0.52	*	-0.02	0.58	0.00	0.50	
TV Set	0.06	0.64	0.27	0.53		0.08	0.67	0.48	0.65	**
Stereo Sound System	0.00	0.48	0.04	0.45		0.01	0.53	-0.04	0.35	
CD Radio Cassette Recorder	0.04	0.54	-0.04	0.34		0.04	0.52	0.28	0.61	**
VCR	0.01	0.60	-0.12	0.65		0.01	0.64	0.28	0.61	**
Video Camera	0.03	0.36	-0.04	0.45		0.04	0.30	0.00	0.41	
Telephone	0.06	0.76	0.08	0.74		0.05	0.89	0.52	0.92	**
Bicycle	0.15	0.91	0.15	0.83		0.08	0.95	0.36	1.19	
Car	0.04	0.52	0.15	0.61		0.05	0.50	0.20	0.50	
TV Game	0.14	0.71	0.08	0.89		0.13	0.70	0.20	0.58	
Word Processor	0.01	0.36	0.04	0.45		-0.02	0.43	0.04	0.54	
Personal Computer	0.12	0.42	0.08	0.39		0.16	0.51	0.20	0.87	
FAX	0.07	0.34	0.04	0.45		0.08	0.32	0.28	0.54	**
Mobile Phone	0.22	0.61	0.38	0.70		0.33	0.68	0.52	0.65	

Purchase of household possession of durable consumer good within a year	Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
	NN (652)		NY (26)		Sig.	NN (608)		NY (25)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.01	0.08	0.00	0.00		0.06	0.23	0.00	0.00	
Cupboard	0.01	0.10	0.00	0.00		0.03	0.17	0.14	0.38	
Microwave	0.03	0.18	0.00	0.00		0.04	0.20	0.00	0.00	
Refrigerator	0.06	0.23	0.17	0.41		0.06	0.23	0.14	0.38	
Automatic Dishwasher	0.01	0.08	0.00	0.00		0.01	0.07	0.00	0.00	

Vacuum Cleaner	0.07	0.26	0.17	0.41		0.10	0.33	0.29	0.49	
Laundry Machine	0.06	0.23	0.00	0.00		0.05	0.21	0.14	0.38	
Cloths Dryer	0.01	0.10	0.00	0.00		0.01	0.07	0.00	0.00	
Sewing Machine	0.02	0.13	0.00	0.00		0.03	0.23	0.00	0.00	
Electric Fan	0.12	0.41	0.00	0.00		0.08	0.37	0.00	0.00	
Air Conditioner	0.08	0.30	0.00	0.00		0.15	0.62	0.14	0.38	
Fan Heater	0.04	0.19	0.00	0.00		0.03	0.16	0.00	0.00	
“Kotatsu” Heater	0.03	0.17	0.00	0.00		0.02	0.12	0.00	0.00	
TV Set	0.12	0.33	0.00	0.00		0.12	0.35	0.00	0.00	
Stereo Sound System	0.05	0.22	0.17	0.41		0.03	0.17	0.00	0.00	
CD Radio Cassette Recorder	0.03	0.17	0.00	0.00		0.05	0.21	0.00	0.00	
VCR	0.06	0.27	0.00	0.00		0.11	0.38	0.14	0.38	
Video Camera	0.06	0.24	0.00	0.00		0.06	0.23	0.00	0.00	
Telephone	0.06	0.35	0.00	0.00		0.10	0.46	0.00	0.00	
Bicycle	0.17	0.43	0.17	0.41		0.15	0.40	0.14	0.38	
Car	0.15	0.39	0.17	0.41		0.18	0.42	0.00	0.00	
TV Game	0.13	0.35	0.00	0.00		0.12	0.36	0.29	0.49	
Word Processor	0.01	0.12	0.00	0.00		0.02	0.12	0.00	0.00	
Personal Computer	0.17	0.37	0.33	0.52		0.16	0.44	0.29	0.49	
FAX	0.05	0.22	0.00	0.00		0.06	0.24	0.14	0.38	
Mobile Phone	0.36	0.67	0.33	0.52		0.34	0.61	0.29	0.49	

		Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
		NN (652)		NY (26)		Sig.	NN (608)		NY (25)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Time-use patterns (minutes)										
	Weekdays-Commuting (work/school)	0.47	26.13	-2.27	11.60		-1.54	25.71	-0.16	24.11	
	Work	1.64	172.40	22.88	234.15		0.48	155.98	2.56	155.56	*
	Study	-1.00	44.16	-0.12	16.98		-1.59	46.30	-23.72	106.77	**
	House-Keeping and Taking Care of Children	9.03	225.08	13.85	259.57		-7.64	196.94	66.76	193.86	
	Hobby, Leisure and Going out	-3.50	143.67	34.77	158.25		-0.17	126.59	14.24	143.13	
	Sleep, Eat, Personal Hygiene	-7.30	181.26	-67.04	144.51	*	10.19	169.35	-53.20	191.18	*
Wife Weekends/Holidays	Weekdays-Commuting (work/school)	-0.65	10.81	0.00	0.00		-0.01	0.28	0.00	0.00	
	Work	-3.44	66.89	-2.31	11.77		-1.70	52.01	2.40	12.00	
	Study	-0.36	38.97	-4.62	44.65		-3.76	41.18	-9.92	63.78	
	House-Keeping and Taking Care of Children	24.56	227.72	28.31	239.64		0.29	202.25	64.92	197.28	
	Hobby, Leisure and Going out	-10.22	191.39	43.85	175.74		-9.71	189.76	-38.76	156.69	
	Sleep, Eat, Personal Hygiene	-9.96	207.47	-69.38	211.86		13.01	185.02	-16.48	176.93	
Husband, Working Days	Weekdays-Commuting (work/school)	0.19	45.01	-5.13	54.73		-3.23	48.00	-4.52	50.04	
	Work	-5.49	131.45	22.62	186.56		4.31	112.93	5.13	84.49	
	Study	2.26	42.91	-4.79	82.13		-0.10	24.52	-5.26	50.89	
	House-Keeping and Taking Care of Children	5.62	82.29	-27.83	167.55	*	-1.98	55.01	7.74	54.13	
	Hobby, Leisure and Going out	7.68	122.50	39.92	131.18		-3.52	90.62	10.00	118.09	
	Sleep, Eat, Personal Hygiene	-7.77	131.54	-24.79	138.38		4.69	118.46	-10.74	130.35	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.21	7.82	0.00	0.00		0.32	11.48	0.00	0.00	
	Work	-2.88	86.96	-5.22	40.10		0.81	91.79	-7.83	52.13	
	Study	2.29	79.01	-0.13	44.32		0.01	50.45	25.83	88.30	**
	House-Keeping and Taking Care of Children	16.31	166.80	-17.87	232.65		-7.13	161.88	5.04	80.41	
	Hobby, Leisure and Going out	-6.42	250.98	44.35	339.08		0.39	231.00	-16.00	199.29	
	Sleep, Eat, Personal Hygiene	-8.29	233.97	-23.48	214.49		6.35	234.71	0.00	213.90	

(\* p<0.1, \*\* p<0.05)

Table 49-i. Comparisons of mean and SD between NN and NY of cloth dryer after stratifying the sample into sub-groups by life events – Wife's annual income > 1 million Yen

Indicators for ultimate utility	Wife's annual income < 1 mill. Yen (1308)				Sig.	Wife's annual income > 1 mill. Yen (371)			
	NN (972)		NY (31)			NN (836)		NY (30)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Happiness	-0.050	0.650	-0.060	0.510		-0.010	0.700	-0.100	0.710
Life Satisfaction	-0.040	0.800	-0.060	1.150		-0.040	0.900	0.000	0.910
Living Standard	-0.020	0.580	-0.030	0.550		-0.020	0.550	0.000	0.790

	Wife's annual income < 1 mill. Yen (1308)					Wife's annual income > 1 mill. Yen (371)				
	NN (972)		NY (31)		Sig.	NN (836)		NY (30)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.06	0.50	0.10	0.47		-0.04	0.73	-0.17	0.83	

Household spending allocation for the month of September (1,000 Yen)	Wife's annual income < 1 mill. Yen (1308)					Wife's annual income > 1 mill. Yen (371)				
	NN (972)		NY (31)		Sig.	NN (836)		NY (30)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.11	31.35	6.19	22.73		3.77	26.04	9.93	42.92	
Housing (Rent/Mortgage)	1.58	62.65	-2.10	24.97		1.11	29.94	-3.03	31.24	
Water, Gas, Electricity	1.09	10.55	1.29	8.19		1.17	8.03	4.60	18.18	**
Furniture and Household Appliances	-0.73	14.10	3.32	25.52		0.17	12.42	0.87	9.83	
Clothing and Shoes	0.93	13.87	1.00	12.02		0.15	20.44	7.13	23.22	*
Medical and Insurance	-0.40	19.59	-5.10	24.08		0.84	30.40	-3.83	16.20	
Transportation	5.45	52.67	5.06	13.04		4.57	74.68	-30.53	139.75	**
Communication	2.46	9.31	2.03	5.15		2.37	9.13	1.70	11.37	
Education	1.49	22.04	3.06	15.46		1.14	23.00	-8.53	41.28	**
Hobby and Leisure	-0.23	17.12	3.81	30.96		-0.55	34.63	-2.17	13.99	
Going out	0.14	18.03	2.84	21.66		-1.70	19.20	5.73	26.01	**
Allowances	-0.37	25.89	-0.90	27.37		0.47	20.00	3.77	27.63	

Household possession of durable consumer good	Wife's annual income < 1 mill. Yen (1308)					Wife's annual income > 1 mill. Yen (371)				
	NN (972)		NY (31)		Sig.	NN (836)		NY (30)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.37	0.03	0.41		0.05	0.43	0.33	0.48	**
Cupboard	0.02	0.45	0.10	0.40		0.01	0.54	0.33	0.71	**
Microwave	0.01	0.25	0.03	0.18		0.03	0.37	0.20	0.55	**
Refrigerator	0.01	0.33	0.06	0.36		0.03	0.44	0.17	0.46	*
Automatic Dishwasher	0.01	0.19	0.06	0.25		0.00	0.18	0.20	0.41	**
Vacuum Cleaner	0.02	0.44	0.10	0.54		0.04	0.55	0.40	0.67	**
Laundry Machine	0.01	0.28	0.00	0.37		0.04	0.37	0.27	0.52	**
Cloths Dryer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
Sewing Machine	0.02	0.34	0.00	0.26		0.01	0.36	0.10	0.48	
Electric Fan	0.06	0.62	0.10	0.60		0.03	0.74	0.37	0.72	**
Air Conditioner	0.08	0.60	0.35	1.52	**	0.05	0.84	0.97	1.35	**
Fan Heater	0.03	0.59	-0.06	0.63		0.00	0.67	0.40	0.89	**
"Kotatsu" Heater	-0.02	0.52	-0.03	0.41		-0.03	0.52	0.10	0.66	
TV Set	0.06	0.65	0.16	0.64		0.05	0.75	0.57	0.86	**
Stereo Sound System	0.01	0.49	0.03	0.41		0.00	0.53	0.03	0.49	
CD Radio Cassette Recorder	0.04	0.52	0.16	0.45		0.01	0.53	0.13	0.63	
VCR	0.00	0.58	-0.03	0.71		0.03	0.68	0.37	0.89	**
Video Camera	0.04	0.30	-0.06	0.51	*	0.02	0.31	0.07	0.25	
Telephone	0.07	0.85	0.23	0.76		0.01	0.82	0.33	1.06	**
Bicycle	0.12	0.93	0.13	1.09		0.04	0.73	0.40	1.00	**
Car	0.02	0.48	0.00	0.52		0.04	0.55	0.30	0.65	**
TV Game	0.12	0.72	0.06	0.93		0.09	0.60	0.10	0.66	
Word Processor	-0.01	0.39	0.13	0.50	*	-0.02	0.40	-0.07	0.52	
Personal Computer	0.12	0.46	0.03	0.71		0.13	0.47	0.27	0.52	
FAX	0.06	0.32	0.06	0.44		0.06	0.38	0.27	0.52	**
Mobile Phone	0.23	0.64	0.32	0.79		0.19	0.63	0.37	0.76	

Purchase of household possession of durable consumer good within a year	Wife's annual income < 1 mill. Yen (1308)					Wife's annual income > 1 mill. Yen (371)				
	NN (972)		NY (31)		Sig.	NN (836)		NY (30)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.02	0.16	0.00	0.00		0.03	0.18	0.00	0.00	
Cupboard	0.02	0.14	0.13	0.35	**	0.05	0.24	0.00	0.00	
Microwave	0.04	0.20	0.00	0.00		0.04	0.19	0.00	0.00	
Refrigerator	0.05	0.22	0.00	0.00		0.09	0.29	0.29	0.49	*
Automatic Dishwasher	0.00	0.00	0.00	0.00		0.02	0.14	0.00	0.00	
Vacuum Cleaner	0.08	0.30	0.38	0.52	**	0.08	0.27	0.00	0.00	
Laundry Machine	0.04	0.20	0.00	0.00		0.08	0.27	0.14	0.38	
Cloths Dryer	0.01	0.09	0.00	0.00		0.01	0.10	0.00	0.00	
Sewing Machine	0.01	0.14	0.00	0.00		0.03	0.19	0.00	0.00	
Electric Fan	0.11	0.41	0.00	0.00		0.11	0.37	0.00	0.00	
Air Conditioner	0.08	0.35	0.00	0.00		0.19	0.72	0.29	0.49	
Fan Heater	0.04	0.19	0.00	0.00		0.04	0.24	0.00	0.00	
"Kotatsu" Heater	0.02	0.15	0.00	0.00		0.03	0.16	0.00	0.00	
TV Set	0.11	0.33	0.00	0.00		0.14	0.36	0.00	0.00	
Stereo Sound System	0.05	0.21	0.13	0.35		0.04	0.20	0.00	0.00	
CD Radio Cassette Recorder	0.04	0.19	0.00	0.00		0.05	0.23	0.00	0.00	

VCR	0.09	0.34	0.00	0.00		0.09	0.31	0.14	0.38
Video Camera	0.06	0.24	0.00	0.00		0.05	0.23	0.00	0.00
Telephone	0.08	0.41	0.00	0.00		0.12	0.50	0.00	0.00
Bicycle	0.18	0.43	0.00	0.00		0.18	0.43	0.29	0.49
Car	0.17	0.42	0.13	0.35		0.15	0.38	0.00	0.00
TV Game	0.13	0.36	0.25	0.46		0.11	0.33	0.00	0.00
Word Processor	0.01	0.10	0.00	0.00		0.02	0.13	0.00	0.00
Personal Computer	0.16	0.39	0.38	0.52		0.15	0.37	0.29	0.49
FAX	0.06	0.23	0.00	0.00		0.05	0.22	0.14	0.38
Mobile Phone	0.36	0.67	0.25	0.46		0.30	0.58	0.43	0.53

		Wife's annual income < 1 mill. Yen (1308)					Wife's annual income > 1 mill. Yen (371)				
		NN (972)		NY (31)		Sig.	NN (836)		NY (30)		Sig.
Time-use patterns (minutes)		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-0.53	21.28	-2.13	11.14		-0.24	38.55	-6.03	42.11	
	Work	12.06	157.20	-44.68	148.79	**	-12.77	171.22	38.00	243.86	
	Study	-3.71	47.83	-28.90	90.14	**	-0.14	57.68	24.10	48.78	**
	House-Keeping and Taking Care of Children	-8.09	215.01	71.55	213.67	**	13.10	134.07	1.83	204.87	
	Hobby, Leisure and Going out	-1.28	147.41	53.81	190.14	**	0.50	128.79	6.20	116.31	
	Sleep, Eat, Personal Hygiene	-0.64	190.74	-39.19	175.41		2.07	144.13	-67.70	143.35	**
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.43	11.43	0.00	0.00		0.13	21.12	0.00	0.00	
	Work	-0.06	59.75	-1.94	10.78		-5.33	86.28	27.90	96.82	**
	Study	-3.38	43.36	-17.58	58.22	*	-0.17	69.27	9.80	63.33	
	House-Keeping and Taking Care of Children	5.95	218.70	46.71	233.87		14.86	147.75	30.27	192.63	
	Hobby, Leisure and Going out	-3.22	190.62	-4.29	183.02		-10.68	205.93	-17.87	177.75	
	Sleep, Eat, Personal Hygiene	-1.07	195.40	-21.16	198.75		1.78	204.13	-50.10	176.73	
Husband, Working Days	Weekdays-Commuting (work/school)	-0.96	48.42	-9.67	56.45		-3.12	40.06	3.71	43.03	
	Work	-1.68	122.75	36.20	171.77		2.44	122.91	-25.00	63.68	
	Study	0.78	29.03	-18.07	58.56	**	2.09	49.47	18.00	78.48	
	House-Keeping and Taking Care of Children	2.42	73.46	-18.00	154.90		0.24	59.55	2.94	39.04	
	Hobby, Leisure and Going out	-0.14	107.03	31.57	138.36		9.38	111.33	14.18	98.30	
	Sleep, Eat, Personal Hygiene	1.08	121.49	-22.03	133.08		-10.10	136.61	-10.65	137.28	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.07	10.87	0.00	0.00		-0.02	5.26	0.00	0.00	
	Work	-1.68	91.33	4.00	31.25		0.84	83.08	-26.25	61.85	
	Study	0.61	51.12	11.70	53.16		2.89	100.13	15.00	96.75	
	House-Keeping and Taking Care of Children	3.92	169.60	9.97	139.89		7.41	149.01	-37.12	223.36	
	Hobby, Leisure and Going out	-5.27	237.09	-26.47	241.39		3.73	254.08	90.38	327.90	
	Sleep, Eat, Personal Hygiene	3.07	235.23	9.80	212.65		-13.91	231.54	-52.13	211.92	

(\* p<0.1, \*\* p<0.05)

Table 50-a. Comparisons of mean and SD between NN and NY of personal computer after stratifying the sample into sub-groups by life events – Gave birth to a child

Indicators for ultimate utility	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1163)		NY (283)		Significant	NN (81)		NY (14)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.030	0.710	-0.020	0.640		-0.100	0.800	-0.140	0.530	
Life Satisfaction	-0.030	0.860	-0.070	0.820		-0.200	1.010	0.070	0.620	
Living Standard	-0.030	0.570	0.020	0.600		0.050	0.590	0.290	0.470	

Number of Family Members	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1163)		NY (283)		Sig.	NN (81)		NY (14)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	-0.06	0.50	-0.05	0.60		1.01	0.54	1.21	0.89	

Household spending allocation for the month of September (1,000 Yen)	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1163)		NY (283)		Sig.	NN (81)		NY (14)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.89	28.80	5.42	29.53		0.51	23.26	4.57	32.91	

Housing (Rent/Mortgage)	2.26	39.44	3.05	27.58		-1.40	27.99	-4.43	50.23
Water, Gas, Electricity	0.76	9.44	0.26	17.24		2.91	12.58	4.29	9.86
Furniture and Household Appliances	-1.14	32.14	-1.06	22.57		-1.51	9.93	-1.36	10.94
Clothing and Shoes	0.29	16.10	-0.36	19.53		0.70	12.78	0.79	10.97
Medical and Insurance	-0.66	21.69	-0.21	20.31		-2.80	31.36	-3.43	11.74
Transportation	5.24	61.72	3.43	75.01		8.56	27.62	3.57	8.87
Communication	2.35	9.53	2.98	8.60		2.88	9.90	4.86	7.13
Education	0.76	18.92	1.25	31.07		4.15	42.64	4.79	15.46
Hobby and Leisure	-0.34	26.10	-0.94	26.37		1.48	12.22	-1.43	13.20
Going out	-0.82	19.02	-2.61	19.00		-0.56	19.16	7.14	12.45
Allowances	-0.57	21.63	2.12	22.54	*	0.43	25.63	-2.29	17.80

Household possession of durable consumer good	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1163)		NY (283)		Sig.	NN (81)		NY (14)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.38	0.08	0.40	**	0.06	0.37	0.21	0.43	
Cupboard	0.02	0.49	0.06	0.49		-0.01	0.37	0.00	0.39	
Microwave	0.02	0.30	0.08	0.33	**	-0.01	0.30	0.00	0.00	
Refrigerator	0.02	0.38	0.03	0.44		-0.09	0.73	0.00	0.00	
Automatic Dishwasher	0.00	0.21	0.03	0.20	**	0.01	0.19	-0.07	0.27	
Vacuum Cleaner	0.02	0.48	0.09	0.52	**	0.00	0.39	0.14	0.36	
Laundry Machine	0.01	0.32	0.07	0.29	**	0.02	0.27	0.00	0.39	
Cloths Dryer	0.00	0.21	0.00	0.22		-0.01	0.11	0.07	0.27	**
Sewing Machine	0.02	0.36	0.05	0.33		0.02	0.45	0.07	0.27	
Electric Fan	0.06	0.69	0.08	0.70		0.15	0.45	0.07	0.47	
Air Conditioner	0.07	0.67	0.16	0.91	*	-0.06	0.53	0.50	0.85	**
Fan Heater	0.03	0.61	0.00	0.71		0.23	0.58	0.50	0.65	
“Kotatsu” Heater	-0.02	0.46	0.07	0.54	**	-0.07	0.38	-0.21	0.80	
TV Set	0.05	0.66	0.13	0.81	*	0.04	0.49	0.21	0.70	
Stereo Sound System	0.00	0.52	0.08	0.54	**	0.07	0.47	0.07	0.62	
CD Radio Cassette Recorder	0.03	0.51	0.01	0.53		-0.04	0.46	-0.14	0.36	
VCR	0.01	0.59	0.13	0.75	**	0.04	0.53	0.00	0.68	
Video Camera	0.03	0.30	0.01	0.33		0.17	0.44	0.21	0.43	
Telephone	0.05	0.84	0.08	0.80		-0.09	0.69	0.29	0.73	
Bicycle	0.09	0.87	0.13	0.86		0.07	0.70	0.07	0.47	
Car	0.03	0.49	0.10	0.63	*	0.02	0.50	0.07	0.62	
TV Game	0.12	0.69	0.11	0.69		0.16	0.81	0.36	1.01	
Word Processor	0.01	0.32	-0.07	0.46	**	0.00	0.39	-0.36	0.50	**
Personal Computer	0.00	0.00	1.02	0.13	**	0.00	0.00	1.00	0.00	
FAX	0.05	0.35	0.12	0.38	**	0.04	0.33	0.07	0.62	
Mobile Phone	0.19	0.61	0.30	0.74	**	0.05	0.47	0.29	0.61	

Purchase of household possession of durable consumer good within a year	Others ( 2198 )					Gave a birth ( 154 )				
	NN (1163)		NY (283)		Sig.	NN (81)		NY (14)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.17	0.07	0.25	*	0.00	0.00	0.00	0.00	
Cupboard	0.04	0.20	0.04	0.26		0.00	0.00	0.00	0.00	
Microwave	0.04	0.18	0.04	0.21		0.02	0.15	0.00	0.00	
Refrigerator	0.07	0.26	0.15	0.39	**	0.02	0.15	0.29	0.49	**
Automatic Dishwasher	0.01	0.11	0.01	0.11		0.02	0.15	0.00	0.00	
Vacuum Cleaner	0.07	0.26	0.12	0.39		0.07	0.26	0.14	0.38	
Laundry Machine	0.07	0.26	0.07	0.25		0.07	0.26	0.00	0.00	
Cloths Dryer	0.01	0.11	0.02	0.15		0.00	0.00	0.00	0.00	
Sewing Machine	0.02	0.16	0.03	0.18		0.00	0.00	0.00	0.00	
Electric Fan	0.11	0.37	0.17	0.41		0.10	0.30	0.14	0.38	
Air Conditioner	0.11	0.42	0.44	1.17	**	0.07	0.26	0.00	0.00	
Fan Heater	0.05	0.27	0.04	0.21		0.02	0.15	0.14	0.38	
“Kotatsu” Heater	0.01	0.12	0.09	0.39	**	0.00	0.00	0.14	0.38	**
TV Set	0.11	0.33	0.21	0.75	**	0.07	0.26	0.00	0.00	
Stereo Sound System	0.05	0.23	0.03	0.24		0.10	0.30	0.14	0.38	
CD Radio Cassette Recorder	0.03	0.18	0.06	0.23		0.07	0.26	0.14	0.38	
VCR	0.09	0.30	0.19	0.72	**	0.02	0.15	0.14	0.38	
Video Camera	0.06	0.24	0.04	0.21		0.05	0.22	0.00	0.00	
Telephone	0.10	0.45	0.25	0.73	**	0.02	0.15	0.00	0.00	
Bicycle	0.18	0.43	0.19	0.42		0.19	0.51	0.29	0.49	
Car	0.16	0.40	0.24	0.48		0.10	0.30	0.14	0.38	
TV Game	0.11	0.34	0.13	0.38		0.10	0.30	0.14	0.38	
Word Processor	0.01	0.11	0.01	0.11		0.00	0.00	0.00	0.00	
Personal Computer	0.16	0.37	0.20	0.43		0.17	0.38	0.00	0.00	
FAX	0.04	0.20	0.09	0.29	**	0.07	0.26	0.00	0.00	
Mobile Phone	0.33	0.66	0.39	0.63		0.38	0.62	0.29	0.49	

		Others ( 2198 )				Gave a birth ( 154 )					
		NN (1163)		NY (283)		Sig.	NN (81)		NY (14)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Time-use patterns (minutes)										
	Weekdays-Commuting (work/school)	1.40	29.98	-0.65	34.16		-8.26	29.64	-9.07	22.02	
	Work	7.91	156.05	-19.68	169.27	**	-108.19	219.78	-180.00	257.80	
	Study	-2.54	48.98	7.89	56.12	**	-1.57	20.95	0.00	0.00	
	House-Keeping and Taking Care of Children	-20.56	153.67	-18.53	180.12		292.63	291.60	402.29	286.66	
	Hobby, Leisure and Going out	9.93	136.91	1.75	138.36		-83.88	164.03	-85.93	142.53	
Wife Weekends/Holidays	Sleep, Eat, Personal Hygiene	3.86	166.33	32.08	162.80	**	-86.07	182.45	-115.71	201.67	
	Weekends-Commuting (work/school)	1.02	15.39	-1.05	21.79	*	0.00	0.00	0.00	0.00	
	Work	-0.58	78.80	-0.63	62.39		-5.25	35.97	0.00	0.00	
	Study	-2.55	53.02	3.01	59.14		-0.10	16.55	0.00	0.00	
	House-Keeping and Taking Care of Children	-13.25	171.41	-10.90	175.95		258.19	270.55	368.14	313.61	
	Hobby, Leisure and Going out	7.79	194.21	-15.35	198.31	*	-146.25	224.02	-188.07	196.28	
Husband, Working Days	Sleep, Eat, Personal Hygiene	6.91	198.09	24.71	195.52		-108.61	211.05	-183.93	224.96	
	Weekdays-Commuting (work/school)	-0.50	46.98	6.32	57.82	*	-2.30	37.96	-10.36	35.72	
	Work	-5.45	127.44	-4.84	99.14		2.41	132.78	43.18	100.77	
	Study	1.12	33.77	1.01	24.28		-6.57	21.21	-5.00	42.11	
	House-Keeping and Taking Care of Children	-1.13	80.93	-0.05	46.78		13.49	84.09	28.09	66.98	
	Hobby, Leisure and Going out	8.80	111.57	-3.61	103.37		2.12	118.94	-48.64	113.28	
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	-1.18	127.06	4.32	114.39		-15.72	158.67	-31.82	140.53	
	Weekends-Commuting (work/school)	-0.01	7.02	1.01	18.48		3.35	28.24	0.00	0.00	
	Work	-4.04	89.99	11.12	74.45	**	-1.66	46.66	10.91	36.18	
	Study	1.85	38.60	1.70	45.40		-5.68	55.45	-43.64	186.08	
	House-Keeping and Taking Care of Children	-5.53	158.43	-15.54	184.81		70.47	223.21	125.64	241.95	
	Hobby, Leisure and Going out	-3.45	235.25	-19.09	252.55		-47.07	288.96	-114.64	262.83	
Sleep, Eat, Personal Hygiene	12.41	232.87	17.58	246.32		-20.15	252.68	26.64	314.84		

(\* p<0.1, \*\* p<0.05)

Table 50-b. Comparisons of mean and SD between NN and NY of personal computer after stratifying the sample into sub-groups by life events – Got married

Indicators for ultimate utility	Others(2295)				Sig.	Got Married (57)				Sig.
	NN (1220)		NY (273)			NN (24)		NY (24)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.040	0.720	-0.050	0.630		0.130	0.450	0.210	0.590	
Life Satisfaction	-0.040	0.870	-0.070	0.820		0.130	0.680	-0.040	0.620	
Living Standard	-0.030	0.570	0.050	0.560	**	0.000	0.590	-0.170	0.960	

	Others(2295)				Sig.	Got Married (57)				Sig.
	NN (1220)		NY (273)			NN (24)		NY (24)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.01	0.52	0.03	0.52		-0.17	1.76	-0.25	1.59	

Household spending allocation for the month of September (1,000 Yen)	Others(2295)				Sig.	Got Married (57)				Sig.
	NN (1220)		NY (273)			NN (24)		NY (24)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.26	28.27	2.81	28.83		26.75	28.82	34.71	22.27	
Housing (Rent/Mortgage)	1.27	38.48	-0.86	24.48		39.96	36.63	43.21	42.87	
Water, Gas, Electricity	0.62	9.23	-0.78	17.02	**	14.92	18.52	14.46	7.76	
Furniture and Household Appliances	-0.48	16.89	-1.36	22.91		-36.21	190.01	2.17	9.78	
Clothing and Shoes	0.48	15.35	0.34	19.18		-8.00	33.15	-7.62	18.29	
Medical and Insurance	-0.86	22.62	-0.75	20.46		2.12	7.80	4.13	12.79	
Transportation	5.50	60.65	2.38	75.56		3.50	12.34	15.50	36.69	
Communication	2.31	9.50	2.99	8.54		6.33	11.44	3.96	8.63	
Education	1.03	21.46	1.53	31.81		-1.50	6.12	0.04	3.13	
Hobby and Leisure	-0.22	25.62	-1.28	26.58		-0.75	12.19	2.62	16.06	
Going out	-0.60	19.04	-1.47	18.27		-10.83	15.34	-9.96	23.49	

Allowances	-0.92	21.67	0.52	21.96		20.58	23.92	17.71	20.80
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Household possession of durable consumer good	Others(2295)					Got Married (57)				
	NN (1220)		NY (273)		Sig.	NN (24)		NY (24)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.37	0.05	0.36		0.29	0.62	0.54	0.59	
Cupboard	0.02	0.48	0.03	0.47		0.25	0.79	0.42	0.58	
Microwave	0.01	0.29	0.04	0.27		0.25	0.53	0.46	0.51	
Refrigerator	0.01	0.36	0.01	0.39		0.08	1.41	0.21	0.78	
Automatic Dishwasher	0.00	0.20	0.02	0.21		-0.04	0.36	0.04	0.20	
Vacuum Cleaner	0.02	0.47	0.07	0.49	*	0.17	0.70	0.29	0.75	
Laundry Machine	0.00	0.31	0.03	0.23		0.33	0.48	0.42	0.58	
Cloths Dryer	0.00	0.20	0.00	0.21		0.00	0.29	0.04	0.36	
Sewing Machine	0.02	0.36	0.04	0.32		0.00	0.59	0.08	0.41	
Electric Fan	0.06	0.67	0.11	0.67		0.29	0.69	-0.21	0.93	**
Air Conditioner	0.06	0.65	0.16	0.88	**	0.25	1.07	0.29	1.20	
Fan Heater	0.05	0.61	0.04	0.65		0.08	0.65	-0.17	1.20	
“Kotatsu” Heater	-0.02	0.45	0.07	0.52	**	-0.04	0.62	-0.17	0.87	
TV Set	0.05	0.65	0.13	0.75	*	0.38	0.65	0.21	1.32	
Stereo Sound System	0.00	0.51	0.07	0.53	**	0.29	0.62	0.21	0.66	
CD Radio Cassette Recorder	0.03	0.51	0.02	0.52		-0.13	0.68	-0.17	0.48	
VCR	0.01	0.58	0.12	0.74	**	0.29	0.75	0.17	0.87	
Video Camera	0.03	0.30	0.01	0.33		0.29	0.46	0.17	0.38	
Telephone	0.04	0.82	0.08	0.72		0.04	1.04	0.13	1.45	
Bicycle	0.09	0.85	0.12	0.83		0.21	1.02	0.17	1.01	
Car	0.02	0.47	0.09	0.58	**	0.79	0.72	0.17	1.05	**
TV Game	0.12	0.70	0.10	0.70		0.33	0.76	0.38	0.77	
Word Processor	0.01	0.32	-0.07	0.45	**	0.00	0.51	-0.17	0.64	
Personal Computer	0.00	0.00	1.01	0.10	**	0.00	0.00	1.08	0.28	**
FAX	0.05	0.34	0.09	0.36	*	0.21	0.59	0.38	0.65	
Mobile Phone	0.17	0.59	0.30	0.72	**	0.71	0.55	0.38	0.88	

Purchase of household possession of durable consumer good within a year	Others(2295)					Got Married (57)				
	NN (1220)		NY (273)		Sig.	NN (24)		NY (24)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.01	0.11	0.05	0.22		0.03	0.17	0.50	0.71	**
Cupboard	0.04	0.21	0.00	0.00		0.09	0.38	0.50	0.71	
Microwave	0.02	0.15	0.00	0.00		0.06	0.24	0.00	0.00	
Refrigerator	0.06	0.23	0.10	0.31		0.03	0.17	0.00	0.00	
Automatic Dishwasher	0.01	0.11	0.00	0.00		0.00	0.00	0.00	0.00	
Vacuum Cleaner	0.10	0.30	0.15	0.49		0.09	0.29	0.00	0.00	
Laundry Machine	0.08	0.27	0.00	0.00		0.06	0.24	0.00	0.00	
Cloths Dryer	0.00	0.00	0.00	0.00		0.03	0.17	0.00	0.00	
Sewing Machine	0.01	0.11	0.05	0.22		0.03	0.17	0.00	0.00	
Electric Fan	0.08	0.27	0.10	0.31		0.12	0.41	0.00	0.00	
Air Conditioner	0.07	0.29	0.20	0.70		0.00	0.00	0.00	0.00	
Fan Heater	0.03	0.23	0.10	0.31		0.03	0.17	0.00	0.00	
“Kotatsu” Heater	0.01	0.11	0.10	0.31	**	0.00	0.00	0.00	0.00	
TV Set	0.16	0.39	0.15	0.49		0.06	0.24	0.00	0.00	
Stereo Sound System	0.09	0.29	0.00	0.00		0.00	0.00	0.00	0.00	
CD Radio Cassette Recorder	0.01	0.11	0.00	0.00		0.00	0.00	0.00	0.00	
VCR	0.03	0.18	0.00	0.00		0.15	0.36	0.00	0.00	
Video Camera	0.07	0.25	0.00	0.00		0.06	0.24	0.00	0.00	
Telephone	0.07	0.36	0.05	0.22		0.09	0.51	0.00	0.00	
Bicycle	0.16	0.45	0.05	0.22		0.24	0.43	0.00	0.00	
Car	0.11	0.35	0.10	0.31		0.24	0.43	0.00	0.00	
TV Game	0.16	0.39	0.20	0.41		0.09	0.29	0.00	0.00	
Word Processor	0.01	0.11	0.05	0.22		0.06	0.24	0.00	0.00	
Personal Computer	0.22	0.42	0.10	0.31		0.15	0.36	0.00	0.00	
FAX	0.10	0.30	0.05	0.22		0.03	0.17	0.00	0.00	
Mobile Phone	0.29	0.71	0.20	0.52		0.24	0.43	0.50	0.71	

Wife, Working Days	Time-use patterns (minutes)	Others(2295)					Got Married (57)				
		NN (1220)		NY (273)		Sig.	NN (24)		NY (24)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Weekdays-Commuting (work/school)	0.99	29.65	0.21	33.20		-10.54	45.19	-15.42	36.76		
Work	4.62	158.35	-11.16	152.40		-217.71	251.54	-210.08	301.88		
Study	-2.48	48.09	6.21	52.16	**	-2.63	12.24	22.38	78.89		
House-Keeping and Taking Care of Children	-4.28	178.87	-18.75	189.69		212.58	264.03	229.38	249.72		

	Hobby, Leisure and Going out	3.74	139.45	-4.29	135.49		7.12	197.48	19.37	181.67	
	Sleep, Eat, Personal Hygiene	-2.63	168.49	29.75	163.50	**	29.17	185.85	-27.63	203.28	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	1.02	14.92	-0.64	20.97		-2.61	12.51	-5.00	24.49	
	Work	-0.90	77.47	0.47	59.53		0.13	0.63	-12.62	75.00	
	Study	-2.09	51.56	2.69	56.35		-18.26	42.17	4.87	72.78	
	House-Keeping and Taking Care of Children	0.88	188.89	-9.75	189.58		190.30	235.99	197.25	229.78	
	Hobby, Leisure and Going out	-0.70	199.50	-11.66	194.06		-83.48	205.11	-157.75	235.13	
	Sleep, Eat, Personal Hygiene	1.02	198.13	18.09	191.83		-86.09	308.09	-22.25	292.71	
Husband, Working Days	Weekdays-Commuting (work/school)	-0.66	46.22	5.40	56.89		N/A	N/A	N/A	N/A	N/A
	Work	-4.74	127.87	-2.20	99.58		N/A	N/A	N/A	N/A	N/A
	Study	0.43	32.90	0.67	25.45		N/A	N/A	N/A	N/A	N/A
	House-Keeping and Taking Care of Children	0.18	81.28	1.50	48.32		N/A	N/A	N/A	N/A	N/A
	Hobby, Leisure and Going out	8.20	112.19	-6.09	104.14		N/A	N/A	N/A	N/A	N/A
	Sleep, Eat, Personal Hygiene	-2.49	130.17	2.33	115.85		N/A	N/A	N/A	N/A	N/A
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.29	10.83	0.95	17.95		N/A	N/A	N/A	N/A	N/A
	Work	-3.82	86.94	11.11	72.78	**	N/A	N/A	N/A	N/A	N/A
	Study	1.17	40.44	-0.86	61.96		N/A	N/A	N/A	N/A	N/A
	House-Keeping and Taking Care of Children	1.37	166.63	-7.57	190.53		N/A	N/A	N/A	N/A	N/A
	Hobby, Leisure and Going out	-7.41	240.74	-24.48	253.40		N/A	N/A	N/A	N/A	N/A
	Sleep, Eat, Personal Hygiene	9.46	234.76	18.09	249.69		N/A	N/A	N/A	N/A	N/A

(\* p<0.1, \*\* p<0.05)

Table 50-c. Comparisons of mean and SD between NN and NY of personal computer after stratifying the sample into sub-groups by life events – Spiritually depressed

Indicators for ultimate utility	Others (547)				Sig.	Spiritually Depressed (98)				Sig.
	NN (278)		NY (68)			NN (57)		NY (9)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.040	0.720	-0.040	0.660		-0.190	0.910	-0.330	1.120	
Life Satisfaction	-0.040	0.940	-0.070	0.700		-0.210	0.980	-0.560	0.730	
Living Standard	-0.080	0.570	0.100	0.520	**	-0.180	0.680	-0.440	0.730	

	Others (547)				Sig.	Spiritually Depressed (98)				Sig.
	NN (278)		NY (68)			NN (57)		NY (9)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.00	0.53	0.04	0.80		-0.05	0.51	0.00	0.00	

Household spending allocation for the month of September (1,000 Yen)	Others (547)				Sig.	Spiritually Depressed (98)				Sig.
	NN (278)		NY (68)			NN (57)		NY (9)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.87	25.43	-3.71	35.28	**	1.68	33.91	7.78	30.19	
Housing (Rent/Mortgage)	1.32	16.38	-1.28	30.09		1.47	18.46	0.11	0.33	
Water, Gas, Electricity	1.29	11.42	-3.16	31.16	*	0.68	10.02	-0.89	11.11	
Furniture and Household Appliances	-1.14	20.01	-3.31	40.09		0.02	7.50	1.33	5.07	
Clothing and Shoes	-0.35	14.46	0.85	15.39		0.68	14.10	0.56	5.36	
Medical and Insurance	0.60	37.43	2.60	30.44		0.74	24.18	-26.56	54.29	**
Transportation	8.25	61.74	4.01	15.48		16.96	93.26	0.33	10.11	
Communication	2.75	9.48	3.87	10.12		1.25	8.34	4.67	6.52	
Education	1.72	31.60	-5.12	42.49		-0.02	34.99	-0.89	8.74	
Hobby and Leisure	-2.57	24.69	-1.62	33.89		6.53	28.77	-13.00	37.98	*
Going out	-1.30	14.96	1.28	14.71		-3.56	16.18	-5.56	17.89	
Allowances	-2.10	23.77	2.97	21.69		-1.11	14.15	12.78	17.16	**

Household possession of durable consumer good	Others (547)				Sig.	Spiritually Depressed (98)				Sig.
	NN (278)		NY (68)			NN (57)		NY (9)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.33	0.10	0.35		0.00	0.33	-0.11	0.33	
Cupboard	-0.02	0.45	0.15	0.55	**	0.00	0.42	0.11	0.60	
Microwave	0.00	0.29	0.03	0.30		0.05	0.29	0.00	0.00	
Refrigerator	0.00	0.33	0.00	0.42		0.02	0.35	-0.11	0.33	
Automatic Dishwasher	0.01	0.25	0.03	0.24		0.00	0.00	0.00	0.00	

Vacuum Cleaner	0.00	0.43	0.04	0.58		0.02	0.40	0.00	0.50	
Laundry Machine	0.01	0.31	0.04	0.32		0.07	0.32	0.00	0.00	
Cloths Dryer	0.00	0.23	-0.03	0.24		0.00	0.19	0.00	0.00	
Sewing Machine	0.03	0.35	0.04	0.36		-0.05	0.35	0.00	0.50	
Electric Fan	0.04	0.67	0.21	0.95	*	0.04	0.53	0.11	0.78	
Air Conditioner	0.05	0.67	0.38	1.02	**	0.09	0.63	0.11	0.33	
Fan Heater	0.09	0.65	0.10	0.60		0.02	0.52	0.00	0.00	
“Kotatsu” Heater	-0.01	0.50	0.06	0.57		0.00	0.38	0.22	0.67	
TV Set	0.03	0.59	0.15	0.83		0.00	0.60	0.11	0.33	
Stereo Sound System	0.02	0.54	0.09	0.57		0.02	0.48	0.00	0.00	
CD Radio Cassette Recorder	-0.01	0.52	-0.07	0.50		0.09	0.47	-0.11	0.33	
VCR	-0.02	0.55	0.18	0.69	**	0.00	0.50	0.22	0.67	
Video Camera	0.02	0.29	0.00	0.35		0.02	0.35	0.22	0.44	
Telephone	0.02	0.84	0.19	0.74		0.16	0.86	-0.22	0.83	
Bicycle	0.08	0.91	0.07	0.94		0.39	1.08	0.33	0.87	
Car	0.06	0.43	0.03	0.67		0.04	0.38	0.00	0.50	
TV Game	0.05	0.74	-0.01	0.72		0.18	0.83	0.22	0.44	
Word Processor	0.00	0.36	-0.07	0.43		0.04	0.38	0.33	0.50	**
Personal Computer	0.00	0.00	1.00	0.00		0.00	0.00	1.00	0.00	
FAX	0.04	0.32	0.16	0.41	**	0.04	0.42	0.00	0.00	
Mobile Phone	0.22	0.65	0.50	0.92	**	0.30	0.82	0.44	0.73	

Purchase of household possession of durable consumer good within a year	Others (547)					Spiritually Depressed (98)				
	NN (278)		NY (68)		Sig.	NN (57)		NY (9)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.01	0.11	0.05	0.22		0.03	0.17	0.50	0.71	**
Cupboard	0.04	0.21	0.00	0.00		0.09	0.38	0.50	0.71	
Microwave	0.02	0.15	0.00	0.00		0.06	0.24	0.00	0.00	
Refrigerator	0.06	0.23	0.10	0.31		0.03	0.17	0.00	0.00	
Automatic Dishwasher	0.01	0.11	0.00	0.00		0.00	0.00	0.00	0.00	
Vacuum Cleaner	0.10	0.30	0.15	0.49		0.09	0.29	0.00	0.00	
Laundry Machine	0.08	0.27	0.00	0.00		0.06	0.24	0.00	0.00	
Cloths Dryer	0.00	0.00	0.00	0.00		0.03	0.17	0.00	0.00	
Sewing Machine	0.01	0.11	0.05	0.22		0.03	0.17	0.00	0.00	
Electric Fan	0.08	0.27	0.10	0.31		0.12	0.41	0.00	0.00	
Air Conditioner	0.07	0.29	0.20	0.70		0.00	0.00	0.00	0.00	
Fan Heater	0.03	0.23	0.10	0.31		0.03	0.17	0.00	0.00	
“Kotatsu” Heater	0.01	0.11	0.10	0.31	**	0.00	0.00	0.00	0.00	
TV Set	0.16	0.39	0.15	0.49		0.06	0.24	0.00	0.00	
Stereo Sound System	0.09	0.29	0.00	0.00		0.00	0.00	0.00	0.00	
CD Radio Cassette Recorder	0.01	0.11	0.00	0.00		0.00	0.00	0.00	0.00	
VCR	0.03	0.18	0.00	0.00		0.15	0.36	0.00	0.00	
Video Camera	0.07	0.25	0.00	0.00		0.06	0.24	0.00	0.00	
Telephone	0.07	0.36	0.05	0.22		0.09	0.51	0.00	0.00	
Bicycle	0.16	0.45	0.05	0.22		0.24	0.43	0.00	0.00	
Car	0.11	0.35	0.10	0.31		0.24	0.43	0.00	0.00	
TV Game	0.16	0.39	0.20	0.41		0.09	0.29	0.00	0.00	
Word Processor	0.01	0.11	0.05	0.22		0.06	0.24	0.00	0.00	
Personal Computer	0.22	0.42	0.10	0.31		0.15	0.36	0.00	0.00	
FAX	0.10	0.30	0.05	0.22		0.03	0.17	0.00	0.00	
Mobile Phone	0.29	0.71	0.20	0.52		0.24	0.43	0.50	0.71	

	Time-use patterns (minutes)	Others (547)					Spiritually Depressed (98)				
		NN (278)		NY (68)		Sig.	NN (57)		NY (9)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-1.30	26.64	6.93	25.94	**	-1.04	36.19	20.67	43.67	
	Work	-4.78	152.18	-14.88	162.81		-17.91	113.00	67.22	154.06	*
	Study	-2.41	65.10	6.13	31.44		-8.53	44.61	-52.44	117.40	**
	House-Keeping and Taking Care of Children	1.59	180.07	-43.99	236.99	*	1.25	130.34	-53.22	162.83	
	Hobby, Leisure and Going out	13.58	137.38	7.51	147.79		16.28	128.93	-0.33	73.20	
	Sleep, Eat, Personal Hygiene	-4.14	160.07	44.65	159.81	**	7.11	132.91	12.11	143.12	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	-0.48	8.84	-5.33	32.59	**	3.09	17.44	0.00	0.00	
	Work	-4.58	61.02	-12.55	75.70		-22.05	115.14	13.33	40.00	
	Study	-5.02	51.12	4.48	48.17		-6.32	41.80	13.67	26.33	
	House-Keeping and Taking Care of Children	22.93	188.68	-18.88	213.87		0.11	169.47	-46.33	65.87	
	Hobby, Leisure and Going out	4.58	184.46	-5.42	193.25		15.95	165.29	-33.67	112.79	

Husband, Working Days	Sleep, Eat, Personal Hygiene	-17.43	188.85	40.12	207.50	**	3.54	167.16	59.00	140.72
	Weekdays-Commuting (work/school)	-8.63	51.83	20.63	79.15	**	-2.24	37.63	23.86	89.13
	Work	-31.06	149.31	-18.54	105.31		-12.67	166.83	-42.71	95.99
	Study	0.90	42.45	-0.02	16.62		1.82	31.77	-7.71	21.76
	House-Keeping and Taking Care of Children	6.44	75.60	-3.40	41.52		-12.85	94.52	0.00	2.08
	Hobby, Leisure and Going out	22.34	118.87	16.75	127.37		42.18	127.61	59.00	34.71
	Sleep, Eat, Personal Hygiene	10.80	133.65	-13.35	117.93		-16.24	97.36	-1.57	128.31
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.02	5.79	0.02	0.14		0.06	0.56	0.00	0.00
	Work	-6.66	79.14	9.60	90.19		-16.52	166.02	20.50	50.21
	Study	3.77	45.55	3.54	37.19		1.82	48.57	11.50	25.27
	House-Keeping and Taking Care of Children	15.54	177.94	-8.16	189.56		-34.30	145.17	60.50	106.01
	Hobby, Leisure and Going out	12.13	228.31	-18.92	271.26		14.39	199.52	-80.00	104.40
	Sleep, Eat, Personal Hygiene	-21.62	219.92	8.52	253.68		32.91	174.35	-39.50	73.00

(\* p<0.1, \*\* p<0.05)

Table 50-d. Comparisons of mean and SD between NN and NY of personal computer after stratifying the sample into sub-groups by life events – Wife working

Indicators for ultimate utility	Others (931)				Sig.	Wife - Working (1421)			
	NN (465)		NY (121)			NN (779)		NY (176)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Happiness	-0.080	0.660	-0.010	0.540		-0.010	0.740	-0.050	0.690
Life Satisfaction	-0.050	0.820	-0.090	0.820		-0.030	0.900	-0.050	0.800
Living Standard	-0.020	0.550	0.050	0.660		-0.030	0.590	0.030	0.560

	Others (931)				Sig.	Wife - Working (1421)			
	NN (465)		NY (121)			NN (779)		NY (176)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Number of Family Members	0.11	0.58	0.07	0.81		-0.05	0.55	-0.03	0.55

Household spending allocation for the month of September (1,000 Yen)	Others (931)				Sig.	Wife - Working (1421)			
	NN (465)		NY (121)			NN (779)		NY (176)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Food	3.17	28.84	4.33	31.17		2.47	28.26	6.11	28.59
Housing (Rent/Mortgage)	3.15	51.11	5.34	33.29		1.34	29.08	0.89	25.49
Water, Gas, Electricity	0.97	9.75	-0.31	24.67		0.86	9.65	0.97	8.34
Furniture and Household Appliances	-2.80	46.09	-3.50	29.77		-0.19	16.82	0.59	14.68
Clothing and Shoes	-0.69	15.46	-0.73	15.80		0.92	16.14	-0.01	21.27
Medical and Insurance	-1.29	29.38	-0.85	10.37		-0.51	16.99	-0.02	24.52
Transportation	7.72	61.10	7.60	65.33		4.11	59.48	0.58	78.27
Communication	2.04	9.66	3.46	8.80		2.59	9.48	2.80	8.37
Education	2.32	21.45	-1.07	31.68		0.18	21.14	3.12	29.65
Hobby and Leisure	0.28	17.81	-0.78	18.77		-0.53	29.04	-1.10	29.87
Going out	-0.12	20.16	-1.70	18.02		-1.21	18.31	-2.46	19.43
Allowances	-0.70	22.04	1.26	26.09		-0.39	21.84	2.36	19.39

Household possession of durable consumer good	Others (931)				Sig.	Wife - Working (1421)			
	NN (465)		NY (121)			NN (779)		NY (176)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Dining Set	0.05	0.38	0.08	0.42		0.02	0.38	0.10	0.40
Cupboard	0.03	0.43	-0.02	0.39		0.02	0.51	0.11	0.54
Microwave	0.02	0.24	0.04	0.30		0.01	0.33	0.10	0.33
Refrigerator	0.00	0.39	0.00	0.32		0.02	0.42	0.05	0.50
Automatic Dishwasher	0.00	0.24	0.01	0.16		0.00	0.18	0.03	0.24
Vacuum Cleaner	0.02	0.44	0.08	0.46		0.02	0.50	0.10	0.55
Laundry Machine	0.01	0.26	0.05	0.28		0.01	0.35	0.07	0.30
Cloths Dryer	0.01	0.21	-0.02	0.27		-0.01	0.20	0.02	0.18
Sewing Machine	0.03	0.36	0.02	0.30		0.02	0.36	0.06	0.34
Electric Fan	0.11	0.62	0.00	0.63	*	0.03	0.70	0.14	0.73
Air Conditioner	0.08	0.56	0.08	0.65		0.06	0.72	0.24	1.05
Fan Heater	0.07	0.55	-0.02	0.78		0.03	0.64	0.06	0.67
“Kotatsu” Heater	0.00	0.46	0.03	0.53		-0.03	0.45	0.07	0.58
TV Set	0.08	0.61	0.01	0.71		0.04	0.68	0.23	0.85
Stereo Sound System	0.01	0.50	0.07	0.44		0.00	0.52	0.09	0.60
CD Radio Cassette Recorder	0.02	0.49	-0.06	0.49		0.03	0.52	0.05	0.54

VCR	0.01	0.57	0.12	0.61	*	0.02	0.60	0.14	0.83	**
Video Camera	0.06	0.37	0.08	0.33		0.02	0.27	-0.02	0.33	
Telephone	0.06	0.79	0.06	0.82		0.03	0.85	0.11	0.78	
Bicycle	0.13	0.96	0.12	0.91		0.07	0.79	0.13	0.80	
Car	0.01	0.48	0.03	0.59		0.04	0.49	0.14	0.65	**
TV Game	0.17	0.74	0.12	0.82		0.10	0.67	0.12	0.63	
Word Processor	0.01	0.37	-0.12	0.50	**	0.01	0.30	-0.06	0.44	**
Personal Computer	0.00	0.00	1.02	0.16	**	0.00	0.00	1.01	0.11	**
FAX	0.08	0.35	0.09	0.37		0.03	0.34	0.13	0.41	**
Mobile Phone	0.15	0.57	0.27	0.79	*	0.20	0.62	0.32	0.70	**

Purchase of household possession of durable consumer good within a year	Others (931)					Wife - Working (1421)				
	NN (465)		NY (121)		Sig.	NN (779)		NY (176)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.02	0.15	0.00	0.00		0.03	0.17	0.13	0.34	**
Cupboard	0.03	0.16	0.00	0.00		0.04	0.21	0.09	0.36	
Microwave	0.03	0.18	0.04	0.20		0.04	0.18	0.04	0.21	
Refrigerator	0.04	0.19	0.08	0.27		0.08	0.28	0.24	0.48	**
Automatic Dishwasher	0.01	0.07	0.00	0.00		0.02	0.13	0.02	0.15	
Vacuum Cleaner	0.04	0.20	0.04	0.20		0.09	0.30	0.22	0.52	**
Laundry Machine	0.05	0.23	0.02	0.14		0.08	0.28	0.11	0.32	
Cloths Dryer	0.01	0.07	0.02	0.14		0.01	0.12	0.02	0.15	
Sewing Machine	0.02	0.13	0.00	0.00		0.02	0.17	0.07	0.25	
Electric Fan	0.10	0.35	0.20	0.45	*	0.11	0.38	0.13	0.34	
Air Conditioner	0.09	0.32	0.10	0.30		0.12	0.46	0.77	1.57	**
Fan Heater	0.05	0.31	0.08	0.27		0.04	0.23	0.02	0.15	
"Kotatsu" Heater	0.01	0.07	0.04	0.20	*	0.02	0.13	0.16	0.52	**
TV Set	0.08	0.26	0.12	0.33		0.13	0.35	0.29	0.99	**
Stereo Sound System	0.06	0.24	0.04	0.20		0.05	0.24	0.04	0.30	
CD Radio Cassette Recorder	0.03	0.18	0.08	0.27		0.04	0.20	0.04	0.21	
VCR	0.04	0.19	0.12	0.33	**	0.11	0.34	0.27	0.96	**
Video Camera	0.05	0.23	0.04	0.20		0.06	0.24	0.04	0.21	
Telephone	0.06	0.37	0.16	0.50		0.11	0.47	0.31	0.87	**
Bicycle	0.18	0.45	0.22	0.42		0.18	0.43	0.18	0.44	
Car	0.16	0.40	0.22	0.46		0.15	0.38	0.24	0.48	
TV Game	0.10	0.30	0.22	0.46	**	0.12	0.36	0.04	0.21	
Word Processor	0.01	0.10	0.00	0.00		0.01	0.10	0.02	0.15	
Personal Computer	0.19	0.39	0.20	0.40		0.14	0.36	0.18	0.44	
FAX	0.05	0.22	0.04	0.20		0.04	0.19	0.13	0.34	**
Mobile Phone	0.38	0.67	0.33	0.59		0.31	0.64	0.44	0.66	

	Time-use patterns (minutes)	Others (931)					Wife - Working (1421)				
		NN (465)		NY (121)		Sig.	NN (779)		NY (176)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-5.10	21.80	-7.79	28.69		4.27	33.55	3.58	36.12	
	Work	-62.90	156.67	-104.68	208.53	**	38.03	155.61	26.01	127.48	
	Study	-0.43	54.65	16.88	65.25	**	-3.70	42.93	1.08	45.36	
	House-Keeping and Taking Care of Children	35.04	234.84	49.45	268.30		-21.04	139.86	-31.80	140.77	
	Hobby, Leisure and Going out	23.16	167.28	22.63	167.55		-7.75	120.75	-19.57	113.85	
	Sleep, Eat, Personal Hygiene	14.08	195.21	30.64	206.68		-11.62	150.21	21.32	134.42	**
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.90	13.45	0.00	0.00		0.99	15.69	-1.69	27.70	*
	Work	-6.38	51.03	-0.02	0.27		2.43	88.55	-0.99	79.37	
	Study	-3.53	41.99	-1.51	56.19		-1.71	56.37	5.91	58.73	
	House-Keeping and Taking Care of Children	24.54	225.67	36.21	240.92		-7.66	166.64	-13.16	165.25	
	Hobby, Leisure and Going out	-14.38	198.81	-30.29	197.01		5.05	200.22	-18.85	204.62	
	Sleep, Eat, Personal Hygiene	-3.02	186.06	-3.93	215.26		0.83	209.43	27.84	190.97	
Husband, Working Days	Weekdays-Commuting (work/school)	-1.70	50.21	6.99	44.45		0.39	41.82	3.81	67.28	
	Work	6.55	131.83	2.18	89.95		-16.19	122.82	-6.58	108.64	
	Study	-1.79	28.75	-1.17	30.62		2.68	36.54	2.52	18.92	
	House-Keeping and Taking Care of Children	-1.67	98.69	1.93	52.37		2.07	58.60	1.06	44.16	
	Hobby, Leisure and Going out	3.04	103.08	-10.14	91.88		13.43	120.64	-2.03	115.43	
	Sleep, Eat, Personal Hygiene	-5.08	119.70	4.53	117.20		0.14	140.10	0.14	115.04	

Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.45	13.00	1.84	25.22		0.13	8.00	0.03	0.23
	Work	-6.98	91.93	15.18	81.89	**	-0.57	81.45	6.91	62.15
	Study	-0.01	45.75	-6.03	74.48		2.39	34.11	4.47	45.40
	House-Keeping and Taking Care of Children	8.83	178.56	2.47	207.93		-6.32	153.18	-17.94	171.23
	Hobby, Leisure and Going out	-8.72	241.94	-25.38	271.02		-6.05	239.79	-23.55	235.29
	Sleep, Eat, Personal Hygiene	7.35	229.19	10.28	251.56		11.63	240.64	26.15	248.81

(\* p<0.1, \*\* p<0.05)

Table 50-e. Comparisons of mean and SD between NN and NY of personal computer after stratifying the sample into sub-groups by life events – Wife - housekeeper

Indicators for ultimate utility	Others (1492)					Wife - House keeper (860)				
	NN (819)		NY (184)		Sig.	NN (425)		NY (113)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.020	0.750	-0.040	0.680		-0.070	0.640	-0.020	0.550	
Life Satisfaction	-0.030	0.890	-0.040	0.790		-0.050	0.830	-0.110	0.830	
Living Standard	-0.030	0.600	0.020	0.560		-0.030	0.520	0.060	0.660	

	Others (1492)					Wife - House keeper (860)				
	NN (819)		NY (184)		Sig.	NN (425)		NY (113)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	-0.05	0.55	-0.01	0.63		0.12	0.58	0.04	0.74	

Household spending allocation for the month of September (1,000 Yen)	Others (1492)					Wife - House keeper (860)				
	NN (819)		NY (184)		Sig.	NN (425)		NY (113)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.15	27.83	6.17	28.38	*	3.86	29.65	4.10	31.66	
Housing (Rent/Mortgage)	1.31	28.61	-0.31	27.62		3.39	53.20	7.60	30.49	
Water, Gas, Electricity	0.87	9.46	1.02	8.29		0.96	10.11	-0.48	25.46	
Furniture and Household Appliances	-0.26	16.44	0.59	14.38		-2.91	48.20	-3.79	30.77	
Clothing and Shoes	0.63	16.19	0.11	20.84		-0.28	15.33	-0.97	16.25	
Medical and Insurance	-0.57	16.76	-0.23	24.10		-1.26	30.54	-0.58	10.31	
Transportation	3.95	58.03	0.55	76.60		8.36	63.83	8.13	67.49	
Communication	2.53	9.46	2.86	8.45		2.11	9.72	3.41	8.71	
Education	0.17	20.80	3.39	29.22	*	2.55	22.10	-1.81	32.36	*
Hobby and Leisure	-0.44	29.86	-0.99	29.26		0.19	13.21	-0.92	19.32	
Going out	-1.23	18.47	-2.26	19.06		0.02	20.05	-1.98	18.57	
Allowances	-0.43	21.60	2.20	19.25		-0.65	22.49	1.43	26.68	

Household possession of durable consumer good	Others (1492)					Wife - House keeper (860)				
	NN (819)		NY (184)		Sig.	NN (425)		NY (113)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.38	0.10	0.39	**	0.04	0.37	0.08	0.43	
Cupboard	0.02	0.52	0.10	0.54	*	0.02	0.41	-0.01	0.39	
Microwave	0.01	0.34	0.09	0.33	**	0.01	0.19	0.04	0.31	
Refrigerator	0.03	0.42	0.04	0.49		-0.02	0.37	0.00	0.33	
Automatic Dishwasher	0.00	0.19	0.03	0.23	*	0.00	0.23	0.01	0.16	
Vacuum Cleaner	0.02	0.50	0.10	0.54	*	0.02	0.43	0.08	0.47	
Laundry Machine	0.02	0.36	0.07	0.30	*	0.00	0.22	0.05	0.29	**
Cloths Dryer	-0.01	0.20	0.03	0.19	**	0.01	0.21	-0.04	0.26	*
Sewing Machine	0.02	0.37	0.06	0.33		0.03	0.35	0.03	0.31	
Electric Fan	0.04	0.72	0.12	0.72		0.11	0.57	0.02	0.64	
Air Conditioner	0.06	0.72	0.23	1.04	**	0.08	0.54	0.08	0.64	
Fan Heater	0.03	0.63	0.06	0.67		0.07	0.56	-0.04	0.78	
“Kotatsu” Heater	-0.03	0.47	0.07	0.57	**	-0.01	0.43	0.03	0.54	
TV Set	0.04	0.68	0.21	0.85	**	0.08	0.59	0.02	0.71	
Stereo Sound System	0.00	0.52	0.10	0.59	**	0.01	0.49	0.05	0.44	
CD Radio Cassette Recorder	0.03	0.52	0.05	0.54		0.02	0.49	-0.07	0.49	*
VCR	0.02	0.60	0.16	0.82	**	0.00	0.56	0.08	0.60	
Video Camera	0.02	0.27	0.00	0.35		0.06	0.37	0.06	0.31	
Telephone	0.04	0.86	0.11	0.77		0.05	0.77	0.04	0.84	
Bicycle	0.07	0.80	0.11	0.81		0.14	0.96	0.15	0.91	
Car	0.05	0.49	0.12	0.66	*	0.00	0.48	0.04	0.57	
TV Game	0.10	0.67	0.11	0.64		0.18	0.74	0.13	0.82	
Word Processor	0.01	0.30	-0.06	0.45	**	0.01	0.37	-0.12	0.50	**
Personal Computer	0.00	0.00	1.01	0.10	**	0.00	0.00	1.03	0.16	**
FAX	0.04	0.34	0.13	0.41	**	0.08	0.35	0.09	0.37	
Mobile Phone	0.20	0.62	0.30	0.71	*	0.15	0.56	0.31	0.78	**

Purchase of household possession of durable consumer good within a year	Others (1492)					Wife - House keeper (860)				
	NN (819)		NY (184)		Sig.	NN (425)		NY (113)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.03	0.16	0.13	0.34	**	0.02	0.15	0.00	0.00	
Cupboard	0.04	0.21	0.09	0.35		0.03	0.17	0.00	0.00	
Microwave	0.03	0.18	0.04	0.20		0.03	0.18	0.04	0.20	
Refrigerator	0.08	0.27	0.23	0.48	**	0.04	0.20	0.08	0.28	
Automatic Dishwasher	0.02	0.13	0.02	0.15		0.01	0.08	0.00	0.00	
Vacuum Cleaner	0.09	0.29	0.21	0.51	**	0.05	0.21	0.04	0.20	
Laundry Machine	0.09	0.28	0.11	0.31		0.05	0.22	0.02	0.14	
Cloths Dryer	0.01	0.12	0.02	0.15		0.01	0.08	0.02	0.14	
Sewing Machine	0.02	0.16	0.06	0.25		0.02	0.13	0.00	0.00	
Electric Fan	0.12	0.38	0.13	0.34		0.09	0.34	0.20	0.46	*
Air Conditioner	0.12	0.45	0.76	1.54	**	0.08	0.32	0.08	0.28	
Fan Heater	0.04	0.23	0.02	0.15		0.06	0.31	0.08	0.28	
“Kotatsu” Heater	0.02	0.13	0.17	0.52	**	0.01	0.08	0.02	0.14	
TV Set	0.12	0.35	0.28	0.97	**	0.08	0.27	0.12	0.33	
Stereo Sound System	0.06	0.25	0.04	0.29		0.05	0.22	0.04	0.20	
CD Radio Cassette Recorder	0.03	0.20	0.06	0.25		0.03	0.18	0.06	0.24	
VCR	0.11	0.33	0.26	0.94	**	0.04	0.20	0.12	0.33	**
Video Camera	0.06	0.25	0.04	0.20		0.05	0.22	0.04	0.20	
Telephone	0.10	0.46	0.30	0.86	**	0.07	0.38	0.16	0.51	
Bicycle	0.18	0.43	0.19	0.45		0.18	0.45	0.20	0.41	
Car	0.14	0.38	0.26	0.49		0.17	0.41	0.20	0.46	
TV Game	0.12	0.36	0.04	0.20		0.10	0.30	0.22	0.47	**
Word Processor	0.01	0.10	0.02	0.15		0.01	0.11	0.00	0.00	
Personal Computer	0.15	0.36	0.17	0.43		0.19	0.39	0.20	0.41	
FAX	0.04	0.19	0.13	0.34	**	0.05	0.22	0.04	0.20	
Mobile Phone	0.30	0.63	0.43	0.65		0.40	0.68	0.35	0.60	

Time-use patterns (minutes)	Others (1492)					Wife - House keeper (860)					
	NN (819)		NY (184)		Sig.	NN (425)		NY (113)		Sig.	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD		
Wife, Working Days	Weekdays-Commuting (work/school)	2.71	35.09	2.71	36.52		-2.97	15.79	-7.18	27.63	**
	Work	24.54	172.41	11.16	152.79		-46.41	132.71	-89.76	195.97	**
	Study	-1.83	50.62	5.58	58.55	*	-3.74	41.36	10.67	48.15	**
	House-Keeping and Taking Care of Children	-16.79	141.44	-27.18	152.75		32.15	241.34	47.68	265.87	
	Hobby, Leisure and Going out	-2.07	131.60	-14.84	119.53		15.13	156.29	17.90	165.70	
	Sleep, Eat, Personal Hygiene	-7.48	160.42	24.32	138.20	**	8.52	183.69	26.42	206.99	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	1.53	17.95	-1.62	27.08	*	-0.15	5.19	0.00	0.00	
	Work	0.96	90.07	-0.95	77.60		-4.42	40.22	-0.03	0.28	
	Study	-1.40	58.46	7.63	61.55		-4.29	34.13	-4.81	50.26	
	House-Keeping and Taking Care of Children	-5.27	164.84	-13.24	171.44	*	23.03	233.36	39.83	238.06	
	Hobby, Leisure and Going out	3.24	204.40	-19.31	206.08		-12.76	190.57	-30.36	194.01	
	Sleep, Eat, Personal Hygiene	0.80	211.88	25.99	189.50		-3.33	178.20	-3.20	219.22	
Husband, Working Days	Weekdays-Commuting (work/school)	0.54	41.72	4.24	66.48		-1.87	50.36	6.63	44.85	
	Work	-16.18	122.24	-4.64	111.80		6.76	132.44	0.39	85.22	
	Study	2.65	36.36	3.61	21.94		-1.81	28.89	-2.44	28.50	
	House-Keeping and Taking Care of Children	2.06	58.46	1.00	43.51		-1.70	99.09	2.02	53.17	
	Hobby, Leisure and Going out	12.73	120.34	-4.32	115.23		3.65	103.31	-7.96	91.47	
	Sleep, Eat, Personal Hygiene	0.44	139.48	0.11	119.64		-5.43	120.20	4.70	112.26	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.13	7.96	-0.58	6.04		0.45	13.06	2.52	24.80	
	Work	-0.86	81.26	9.12	71.44		-6.75	92.21	13.16	74.45	**
	Study	2.21	34.09	3.73	45.17		0.13	45.87	-5.59	75.44	
	House-Keeping and Taking Care of Children	-6.10	152.81	-17.39	168.83		8.76	179.12	2.55	211.00	
	Hobby, Leisure and Going out	-6.73	238.97	-22.23	232.15		-8.08	242.77	-26.80	274.82	
	Sleep, Eat, Personal Hygiene	12.41	240.23	23.54	247.36		6.54	229.49	12.48	253.25	

(\* p<0.1, \*\* p<0.05)

Table 50-f. Comparisons of mean and SD between NN and NY of personal computer after stratifying the sample into sub-groups by life events –Housing situation – own house

Indicators for ultimate utility	Others (844)				Sig.	Own House (1508)			
	NN (482)		NY (99)			NN (762)		NY (198)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Happiness	-0.040	0.760	-0.070	0.580		-0.030	0.680	-0.010	0.660
Life Satisfaction	-0.060	0.930	-0.080	0.770		-0.020	0.830	-0.060	0.830
Living Standard	-0.040	0.600	0.020	0.670		-0.020	0.560	0.050	0.560

Number of Family Members	Others (844)				Sig.	Own House (1508)			
	NN (482)		NY (99)			NN (762)		NY (198)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Number of Family Members	0.00	0.63	-0.14	0.80	**	0.01	0.53	0.08	0.59

Household spending allocation for the month of September (1,000 Yen)	Others (844)				Sig.	Own House (1508)			
	NN (482)		NY (99)			NN (762)		NY (198)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Food	1.06	29.26	4.79	28.83		3.79	27.93	5.68	30.09
Housing (Rent/Mortgage)	4.94	18.78	13.14	30.19	**	0.17	47.19	-2.52	26.90
Water, Gas, Electricity	1.60	8.40	2.52	9.84		0.46	10.40	-0.59	19.54
Furniture and Household Appliances	-2.58	46.40	-0.45	10.44		-0.27	14.99	-1.38	26.13
Clothing and Shoes	0.48	14.92	1.35	17.40		0.22	16.50	-1.13	20.04
Medical and Insurance	-1.87	22.47	0.17	9.40		-0.13	22.40	-0.63	23.58
Transportation	5.44	70.79	-5.51	103.03		5.47	52.25	7.91	52.15
Communication	2.60	10.09	2.90	7.62		2.25	9.19	3.16	8.98
Education	1.54	21.13	0.96	35.55		0.63	21.36	1.64	27.74
Hobby and Leisure	0.01	22.31	1.28	27.49		-0.38	27.23	-2.09	25.05
Going out	-1.25	20.00	-4.08	17.61		-0.52	18.39	-1.19	19.40
Allowances	-0.58	23.68	4.17	24.07	*	-0.46	20.71	0.78	21.38

Household possession of durable consumer good	Others (844)				Sig.	Own House (1508)			
	NN (482)		NY (99)			NN (762)		NY (198)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Dining Set	0.01	0.33	0.09	0.41	**	0.05	0.40	0.09	0.41
Cupboard	0.00	0.36	0.08	0.40	*	0.03	0.55	0.05	0.53
Microwave	0.01	0.28	0.12	0.36	**	0.01	0.31	0.05	0.30
Refrigerator	0.00	0.41	0.02	0.43		0.02	0.41	0.03	0.44
Automatic Dishwasher	-0.01	0.19	-0.02	0.14		0.00	0.21	0.05	0.23
Vacuum Cleaner	0.02	0.37	0.08	0.44		0.02	0.54	0.10	0.55
Laundry Machine	0.02	0.27	0.10	0.33	**	0.00	0.34	0.05	0.27
Cloths Dryer	0.00	0.18	0.02	0.20		0.00	0.22	-0.01	0.24
Sewing Machine	0.02	0.34	0.03	0.33		0.02	0.37	0.06	0.32
Electric Fan	0.07	0.52	0.03	0.58		0.05	0.76	0.11	0.74
Air Conditioner	0.04	0.50	0.09	0.66		0.08	0.75	0.22	1.01
Fan Heater	0.05	0.48	-0.01	0.72		0.04	0.68	0.04	0.71
“Kotatsu” Heater	-0.01	0.35	-0.04	0.53		-0.03	0.51	0.10	0.57
TV Set	0.07	0.46	0.01	0.68		0.04	0.75	0.20	0.85
Stereo Sound System	0.04	0.47	0.10	0.52		-0.02	0.54	0.07	0.55
CD Radio Cassette Recorder	0.01	0.51	-0.03	0.48		0.03	0.51	0.02	0.54
VCR	0.03	0.54	0.07	0.64		0.00	0.61	0.16	0.79
Video Camera	0.04	0.33	0.08	0.37		0.03	0.30	-0.01	0.31
Telephone	0.05	0.68	0.12	0.84		0.04	0.91	0.07	0.78
Bicycle	0.12	0.84	0.07	0.70		0.07	0.87	0.16	0.91
Car	0.04	0.40	0.07	0.61		0.03	0.53	0.11	0.64
TV Game	0.12	0.72	0.14	0.83		0.13	0.68	0.11	0.64
Word Processor	0.02	0.33	-0.11	0.47	**	0.00	0.33	-0.07	0.46
Personal Computer	0.00	0.00	1.03	0.17	**	0.00	0.00	1.01	0.10
FAX	0.05	0.33	0.15	0.46	**	0.05	0.35	0.10	0.36
Mobile Phone	0.16	0.62	0.26	0.76		0.20	0.59	0.32	0.72

Purchase of household possession of durable consumer good within a year	Others (844)				Sig.	Own House (1508)			
	NN (482)		NY (99)			NN (762)		NY (198)	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD
Dining Set	0.03	0.16	0.06	0.24	*	0.03	0.18	0.03	0.17
Cupboard	0.03	0.19	0.04	0.25		0.03	0.16	0.03	0.16
Microwave	0.03	0.18	0.04	0.20		0.04	0.21	0.06	0.24
Refrigerator	0.07	0.25	0.16	0.39	**	0.09	0.28	0.08	0.28
Automatic Dishwasher	0.01	0.11	0.01	0.10		0.01	0.09	0.01	0.10
Vacuum Cleaner	0.07	0.26	0.12	0.39	*	0.08	0.28	0.09	0.28
Laundry Machine	0.07	0.26	0.06	0.24		0.06	0.23	0.08	0.27

Cloths Dryer	0.01	0.10	0.02	0.14		0.01	0.10	0.01	0.07	
Sewing Machine	0.02	0.15	0.03	0.17		0.03	0.18	0.02	0.14	
Electric Fan	0.11	0.37	0.17	0.40		0.10	0.34	0.14	0.41	
Air Conditioner	0.11	0.41	0.41	1.13	**	0.12	0.42	0.18	0.71	
Fan Heater	0.05	0.27	0.05	0.22		0.06	0.23	0.07	0.25	
“Kotatsu” Heater	0.01	0.11	0.09	0.39	**	0.01	0.10	0.02	0.12	
TV Set	0.11	0.32	0.20	0.72	*	0.11	0.32	0.11	0.31	
Stereo Sound System	0.06	0.24	0.04	0.25		0.04	0.20	0.03	0.17	
CD Radio Cassette Recorder	0.03	0.19	0.06	0.24		0.04	0.20	0.05	0.21	
VCR	0.08	0.29	0.19	0.70	**	0.09	0.31	0.08	0.27	
Video Camera	0.06	0.24	0.04	0.20		0.05	0.22	0.04	0.20	
Telephone	0.09	0.43	0.23	0.70	**	0.09	0.43	0.08	0.38	
Bicycle	0.18	0.44	0.20	0.43		0.19	0.48	0.16	0.41	
Car	0.15	0.39	0.23	0.47	*	0.15	0.37	0.14	0.39	
TV Game	0.11	0.34	0.14	0.37		0.10	0.33	0.11	0.36	
Word Processor	0.01	0.10	0.01	0.10		0.01	0.10	0.01	0.10	
Personal Computer	0.16	0.37	0.19	0.42		0.13	0.35	0.17	0.42	
FAX	0.04	0.20	0.08	0.28	*	0.06	0.25	0.06	0.23	
Mobile Phone	0.34	0.65	0.39	0.62		0.32	0.58	0.33	0.62	

		Others (844)				Own House (1508)					
		NN (482)		NY (99)		Sig.	NN (762)		NY (198)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Time-use patterns (minutes)										
	Weekdays-Commuting (work/school)	0.82	31.73	-3.13	34.52		0.73	28.95	-0.01	33.33	
	Work	-7.83	187.69	-41.12	179.98		5.47	145.90	-20.29	175.73	**
	Study	-0.78	34.02	9.22	59.59	**	-3.56	54.54	6.67	52.38	**
	House-Keeping and Taking Care of Children	9.97	212.53	9.57	232.83		-6.44	161.76	-2.83	191.93	
	Hobby, Leisure and Going out	3.58	143.14	0.36	171.87		3.94	139.22	-3.75	120.68	
Sleep, Eat, Personal Hygiene	-5.08	168.83	29.46	209.64	*	-0.08	168.89	22.94	142.21	*	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.60	15.25	-0.61	13.54		1.18	14.65	-1.19	24.28	*
	Work	-4.18	91.34	1.82	62.61		1.19	65.92	-1.82	60.13	
	Study	-4.06	54.75	0.61	46.55		-1.34	49.25	4.01	62.69	
	House-Keeping and Taking Care of Children	11.83	211.62	7.68	230.96		-0.22	177.67	6.80	184.47	
	Hobby, Leisure and Going out	-5.91	203.66	-55.78	234.04	**	0.06	197.50	-7.26	180.99	
	Sleep, Eat, Personal Hygiene	1.05	197.26	49.01	224.84	**	-1.66	203.29	-2.46	186.92	
Husband, Working Days	Weekdays-Commuting (work/school)	0.97	44.60	11.03	74.69		-1.66	47.20	2.93	47.14	
	Work	3.18	133.52	9.46	84.72		-9.58	124.17	-7.32	105.32	
	Study	0.35	41.90	-3.90	34.42		0.47	25.96	2.68	20.14	
	House-Keeping and Taking Care of Children	-6.00	80.40	6.03	54.16		3.97	81.66	-0.50	45.58	
	Hobby, Leisure and Going out	3.07	103.26	-23.79	98.75	*	11.34	117.31	1.68	105.83	
	Sleep, Eat, Personal Hygiene	-2.10	142.77	5.59	138.75	*	-2.73	121.98	0.91	104.78	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.79	16.92	-0.02	0.43		-0.01	3.70	1.38	21.58	
	Work	-5.26	123.14	16.05	61.31		-2.94	53.93	8.91	77.44	**
	Study	1.34	48.84	-8.85	85.46		1.07	34.32	2.69	47.97	
	House-Keeping and Taking Care of Children	11.39	166.16	-23.00	209.76		-4.78	166.78	-0.72	181.74	
	Hobby, Leisure and Going out	-23.25	243.04	-73.77	263.19		2.32	239.04	-2.58	246.77	
	Sleep, Eat, Personal Hygiene	15.86	215.58	87.78	255.05	**	5.52	245.92	-12.88	241.82	

(\* p<0.1, \*\* p<0.05)

Table 50-g. Comparisons of mean and SD between NN and NY of personal computer after stratifying the sample into sub-groups by life events – Housing situation – company/school owned housing

		Others (2117)				Company/school owned housing (235)					
		NN (1076)		NY (281)		Sig.	NN (168)		NY (16)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Indicators for ultimate utility											
Happiness		-0.040	0.700	-0.040	0.640		-0.010	0.800	0.130	0.500	
Life Satisfaction		-0.030	0.860	-0.070	0.820		-0.060	0.930	0.060	0.570	
Living Standard		-0.030	0.570	0.060	0.570	**	-0.020	0.620	-0.370	0.890	**

	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.01	0.58	0.01	0.68		-0.01	0.50	0.00	0.63	

Household spending allocation for the month of September (1,000 Yen)	Others (2117)					Company/school owned housing (235)				
	NN (1076)		NY (281)		Sig.	NN (168)		NY (16)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.26	28.16	5.72	30.03		-0.64	30.21	-0.50	21.45	
Housing (Rent/Mortgage)	2.00	41.44	2.64	29.49		2.14	12.14	3.75	17.47	
Water, Gas, Electricity	0.92	9.81	0.22	17.34		0.74	8.89	4.50	7.69	
Furniture and Household Appliances	-1.51	32.50	-1.20	22.66		1.04	20.74	1.13	9.82	
Clothing and Shoes	0.25	16.58	-0.49	19.11		0.76	10.64	2.94	21.25	
Medical and Insurance	-0.57	21.09	-0.36	20.42		-2.27	29.66	-0.31	9.67	
Transportation	6.36	59.55	2.68	74.62		-0.31	63.32	16.81	41.48	
Communication	2.32	9.61	2.98	8.61		2.83	9.13	4.75	7.08	
Education	1.03	22.27	1.39	31.08		0.67	13.19	1.87	18.12	
Hobby and Leisure	-0.40	26.74	-0.66	25.67		0.88	14.39	-6.38	29.94	*
Going out	-0.58	19.61	-1.77	18.89		-2.21	14.69	-8.81	17.10	*
Allowances	-0.62	22.51	1.74	22.44		0.22	17.59	4.81	20.67	

Household possession of durable consumer good	Others (2117)					Company/school owned housing (235)				
	NN (1076)		NY (281)		Sig.	NN (168)		NY (16)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.38	0.09	0.40	*	-0.02	0.32	0.06	0.44	
Cupboard	0.02	0.51	0.06	0.50		0.01	0.30	0.00	0.37	
Microwave	0.01	0.30	0.07	0.32	**	0.01	0.31	0.06	0.25	
Refrigerator	0.02	0.42	0.04	0.44		0.00	0.29	-0.13	0.34	
Automatic Dishwasher	0.00	0.20	0.02	0.21	*	0.00	0.22	0.00	0.00	
Vacuum Cleaner	0.02	0.49	0.10	0.52	**	0.04	0.39	-0.06	0.44	
Laundry Machine	0.01	0.32	0.07	0.30	**	-0.01	0.30	0.00	0.00	
Cloths Dryer	0.00	0.21	0.01	0.22		0.01	0.20	-0.06	0.25	
Sewing Machine	0.02	0.35	0.05	0.32		0.03	0.42	0.00	0.37	
Electric Fan	0.05	0.70	0.10	0.69		0.14	0.45	-0.25	0.77	**
Air Conditioner	0.07	0.69	0.20	0.91	**	0.07	0.47	-0.25	0.77	**
Fan Heater	0.04	0.62	0.05	0.66		0.07	0.55	-0.37	1.36	**
“Kotatsu” Heater	-0.02	0.46	0.07	0.56	**	0.00	0.39	-0.19	0.54	*
TV Set	0.05	0.67	0.16	0.79	**	0.05	0.51	-0.25	1.00	**
Stereo Sound System	0.00	0.52	0.07	0.54	**	0.01	0.44	0.25	0.58	**
CD Radio Cassette Recorder	0.02	0.51	0.00	0.52		0.04	0.51	0.00	0.52	
VCR	0.01	0.59	0.13	0.75	**	0.02	0.57	0.13	0.62	
Video Camera	0.04	0.32	0.01	0.33		0.03	0.25	0.19	0.40	**
Telephone	0.04	0.84	0.11	0.77		0.09	0.73	-0.38	1.09	**
Bicycle	0.08	0.87	0.13	0.85		0.15	0.74	0.06	0.68	
Car	0.03	0.50	0.09	0.63	*	0.03	0.39	0.13	0.62	
TV Game	0.13	0.70	0.12	0.71		0.10	0.70	0.19	0.66	
Word Processor	0.00	0.33	-0.07	0.47	**	0.06	0.34	-0.19	0.40	**
Personal Computer	0.00	0.00	1.02	0.13	**	0.00	0.00	1.00	0.00	.
FAX	0.05	0.36	0.12	0.40	**	0.02	0.24	0.00	0.00	
Mobile Phone	0.19	0.58	0.31	0.74	**	0.14	0.69	0.13	0.72	

Purchase of household possession of durable consumer good within a year	Others (2117)					Company/school owned housing (235)				
	NN (1076)		NY (281)		Sig.	NN (168)		NY (16)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.02	0.15	0.07	0.26	**	0.03	0.17	0.00	0.00	
Cupboard	0.04	0.22	0.05	0.27		0.02	0.13	0.00	0.00	
Microwave	0.04	0.20	0.05	0.22		0.02	0.15	0.00	0.00	
Refrigerator	0.07	0.25	0.17	0.41	**	0.07	0.25	0.07	0.27	
Automatic Dishwasher	0.01	0.11	0.01	0.11		0.01	0.11	0.00	0.00	
Vacuum Cleaner	0.05	0.22	0.15	0.42	**	0.10	0.32	0.00	0.00	
Laundry Machine	0.06	0.24	0.07	0.26		0.09	0.29	0.00	0.00	
Cloths Dryer	0.01	0.10	0.02	0.16		0.01	0.11	0.00	0.00	
Sewing Machine	0.01	0.14	0.04	0.19		0.03	0.17	0.00	0.00	
Electric Fan	0.11	0.38	0.16	0.37		0.10	0.33	0.21	0.58	
Air Conditioner	0.11	0.40	0.46	1.22	**	0.11	0.42	0.14	0.36	
Fan Heater	0.05	0.27	0.05	0.22		0.04	0.25	0.07	0.27	
“Kotatsu” Heater	0.01	0.11	0.09	0.39	**	0.01	0.11	0.14	0.36	**
TV Set	0.11	0.32	0.21	0.77	*	0.10	0.32	0.14	0.36	
Stereo Sound System	0.06	0.26	0.05	0.27		0.04	0.20	0.00	0.00	
CD Radio Cassette Recorder	0.03	0.20	0.04	0.19		0.04	0.19	0.21	0.43	**
VCR	0.09	0.29	0.20	0.74	**	0.08	0.29	0.14	0.36	
Video Camera	0.06	0.24	0.05	0.22		0.06	0.24	0.00	0.00	

Telephone	0.11	0.49	0.26	0.75	**	0.05	0.30	0.07	0.27
Bicycle	0.15	0.39	0.20	0.43		0.23	0.50	0.21	0.43
Car	0.14	0.37	0.22	0.47		0.17	0.42	0.29	0.47
TV Game	0.10	0.32	0.15	0.39		0.14	0.36	0.07	0.27
Word Processor	0.01	0.11	0.01	0.11		0.01	0.08	0.00	0.00
Personal Computer	0.16	0.38	0.20	0.43		0.16	0.37	0.14	0.36
FAX	0.04	0.20	0.09	0.28		0.04	0.20	0.07	0.27
Mobile Phone	0.36	0.66	0.38	0.62		0.30	0.64	0.43	0.65

		Others (2117)				Company/school owned housing (235)					
Time-use patterns (minutes)		NN (1076)		NY (281)		Sig.	NN (168)		NY (16)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.75	29.34	-1.33	33.71		0.90	34.28	3.88	34.43	
	Work	0.58	163.26	-27.49	178.05	*	-1.35	164.84	-22.75	165.19	
	Study	-2.97	48.56	7.95	56.31	**	0.66	41.37	0.00	0.00	
	House-Keeping and Taking Care of Children	2.52	180.65	-0.77	207.71		-16.65	198.46	37.75	178.20	
	Hobby, Leisure and Going out	2.48	138.24	-1.89	135.02		12.24	155.59	-11.00	209.59	
	Sleep, Eat, Personal Hygiene	-2.84	167.86	27.19	166.34	**	3.23	175.27	-11.25	186.93	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	1.06	13.62	-1.05	21.87	**	0.31	21.25	0.00	0.00	
	Work	0.11	72.68	-0.63	62.62		-7.19	98.74	0.00	0.00	
	Study	-2.48	53.38	3.03	59.35		-1.86	36.92	0.00	0.00	
	House-Keeping and Taking Care of Children	6.08	190.23	6.43	203.60		-6.02	199.62	18.56	149.86	
	Hobby, Leisure and Going out	-4.03	200.05	-21.05	199.33		9.07	198.70	-67.00	235.59	
	Sleep, Eat, Personal Hygiene	-1.40	201.34	13.08	200.74		4.40	198.63	45.06	219.61	
Husband, Working Days	Weekdays-Commuting (work/school)	-1.08	45.74	5.39	58.08		2.18	49.48	5.55	31.46	
	Work	-6.11	123.86	-3.91	100.19		4.54	152.58	27.18	87.25	
	Study	0.66	29.68	0.71	26.19		-1.17	49.64	0.09	0.70	
	House-Keeping and Taking Care of Children	1.61	82.40	2.84	48.08		-9.45	72.87	-21.55	48.70	
	Hobby, Leisure and Going out	7.47	113.20	-8.01	104.04	*	13.15	105.51	26.91	105.11	
	Sleep, Eat, Personal Hygiene	-2.17	121.69	4.12	115.73		-4.66	177.92	-28.36	119.15	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.34	11.62	1.01	18.48		0.00	0.00	0.00	0.00	
	Work	-4.83	93.05	11.45	74.80	**	2.83	15.38	5.45	18.09	
	Study	1.35	36.92	-0.96	63.79		-0.06	58.83	0.82	1.40	
	House-Keeping and Taking Care of Children	2.62	169.46	-0.90	189.05		-6.86	147.01	-119.27	188.86	**
	Hobby, Leisure and Going out	-8.59	241.82	-22.04	248.91		0.45	234.41	-65.27	331.65	
	Sleep, Eat, Personal Hygiene	9.88	237.31	9.69	245.28		6.66	218.14	158.64	292.47	**

(\* p<0.1, \*\* p<0.05)

Table 50-h. Comparisons of mean and SD between NN and NY of personal computer after stratifying the sample into sub-groups by life events – Husband's annual income > 5 million Yen

Indicators for ultimate utility	Husband's annual income < 5 mill. Yen (855)				Sig.	Husband's annual income > 5 mill. Yen (893)				
	NN (519)		NY (105)			NN (338)		NY (123)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.070	0.730	-0.060	0.620		-0.020	0.640	-0.070	0.580	
Life Satisfaction	-0.050	0.890	-0.050	0.800		-0.020	0.830	-0.110	0.750	
Living Standard	-0.060	0.550	0.000	0.680		0.000	0.570	0.110	0.570	*

Number of Family Members	Husband's annual income < 5 mill. Yen (855)				Sig.	Husband's annual income > 5 mill. Yen (893)				
	NN (519)		NY (105)			NN (338)		NY (123)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.09	0.58	0.10	0.78		0.01	0.46	-0.02	0.56	

Household spending allocation for the month of September (1,000 Yen)	Husband's annual income < 5 mill. Yen (855)				Sig.	Husband's annual income > 5 mill. Yen (893)				
	NN (519)		NY (105)			NN (338)		NY (123)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.30	32.63	5.53	29.51		2.37	29.79	5.46	34.47	
Housing (Rent/Mortgage)	0.87	19.76	5.38	30.13	*	5.30	68.59	1.88	33.64	
Water, Gas, Electricity	1.24	10.92	1.63	11.16		1.11	11.55	-0.23	24.24	
Furniture and Household	-2.90	44.49	0.06	21.77		0.49	21.64	-1.44	27.34	

Appliances										
Clothing and Shoes	0.18	14.18	-0.20	13.54		0.56	16.72	0.93	18.57	
Medical and Insurance	-1.24	28.25	-0.36	13.36		-0.56	22.40	-2.41	17.06	
Transportation	4.59	49.11	10.62	69.40		11.54	96.86	-3.40	92.52	
Communication	2.59	9.55	2.82	7.33		2.67	10.65	4.02	10.39	
Education	1.90	19.25	1.07	24.22		2.06	29.62	-0.33	34.66	
Hobby and Leisure	0.44	29.05	-2.19	19.43		-0.40	16.78	0.45	24.53	
Going out	-0.99	17.41	-1.82	20.03		0.87	22.70	-1.93	20.07	
Allowances	-0.35	22.06	0.50	20.49		-0.93	30.60	3.26	28.74	

Household possession of durable consumer good	Husband's annual income < 5 mill. Yen (855)					Husband's annual income > 5 mill. Yen (893)				
	NN (519)		NY (105)		Sig.	NN (338)		NY (123)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.06	0.37	0.06	0.43		0.02	0.36	0.09	0.36	*
Cupboard	0.03	0.45	0.07	0.49		-0.01	0.46	0.01	0.47	
Microwave	0.02	0.21	0.06	0.33	*	0.01	0.24	0.04	0.24	
Refrigerator	0.01	0.40	-0.04	0.50		0.00	0.31	0.03	0.31	
Automatic Dishwasher	0.00	0.25	0.03	0.22		0.01	0.19	0.02	0.18	
Vacuum Cleaner	0.00	0.41	0.06	0.43		0.04	0.44	0.08	0.55	
Laundry Machine	0.00	0.29	0.08	0.33	**	0.01	0.23	0.02	0.22	
Cloths Dryer	0.00	0.21	-0.03	0.26		0.01	0.22	0.02	0.22	
Sewing Machine	0.03	0.36	0.04	0.31		0.01	0.33	0.05	0.31	
Electric Fan	0.11	0.61	0.08	0.72		0.04	0.68	0.05	0.70	
Air Conditioner	0.09	0.58	0.13	0.75		0.10	0.67	0.14	0.78	
Fan Heater	0.06	0.67	0.01	0.84		0.07	0.58	0.08	0.59	
"Kotatsu" Heater	-0.02	0.41	0.00	0.54		0.00	0.44	0.03	0.54	
TV Set	0.08	0.66	0.07	0.78		0.07	0.56	0.16	0.71	
Stereo Sound System	0.02	0.51	0.11	0.54	*	-0.02	0.54	0.07	0.46	
CD Radio Cassette Recorder	0.03	0.51	-0.07	0.56	*	0.03	0.52	0.01	0.45	
VCR	0.01	0.60	0.06	0.60		0.03	0.60	0.09	0.71	
Video Camera	0.05	0.36	0.03	0.35		0.03	0.32	0.05	0.34	
Telephone	0.08	0.81	0.03	0.90		0.06	0.81	0.08	0.68	
Bicycle	0.16	0.93	0.06	0.89		0.11	0.92	0.20	0.96	
Car	0.04	0.53	-0.01	0.61		0.05	0.47	0.13	0.51	
TV Game	0.17	0.72	0.15	0.89		0.16	0.80	0.11	0.62	
Word Processor	0.03	0.32	-0.11	0.45	**	0.00	0.34	-0.07	0.46	
Personal Computer	0.00	0.00	1.00	0.00		0.00	0.00	1.02	0.15	**
FAX	0.07	0.35	0.09	0.37		0.06	0.33	0.17	0.40	**
Mobile Phone	0.20	0.60	0.25	0.69		0.27	0.62	0.41	0.74	**

Purchase of household possession of durable consumer good within a year	Husband's annual income < 5 mill. Yen (855)					Husband's annual income > 5 mill. Yen (893)				
	NN (519)		NY (105)		Sig.	NN (338)		NY (123)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.02	0.13	0.00	0.00		0.05	0.21	0.03	0.17	
Cupboard	0.02	0.15	0.00	0.00		0.05	0.21	0.00	0.00	
Microwave	0.03	0.16	0.02	0.15		0.03	0.17	0.06	0.24	
Refrigerator	0.05	0.22	0.14	0.35	**	0.09	0.28	0.09	0.29	
Automatic Dishwasher	0.01	0.10	0.00	0.00		0.01	0.10	0.03	0.17	
Vacuum Cleaner	0.06	0.24	0.07	0.25		0.09	0.32	0.09	0.29	
Laundry Machine	0.07	0.25	0.05	0.21		0.07	0.25	0.03	0.17	
Cloths Dryer	0.01	0.10	0.02	0.15		0.02	0.14	0.00	0.00	
Sewing Machine	0.02	0.13	0.05	0.21		0.03	0.22	0.03	0.17	
Electric Fan	0.11	0.38	0.14	0.41		0.06	0.23	0.15	0.36	*
Air Conditioner	0.08	0.32	0.16	0.48		0.12	0.49	0.35	1.07	*
Fan Heater	0.03	0.16	0.05	0.21		0.07	0.38	0.06	0.24	
"Kotatsu" Heater	0.01	0.12	0.07	0.25	**	0.01	0.10	0.00	0.00	
TV Set	0.09	0.30	0.11	0.32		0.14	0.35	0.09	0.29	
Stereo Sound System	0.06	0.24	0.05	0.21		0.06	0.23	0.00	0.00	
CD Radio Cassette Recorder	0.01	0.12	0.05	0.21		0.06	0.23	0.06	0.24	
VCR	0.05	0.23	0.09	0.29		0.10	0.30	0.15	0.36	
Video Camera	0.07	0.25	0.05	0.21		0.04	0.19	0.06	0.24	
Telephone	0.04	0.29	0.20	0.63	**	0.16	0.56	0.09	0.38	
Bicycle	0.16	0.43	0.18	0.39		0.20	0.49	0.15	0.36	
Car	0.15	0.38	0.23	0.48		0.18	0.41	0.18	0.46	
TV Game	0.11	0.33	0.18	0.39		0.12	0.35	0.15	0.44	
Word Processor	0.01	0.10	0.02	0.15		0.01	0.10	0.00	0.00	
Personal Computer	0.21	0.41	0.16	0.37		0.13	0.33	0.24	0.50	
FAX	0.04	0.19	0.07	0.25		0.05	0.21	0.06	0.24	
Mobile Phone	0.35	0.67	0.36	0.61		0.37	0.62	0.32	0.59	

Time-use patterns (minutes)	Husband's annual income < 5 mill. Yen (855)			Husband's annual income > 5 mill. Yen (893)		
	NN (519)	NY (105)	Sig.	NN (338)	NY (123)	Sig.

		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.92	25.29	-0.55	33.83		-0.67	18.74	0.93	27.34	
	Work	-1.07	175.40	-33.70	204.92	*	3.70	120.56	-18.01	170.91	
	Study	-2.20	35.82	2.32	44.80		-0.01	43.73	6.82	57.29	
	House-Keeping and Taking Care of Children	2.09	232.13	47.71	248.96	*	-4.61	177.52	-27.74	206.77	
	Hobby, Leisure and Going out	3.46	141.55	-24.60	161.16	*	1.48	122.69	8.13	124.80	
	Sleep, Eat, Personal Hygiene	-4.45	179.51	12.93	185.53		2.20	157.43	30.74	169.90	*
Wife Weekends/Holidays	Weekends-Commuting (work/school)	-0.13	7.95	-2.27	16.57	**	0.17	3.29	0.00	0.13	
	Work	-2.11	63.65	-8.66	73.56		2.70	44.56	1.93	45.41	
	Study	-1.85	38.91	-0.58	30.72		-1.41	26.27	1.95	47.41	
	House-Keeping and Taking Care of Children	16.14	229.98	57.02	237.01		-6.24	196.83	-23.30	198.43	
	Hobby, Leisure and Going out	-6.06	196.84	-46.12	221.29	*	-5.67	176.86	-12.13	183.29	
	Sleep, Eat, Personal Hygiene	-6.30	209.97	2.17	212.77		8.34	168.15	29.36	211.87	
Husband, Working Days	Weekdays-Commuting (work/school)	0.41	43.45	10.29	70.12	*	-2.28	50.11	1.64	44.08	
	Work	-6.45	137.47	-5.15	92.49		-2.17	112.10	0.07	105.06	
	Study	0.35	38.84	0.11	31.70		0.53	21.14	1.11	19.46	
	House-Keeping and Taking Care of Children	1.37	93.06	5.47	55.68		-1.58	59.49	-1.57	41.78	
	Hobby, Leisure and Going out	13.95	122.85	-10.56	117.44	*	-0.42	93.51	-2.64	93.00	
	Sleep, Eat, Personal Hygiene	-7.22	132.56	6.05	116.25		4.60	126.38	-0.52	115.99	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.12	6.20	-0.69	6.52		0.56	15.33	2.22	23.17	
	Work	-2.56	82.89	2.15	73.72		-5.71	92.75	18.03	71.61	**
	Study	1.10	41.14	-5.61	71.49		1.27	39.43	2.81	53.50	
	House-Keeping and Taking Care of Children	7.94	173.77	34.75	200.25		-8.42	155.10	-40.28	176.72	*
	Hobby, Leisure and Going out	-8.29	250.36	-39.36	279.13		-6.09	225.99	-12.98	232.24	
	Sleep, Eat, Personal Hygiene	3.25	230.22	5.59	251.35		18.72	241.44	27.75	249.12	

(\* p<0.1, \*\* p<0.05)

Table 50-i. Comparisons of mean and SD between NN and NY of personal computer after stratifying the sample into sub-groups by life events – Wife’s annual income > 1 million Yen

Indicators for ultimate utility	Wife's annual income < 1 mill. Yen (1308)				Sig.	Wife's annual income > 1 mill. Yen (371)				Sig.
	NN (674)		NY (162)			NN (570)		NY (135)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.050	0.680	-0.060	0.600		-0.020	0.750	0.000	0.670	
Life Satisfaction	-0.070	0.840	-0.090	0.770		0.000	0.910	-0.040	0.850	
Living Standard	-0.040	0.560	0.050	0.640	*	-0.010	0.590	0.020	0.550	

Number of Family Members	Wife's annual income < 1 mill. Yen (1308)				Sig.	Wife's annual income > 1 mill. Yen (371)				Sig.
	NN (674)		NY (162)			NN (570)		NY (135)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.05	0.50	0.06	0.51		-0.04	0.63	-0.05	0.82	

Household spending allocation for the month of September (1,000 Yen)	Wife's annual income < 1 mill. Yen (1308)				Sig.	Wife's annual income > 1 mill. Yen (371)				Sig.
	NN (674)		NY (162)			NN (570)		NY (135)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	2.34	29.53	2.43	29.41		3.19	27.18	8.93	29.61	**
Housing (Rent/Mortgage)	2.41	49.30	1.59	20.60		1.56	20.33	4.03	36.59	
Water, Gas, Electricity	0.64	9.75	-1.01	21.81		1.20	9.60	2.19	7.72	
Furniture and Household Appliances	-1.85	40.32	-2.67	27.78		-0.35	14.11	0.84	12.26	
Clothing and Shoes	0.26	14.63	1.06	14.88		0.39	17.30	-1.93	23.32	
Medical and Insurance	-0.80	24.93	-1.86	12.49		-0.81	19.09	1.44	26.24	
Transportation	6.23	51.80	6.51	57.01		4.54	68.64	-0.25	88.99	
Communication	2.39	9.86	3.62	8.86		2.38	9.17	2.41	8.12	
Education	1.01	19.93	0.69	29.56		0.95	22.77	2.28	31.70	
Hobby and Leisure	-0.64	14.52	0.49	21.61		0.26	34.09	-2.72	30.23	
Going out	0.00	18.24	-1.53	16.35		-1.75	19.88	-2.90	21.50	
Allowances	-0.36	23.91	1.14	24.10		-0.67	19.29	2.83	20.06	*

Wife's annual income < 1 mill. Yen (1308)	Wife's annual income > 1 mill. Yen (371)
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Household possession of durable consumer good	NN (674)		NY (162)		Sig.	NN (570)		NY (135)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.35	0.02	0.36		0.03	0.41	0.18	0.44	**
Cupboard	0.02	0.41	0.02	0.47		0.02	0.56	0.11	0.51	*
Microwave	0.01	0.23	0.01	0.21		0.01	0.36	0.16	0.40	**
Refrigerator	0.01	0.29	-0.03	0.26		0.02	0.51	0.10	0.57	
Automatic Dishwasher	0.01	0.22	0.00	0.16		-0.01	0.18	0.05	0.25	**
Vacuum Cleaner	0.01	0.43	0.04	0.44		0.02	0.53	0.16	0.58	**
Laundry Machine	0.00	0.27	0.00	0.19		0.02	0.36	0.14	0.37	**
Cloths Dryer	0.00	0.21	-0.02	0.21		0.00	0.21	0.03	0.24	
Sewing Machine	0.02	0.37	0.03	0.30		0.02	0.35	0.07	0.35	
Electric Fan	0.07	0.64	0.10	0.56		0.05	0.71	0.06	0.83	
Air Conditioner	0.08	0.56	0.04	0.57		0.05	0.77	0.33	1.18	**
Fan Heater	0.05	0.59	0.03	0.78		0.04	0.63	0.01	0.63	
“Kotatsu” Heater	-0.01	0.45	0.04	0.46		-0.03	0.46	0.07	0.66	**
TV Set	0.07	0.62	0.01	0.61		0.04	0.69	0.30	0.97	**
Stereo Sound System	0.00	0.52	0.04	0.45		0.00	0.51	0.13	0.63	**
CD Radio Cassette Recorder	0.03	0.50	-0.02	0.50		0.01	0.52	0.04	0.55	
VCR	0.00	0.57	0.07	0.55		0.03	0.60	0.19	0.93	**
Video Camera	0.04	0.33	0.04	0.31		0.03	0.28	0.01	0.36	
Telephone	0.09	0.82	0.01	0.73		-0.01	0.83	0.18	0.86	**
Bicycle	0.15	0.94	0.13	0.91		0.03	0.75	0.13	0.76	
Car	0.02	0.50	0.04	0.48		0.05	0.47	0.16	0.77	**
TV Game	0.14	0.77	0.09	0.81		0.11	0.60	0.16	0.57	
Word Processor	0.01	0.34	-0.07	0.45	**	0.01	0.32	-0.09	0.48	
Personal Computer	0.00	0.00	1.01	0.08	**	0.00	0.00	1.03	0.17	**
FAX	0.06	0.34	0.10	0.35		0.04	0.35	0.13	0.45	**
Mobile Phone	0.19	0.60	0.31	0.71	**	0.17	0.59	0.29	0.77	*

Purchase of household possession of durable consumer good within a year	Wife's annual income < 1 mill. Yen (1308)					Wife's annual income > 1 mill. Yen (371)				
	NN (674)		NY (162)		Sig.	NN (570)		NY (135)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.02	0.15	0.00	0.00		0.03	0.16	0.14	0.35	**
Cupboard	0.02	0.15	0.00	0.00		0.05	0.23	0.09	0.36	
Microwave	0.04	0.20	0.06	0.24		0.03	0.16	0.02	0.15	
Refrigerator	0.05	0.21	0.08	0.27		0.09	0.28	0.25	0.49	**
Automatic Dishwasher	0.00	0.06	0.00	0.00		0.02	0.15	0.02	0.15	
Vacuum Cleaner	0.06	0.26	0.02	0.14		0.08	0.27	0.25	0.53	**
Laundry Machine	0.06	0.23	0.02	0.14		0.09	0.29	0.11	0.32	
Cloths Dryer	0.01	0.09	0.02	0.14		0.01	0.12	0.02	0.15	
Sewing Machine	0.01	0.11	0.02	0.14		0.03	0.19	0.05	0.21	
Electric Fan	0.09	0.34	0.15	0.41		0.13	0.40	0.18	0.39	
Air Conditioner	0.09	0.40	0.12	0.32		0.13	0.42	0.77	1.59	**
Fan Heater	0.05	0.28	0.06	0.24		0.05	0.25	0.05	0.21	
“Kotatsu” Heater	0.01	0.11	0.04	0.19		0.01	0.12	0.16	0.53	**
TV Set	0.08	0.29	0.08	0.27		0.13	0.35	0.34	1.01	**
Stereo Sound System	0.06	0.23	0.04	0.19		0.05	0.25	0.05	0.30	
CD Radio Cassette Recorder	0.02	0.15	0.06	0.24		0.05	0.23	0.07	0.25	
VCR	0.06	0.26	0.10	0.30		0.10	0.32	0.30	0.98	**
Video Camera	0.05	0.22	0.04	0.19		0.07	0.25	0.05	0.21	
Telephone	0.07	0.39	0.15	0.50		0.11	0.48	0.32	0.88	**
Bicycle	0.18	0.45	0.19	0.40		0.17	0.41	0.20	0.46	
Car	0.17	0.42	0.15	0.41		0.13	0.35	0.32	0.52	**
TV Game	0.11	0.33	0.19	0.44		0.11	0.35	0.07	0.25	
Word Processor	0.01	0.11	0.02	0.14		0.01	0.10	0.00	0.00	
Personal Computer	0.17	0.37	0.17	0.38		0.15	0.37	0.20	0.46	
FAX	0.05	0.21	0.04	0.19		0.04	0.19	0.14	0.35	**
Mobile Phone	0.36	0.69	0.29	0.57		0.31	0.61	0.50	0.66	*

Time-use patterns (minutes)	Wife's annual income < 1 mill. Yen (1308)					Wife's annual income > 1 mill. Yen (371)				
	NN (674)		NY (162)		Sig.	NN (570)		NY (135)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Weekdays-Commuting (work/school)	0.23	21.47	0.77	28.26		1.40	37.73	-3.23	39.26	
Work	8.99	158.68	-4.36	158.04		-9.90	168.39	-54.69	194.69	**
Study	-3.57	47.91	6.31	42.46	**	-1.20	47.36	8.96	66.81	**
House-Keeping and Taking Care of Children	-10.86	216.60	-8.49	233.45		12.61	132.64	13.06	167.75	
Hobby, Leisure and Going out	4.93	148.47	-9.30	158.06		2.47	131.07	5.93	113.48	
Sleep, Eat, Personal Hygiene	-0.85	188.86	14.41	178.68		-3.40	141.79	37.97	152.41	**

Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.62	12.06	-0.72	9.43		1.36	17.68	-1.34	29.97	
	Work	0.27	55.62	-4.45	61.49		-2.26	96.20	4.10	60.04	
	Study	-2.03	38.45	-2.94	42.30		-2.82	63.66	9.95	71.73	**
	House-Keeping and Taking Care of Children	2.72	216.55	7.06	221.36		6.49	156.37	7.13	173.52	
	Hobby, Leisure and Going out	-0.16	184.30	-23.29	201.39		-4.75	217.17	-23.85	201.90	
	Sleep, Eat, Personal Hygiene	-2.70	189.76	23.34	196.20		1.90	213.67	4.42	208.13	
Husband, Working Days	Weekdays-Commuting (work/school)	-1.26	49.42	8.33	60.23	**	1.16	34.79	-3.38	44.84	
	Work	-3.08	131.29	0.72	89.57		-9.76	117.05	-10.96	125.59	
	Study	-0.81	25.69	0.11	26.89		4.16	48.52	2.38	20.69	
	House-Keeping and Taking Care of Children	-0.67	87.29	1.19	48.94		2.78	59.56	2.40	46.86	
	Hobby, Leisure and Going out	5.72	111.80	-11.19	97.06	*	15.70	113.34	9.22	122.79	
	Sleep, Eat, Personal Hygiene	0.54	126.67	1.92	111.25		-11.65	140.18	3.58	129.89	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.40	11.94	1.25	20.61		-0.01	6.32	0.00	0.00	
	Work	-4.79	92.80	11.80	80.62	**	-0.88	66.00	8.94	39.52	
	Study	0.79	40.54	-0.79	66.39		2.32	40.19	-1.09	45.88	
	House-Keeping and Taking Care of Children	0.66	171.97	-8.01	191.17		3.54	149.52	-6.19	190.55	
	Hobby, Leisure and Going out	-6.99	238.47	-27.50	261.20		-8.69	248.16	-14.98	229.49	
	Sleep, Eat, Personal Hygiene	10.63	233.80	21.07	253.36		5.87	238.22	8.72	240.17	

(\* p<0.1, \*\* p<0.05)

Table 51-a. Comparisons of mean and SD between NN and NY of mobile phone after stratifying the sample into sub-groups by life events – Gave birth to a child

Indicators for ultimate utility	Others ( 2198 )					Gave a birth ( 154 )				
	NN (321)		NY (235)		Sig.	NN (23)		NY (8)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.020	0.640	-0.070	0.680		-0.130	0.760	0.130	0.350	
Life Satisfaction	-0.060	0.760	0.010	0.850		-0.130	0.920	0.250	0.890	
Living Standard	-0.030	0.560	-0.010	0.540		0.090	0.600	0.250	0.710	

Number of Family Members	Others ( 2198 )					Gave a birth ( 154 )				
	NN (321)		NY (235)		Sig.	NN (23)		NY (8)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
	-0.02	0.30	-0.05	0.65		0.96	0.21	1.38	1.06	*

Household spending allocation for the month of September (1,000 Yen)	Others ( 2198 )					Gave a birth ( 154 )				
	NN (321)		NY (235)		Sig.	NN (23)		NY (8)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.88	29.87	4.66	26.24		2.78	17.48	3.00	22.51	
Housing (Rent/Mortgage)	1.83	59.53	-6.15	77.37		1.35	11.17	-7.13	34.09	
Water, Gas, Electricity	0.06	8.56	1.14	8.83		3.04	6.60	4.00	12.09	
Furniture and Household Appliances	-0.14	12.45	1.31	17.06		2.57	14.22	-1.50	16.99	
Clothing and Shoes	-0.72	16.53	1.23	15.85		2.35	7.94	8.63	15.77	
Medical and Insurance	-0.31	15.51	1.73	21.81		-1.04	10.43	-2.75	12.95	
Transportation	5.51	59.48	3.19	92.51		6.22	35.96	7.00	15.00	
Communication	1.15	4.86	3.97	9.73	**	1.57	3.30	5.00	8.02	*
Education	2.13	24.48	2.31	14.93		-8.22	34.81	-3.75	8.15	
Hobby and Leisure	0.19	19.89	-2.17	22.42		-1.48	17.77	-12.50	11.20	
Going out	-1.51	17.70	0.25	20.78		5.70	27.81	11.25	30.33	
Allowances	-1.06	22.56	3.40	18.36	**	-5.09	20.44	0.63	16.13	

Household possession of durable consumer good	Others ( 2198 )					Gave a birth ( 154 )				
	NN (321)		NY (235)		Sig.	NN (23)		NY (8)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.05	0.35	0.02	0.47		0.13	0.34	0.13	0.35	
Cupboard	0.03	0.45	0.04	0.48		-0.09	0.51	0.13	0.35	
Microwave	0.04	0.27	0.02	0.33		-0.04	0.21	0.00	0.00	
Refrigerator	0.01	0.34	0.02	0.39		0.00	0.00	0.00	0.00	
Automatic Dishwasher	0.01	0.16	0.00	0.22		0.00	0.00	0.00	0.00	
Vacuum Cleaner	0.06	0.43	0.01	0.50		-0.13	0.34	0.00	0.00	
Laundry Machine	0.03	0.27	0.03	0.32		0.09	0.29	0.00	0.00	

Cloths Dryer	0.02	0.23	0.00	0.25		0.00	0.00	0.00	0.00	
Sewing Machine	0.04	0.29	0.01	0.33		0.04	0.37	0.00	0.53	
Electric Fan	0.13	0.62	0.09	0.65		0.13	0.34	0.38	0.74	
Air Conditioner	0.07	0.74	0.10	0.73		-0.04	0.37	0.25	0.46	*
Fan Heater	0.04	0.58	0.02	0.49		0.39	0.58	0.13	0.35	
“Kotatsu” Heater	0.02	0.48	-0.06	0.62	*	0.17	1.11	0.00	0.00	
TV Set	0.06	0.54	0.07	0.61		0.04	0.37	0.00	0.53	
Stereo Sound System	-0.02	0.43	0.01	0.45		-0.04	0.21	0.00	0.00	
CD Radio Cassette Recorder	0.08	0.48	0.03	0.52		0.13	0.55	0.00	0.00	
VCR	0.01	0.47	0.09	0.57	*	0.04	0.47	-0.13	0.35	
Video Camera	0.02	0.29	0.04	0.30		0.00	0.30	0.00	0.00	
Telephone	0.12	0.76	0.13	0.83		0.04	0.82	-0.25	0.46	
Bicycle	0.05	0.83	0.20	0.93	**	-0.04	0.56	0.13	1.13	
Car	0.02	0.28	0.08	0.45	*	0.04	0.56	0.13	0.35	
TV Game	0.06	0.66	0.11	0.63		-0.17	0.72	0.00	0.00	
Word Processor	-0.02	0.37	0.00	0.38		-0.09	0.29	0.00	0.00	
Personal Computer	0.10	0.46	0.17	0.54	*	-0.09	0.51	0.13	0.35	
FAX	0.03	0.29	0.08	0.37	*	0.00	0.00	0.00	0.00	
Mobile Phone	0.00	0.00	1.20	0.47	**	0.00	0.00	1.00	0.00	

Purchase of household possession of durable consumer good within a year	Others ( 2198 )					Gave a birth ( 154 )				
	NN (321)		NY (235)		Sig.	NN (23)		NY (8)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.05	0.23	0.03	0.16		0.07	0.27	0.00	0.00	
Cupboard	0.06	0.25	0.01	0.11	*	0.00	0.00	0.00	0.00	
Microwave	0.06	0.25	0.04	0.19		0.00	0.00	0.00	0.00	
Refrigerator	0.09	0.29	0.04	0.19		0.00	0.00	0.00	0.00	
Automatic Dishwasher	0.01	0.10	0.00	0.00		0.00	0.00	0.00	0.00	
Vacuum Cleaner	0.13	0.36	0.09	0.33		0.21	0.43	0.00	0.00	
Laundry Machine	0.05	0.23	0.04	0.19		0.07	0.27	0.00	0.00	
Cloths Dryer	0.02	0.13	0.00	0.00		0.00	0.00	0.00	0.00	
Sewing Machine	0.00	0.00	0.04	0.25		0.00	0.00	0.00	0.00	
Electric Fan	0.07	0.26	0.13	0.54		0.14	0.36	0.67	0.58	*
Air Conditioner	0.08	0.36	0.06	0.37		0.07	0.27	0.00	0.00	
Fan Heater	0.05	0.23	0.03	0.16		0.00	0.00	0.00	0.00	
“Kotatsu” Heater	0.02	0.13	0.00	0.00		0.07	0.27	0.00	0.00	
TV Set	0.09	0.29	0.16	0.44		0.21	0.43	0.00	0.00	
Stereo Sound System	0.03	0.16	0.05	0.22		0.07	0.27	0.00	0.00	
CD Radio Cassette Recorder	0.05	0.21	0.01	0.11		0.07	0.27	0.00	0.00	
VCR	0.08	0.28	0.16	0.49		0.00	0.00	0.00	0.00	
Video Camera	0.05	0.23	0.03	0.16		0.00	0.00	0.00	0.00	
Telephone	0.22	0.70	0.10	0.38		0.07	0.27	0.00	0.00	
Bicycle	0.23	0.48	0.13	0.33		0.43	0.76	0.00	0.00	
Car	0.15	0.38	0.11	0.36		0.14	0.36	0.00	0.00	
TV Game	0.11	0.31	0.15	0.40		0.07	0.27	0.00	0.00	
Word Processor	0.01	0.10	0.00	0.00		0.00	0.00	0.00	0.00	
Personal Computer	0.14	0.34	0.19	0.43		0.14	0.36	0.00	0.00	
FAX	0.04	0.19	0.06	0.25		0.14	0.36	0.00	0.00	
Mobile Phone	0.30	0.57	0.27	0.50		0.36	0.63	0.67	1.15	

Time-use patterns (minutes)	Others ( 2198 )					Gave a birth ( 154 )					
	NN (321)		NY (235)		Sig.	NN (23)		NY (8)		Sig.	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD		
Wife, Working Days	Weekdays-Commuting (work/school)	0.73	21.75	-1.78	27.95		-5.17	17.31	-0.75	1.39	
	Work	5.05	109.99	-8.97	160.60		-54.65	165.81	-173.25	260.16	
	Study	0.02	49.98	-4.37	53.14		-13.17	35.49	-0.38	1.06	
	House-Keeping and Taking Care of Children	-22.05	142.08	-1.74	164.68		237.96	311.24	389.38	314.82	
	Hobby, Leisure and Going out	20.86	116.64	3.44	146.61		-49.22	178.42	-135.38	184.77	
	Sleep, Eat, Personal Hygiene	-2.24	144.21	13.19	167.17		-129.83	192.18	-52.63	190.94	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.18	21.01	0.27	13.12		0.00	0.00	0.00	0.00	
	Work	0.37	45.87	2.59	72.58		0.00	0.00	0.00	0.00	
	Study	3.39	56.44	-3.01	60.01		2.48	28.50	0.00	0.00	
	House-Keeping and Taking Care of Children	-9.51	149.62	1.55	174.97		227.35	281.45	307.50	329.09	
	Hobby, Leisure and Going out	6.19	179.09	-11.94	192.08		-109.00	190.67	-150.00	220.58	
	Sleep, Eat, Personal Hygiene	-1.29	182.97	10.78	190.10		-134.91	217.25	-157.50	312.49	

Husband, Working Days	Weekdays-Commuting (work/school)	2.29	47.27	-3.65	49.66		8.33	33.51	8.14	21.18	
	Work	-1.88	101.76	3.71	144.73		8.71	69.53	16.71	66.45	
	Study	1.25	26.71	-0.05	29.81		-5.62	17.61	-17.14	45.36	
	House-Keeping and Taking Care of Children	-2.39	55.01	-5.37	67.39		17.38	111.87	43.71	119.23	
	Hobby, Leisure and Going out	11.72	105.28	-4.48	119.98		14.10	85.13	-43.29	81.49	
	Sleep, Eat, Personal Hygiene	-6.44	100.61	10.19	133.53		-42.90	146.18	7.29	160.26	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.01	0.20	-0.34	8.39		0.00	0.00	-34.71	91.85	*
	Work	-6.80	66.09	3.12	52.75		-11.57	84.24	-51.43	136.07	
	Study	3.20	53.71	-7.14	46.64	*	5.86	49.84	-85.71	226.78	*
	House-Keeping and Taking Care of Children	13.19	145.22	-17.96	177.74	*	45.81	264.79	214.71	265.59	
	Hobby, Leisure and Going out	-10.35	216.19	24.37	250.84		17.38	283.49	-145.43	261.32	
	Sleep, Eat, Personal Hygiene	1.50	233.38	-2.05	232.68		-60.05	276.35	102.57	284.20	

(\* p<0.1, \*\* p<0.05)

Table 51-b. Comparisons of mean and SD between NN and NY of mobile phone after stratifying the sample into sub-groups by life events – Got married

Indicators for ultimate utility	Others(2295)					Got Married (57)				
	NN (339)		NY (232)		Sig.	NN (5)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.020	0.650	-0.080	0.680		0.000	0.710	0.180	0.400	
Life Satisfaction	-0.060	0.770	0.030	0.850		0.000	0.710	-0.270	0.650	
Living Standard	-0.020	0.560	0.000	0.540		-0.200	0.450	-0.090	0.700	

	Others(2295)					Got Married (57)				
	NN (339)		NY (232)		Sig.	NN (5)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.04	0.38	0.00	0.61		0.00	0.71	0.00	1.84	

Household spending allocation for the month of September (1,000 Yen)	Others(2295)					Got Married (57)				
	NN (339)		NY (232)		Sig.	NN (5)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.38	29.13	2.94	24.58		32.80	17.66	39.73	32.89	
Housing (Rent/Mortgage)	1.44	57.74	-8.19	77.11	*	26.00	41.65	36.18	38.41	
Water, Gas, Electricity	0.05	8.28	0.69	8.62		14.20	10.45	12.73	8.05	
Furniture and Household Appliances	-0.04	12.62	0.75	16.50		5.40	6.77	11.00	24.87	
Clothing and Shoes	-0.38	16.17	1.62	15.89		-9.20	8.98	-1.45	15.95	
Medical and Insurance	-0.41	15.31	1.36	21.95		3.40	3.05	6.27	10.34	
Transportation	5.63	58.59	2.10	92.46		1.00	7.04	28.91	46.62	
Communication	1.16	4.79	3.89	9.67	**	2.20	3.11	6.45	9.81	
Education	1.48	25.55	2.32	15.02		-1.60	3.58	-2.36	7.78	
Hobby and Leisure	0.16	19.83	-2.23	22.57		-5.60	11.10	-8.45	11.28	
Going out	-0.82	18.54	1.07	20.83		-15.00	17.71	-9.18	26.59	
Allowances	-1.58	22.43	2.45	17.02	**	16.00	15.17	21.36	31.79	

Household possession of durable consumer good	Others(2295)					Got Married (57)				
	NN (339)		NY (232)		Sig.	NN (5)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.34	0.01	0.44		0.60	0.55	0.36	0.81	
Cupboard	0.01	0.45	0.02	0.46		0.40	0.55	0.55	0.52	
Microwave	0.04	0.27	0.00	0.29		0.00	0.00	0.45	0.52	*
Refrigerator	0.01	0.34	0.00	0.36		0.00	0.00	0.45	0.52	*
Automatic Dishwasher	0.01	0.15	-0.01	0.21		0.00	0.00	0.09	0.30	
Vacuum Cleaner	0.05	0.42	0.00	0.48		0.00	0.71	0.27	0.65	
Laundry Machine	0.03	0.26	0.00	0.29		0.20	0.45	0.45	0.52	
Cloths Dryer	0.02	0.22	-0.01	0.25		-0.20	0.45	0.09	0.30	
Sewing Machine	0.04	0.30	0.02	0.32		0.00	0.00	-0.09	0.54	
Electric Fan	0.13	0.60	0.09	0.66		0.40	0.89	0.27	0.47	
Air Conditioner	0.06	0.72	0.08	0.73		0.00	0.71	0.55	0.52	
Fan Heater	0.06	0.58	0.02	0.48		0.00	1.00	0.18	0.60	
“Kotatsu” Heater	0.03	0.54	-0.06	0.61	*	0.20	0.84	0.00	0.63	
TV Set	0.06	0.52	0.06	0.61		0.20	1.30	0.27	0.47	
Stereo Sound System	-0.03	0.42	-0.01	0.43		0.40	0.55	0.45	0.52	
CD Radio Cassette Recorder	0.09	0.48	0.03	0.51		0.20	0.45	-0.09	0.54	
VCR	0.01	0.48	0.09	0.55		0.00	0.00	0.00	0.89	

Video Camera	0.01	0.29	0.03	0.29		0.00	0.00	0.18	0.40	
Telephone	0.12	0.76	0.12	0.79		0.20	0.84	0.09	1.38	
Bicycle	0.04	0.81	0.17	0.93	*	-0.20	0.84	0.73	0.90	*
Car	0.01	0.30	0.04	0.41		0.60	0.55	0.82	0.40	
TV Game	0.06	0.66	0.11	0.63		-0.60	0.89	0.18	0.40	**
Word Processor	-0.03	0.35	0.00	0.37		0.00	1.00	0.00	0.45	
Personal Computer	0.08	0.46	0.15	0.51		0.40	0.55	0.64	0.81	
FAX	0.03	0.28	0.06	0.36		-0.20	0.45	0.27	0.47	*
Mobile Phone	0.00	0.00	1.19	0.47	**	0.00	0.00	1.18	0.40	**

Purchase of household possession of durable consumer good within a year	Others(2295)					Got Married (57)				
	NN (339)		NY (232)		Sig.	NN (5)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.06	0.24	0.03	0.16		0.00	0.00	0.00	0.00	
Cupboard	0.06	0.24	0.01	0.12		0.00	0.00	0.00	0.00	
Microwave	0.06	0.24	0.04	0.20		0.00	0.00	0.00	0.00	
Refrigerator	0.08	0.28	0.04	0.20		0.00	0.00	0.00	0.00	
Automatic Dishwasher	0.01	0.09	0.00	0.00		0.00	0.00	0.00	0.00	
Vacuum Cleaner	0.13	0.37	0.09	0.34		0.25	0.50	0.00	0.00	
Laundry Machine	0.06	0.24	0.04	0.20		0.00	0.00	0.00	0.00	
Cloths Dryer	0.02	0.13	0.00	0.00		0.00	0.00	0.00	0.00	
Sewing Machine	0.00	0.00	0.04	0.26	*	0.00	0.00	0.00	0.00	
Electric Fan	0.08	0.28	0.16	0.57		0.00	0.00	0.00	0.00	
Air Conditioner	0.08	0.36	0.05	0.36		0.00	0.00	0.14	0.38	
Fan Heater	0.05	0.22	0.03	0.16		0.00	0.00	0.00	0.00	
"Kotatsu" Heater	0.03	0.16	0.00	0.00		0.00	0.00	0.00	0.00	
TV Set	0.10	0.30	0.15	0.43		0.25	0.50	0.29	0.49	
Stereo Sound System	0.03	0.18	0.04	0.20		0.00	0.00	0.14	0.38	
CD Radio Cassette Recorder	0.05	0.22	0.01	0.12		0.00	0.00	0.00	0.00	
VCR	0.08	0.26	0.17	0.50	*	0.00	0.00	0.00	0.00	
Video Camera	0.05	0.22	0.03	0.16		0.00	0.00	0.00	0.00	
Telephone	0.21	0.67	0.11	0.39		0.00	0.00	0.00	0.00	
Bicycle	0.26	0.53	0.12	0.33	**	0.00	0.00	0.14	0.38	
Car	0.14	0.37	0.11	0.35		0.25	0.50	0.14	0.38	
TV Game	0.10	0.30	0.13	0.34		0.25	0.50	0.29	0.76	
Word Processor	0.01	0.09	0.00	0.00		0.00	0.00	0.00	0.00	
Personal Computer	0.14	0.35	0.17	0.42		0.00	0.00	0.29	0.49	
FAX	0.05	0.22	0.05	0.23		0.00	0.00	0.14	0.38	
Mobile Phone	0.30	0.56	0.25	0.50		0.50	1.00	0.57	0.79	

	Time-use patterns (minutes)	Others(2295)					Got Married (57)				
		NN (339)		NY (232)		Sig.	NN (5)		NY (11)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.53	21.42	-1.32	26.50		-12.80	25.86	-10.73	44.19	
	Work	4.43	108.13	-1.80	150.37		-228.00	289.00	-279.00	261.71	
	Study	-0.88	49.58	-3.92	52.93		0.00	0.00	-10.91	36.18	
	House-Keeping and Taking Care of Children	-8.75	166.47	1.05	173.18		274.80	267.36	224.09	278.54	
	Hobby, Leisure and Going out	16.57	122.09	-4.57	149.96	*	-11.60	171.85	70.64	128.20	
	Sleep, Eat, Personal Hygiene	-10.95	148.42	10.79	166.20		-0.80	304.96	15.73	211.36	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.17	20.44	0.53	12.58		0.00	0.00	-5.45	18.09	
	Work	0.34	44.63	2.62	72.83		0.60	1.34	0.00	26.83	
	Study	3.37	55.39	-2.27	59.78		0.00	0.00	-16.36	38.80	
	House-Keeping and Taking Care of Children	4.02	169.59	2.33	181.31		168.00	259.46	207.55	247.88	
	Hobby, Leisure and Going out	0.19	181.27	-9.99	194.11		-119.40	208.28	-153.00	142.84	
	Sleep, Eat, Personal Hygiene	-9.54	187.77	7.00	188.83		-60.00	228.47	-32.73	332.41	
Husband, Working Days	Weekdays-Commuting (work/school)	2.80	46.24	-3.14	48.80		N/A	N/A	N/A	N/A	N/A
	Work	-0.98	99.36	4.27	142.15		N/A	N/A	N/A	N/A	N/A
	Study	0.66	26.10	-0.79	30.64		N/A	N/A	N/A	N/A	N/A
	House-Keeping and Taking Care of Children	-0.71	61.77	-3.25	70.52		N/A	N/A	N/A	N/A	N/A
	Hobby, Leisure and Going out	11.92	103.57	-6.16	118.66		N/A	N/A	N/A	N/A	N/A
	Sleep, Eat, Personal Hygiene	-9.54	105.36	10.07	134.21	*	N/A	N/A	N/A	N/A	N/A
Weekend	Weekends-Commuting (work/school)	-0.01	0.19	-1.84	20.86		N/A	N/A	N/A	N/A	N/A

Work	-7.21	67.66	0.73	59.03		N/A	N/A	N/A	N/A	N/A
Study	3.43	53.30	-10.58	65.42	**	N/A	N/A	N/A	N/A	N/A
House-Keeping and Taking Care of Children	16.01	158.55	-7.78	187.46		N/A	N/A	N/A	N/A	N/A
Hobby, Leisure and Going out	-7.95	222.23	16.94	252.87		N/A	N/A	N/A	N/A	N/A
Sleep, Eat, Personal Hygiene	-3.82	237.38	2.53	235.08		N/A	N/A	N/A	N/A	N/A

(\* p<0.1, \*\* p<0.05)

Table 51-c. Comparisons of mean and SD between NN and NY of mobile phone after stratifying the sample into sub-groups by life events – Spiritually depressed

Indicators for ultimate utility	Others (547)					Spiritually Depressed (98)				
	NN (74)		NY (66)		Sig.	NN (16)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	0.080	0.660	-0.090	0.700		-0.060	0.770	0.000	0.630	
Life Satisfaction	-0.030	0.720	0.000	0.780		-0.060	0.850	0.090	1.140	
Living Standard	0.140	0.560	-0.090	0.550	**	-0.060	0.440	0.000	0.890	

	Others (547)					Spiritually Depressed (98)				
	NN (74)		NY (66)		Sig.	NN (16)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.08	0.27	0.06	0.52		0.06	0.44	-0.09	0.30	

Household spending allocation for the month of September (1,000 Yen)	Others (547)					Spiritually Depressed (98)				
	NN (74)		NY (66)		Sig.	NN (16)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	5.55	27.20	5.83	27.73		5.13	16.50	-4.27	23.50	
Housing (Rent/Mortgage)	11.42	114.80	1.18	15.99		0.62	10.47	5.91	14.15	
Water, Gas, Electricity	0.12	9.98	0.67	10.80		2.19	5.82	6.36	12.77	
Furniture and Household Appliances	0.34	13.42	-0.88	15.95		2.00	7.20	-3.00	8.04	
Clothing and Shoes	-1.05	13.23	1.03	13.86		4.00	19.09	0.73	6.50	
Medical and Insurance	1.16	24.06	5.56	37.26		-6.25	11.56	-1.73	7.44	
Transportation	2.81	10.81	4.26	14.15		-3.00	30.64	-1.18	9.14	
Communication	1.70	4.84	3.33	7.09		-0.19	1.94	7.64	18.21	*
Education	2.97	37.70	5.67	19.65		-7.06	17.15	0.55	3.30	
Hobby and Leisure	1.49	17.28	-2.42	28.27		8.56	33.25	-2.36	41.27	
Going out	1.32	16.07	3.61	23.06		-3.00	10.48	-11.00	19.85	
Allowances	-3.04	17.64	5.32	20.76	**	-0.25	21.10	3.27	14.49	

Household possession of durable consumer good	Others (547)					Spiritually Depressed (98)				
	NN (74)		NY (66)		Sig.	NN (16)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.01	0.26	0.02	0.41		0.13	0.34	0.00	0.00	
Cupboard	-0.05	0.40	0.08	0.51	*	-0.06	0.68	0.00	0.45	
Microwave	0.00	0.29	0.02	0.28		0.13	0.34	0.00	0.00	
Refrigerator	0.00	0.33	-0.03	0.30		0.06	0.25	0.00	0.00	
Automatic Dishwasher	0.03	0.16	-0.03	0.17	**	0.00	0.00	-0.09	0.30	
Vacuum Cleaner	-0.04	0.42	-0.02	0.45		0.13	0.34	-0.09	0.30	
Laundry Machine	0.00	0.23	0.06	0.30		0.06	0.25	0.00	0.00	
Cloths Dryer	0.04	0.20	0.00	0.25		0.13	0.34	0.00	0.00	
Sewing Machine	0.01	0.35	0.08	0.32		0.06	0.25	-0.18	0.40	*
Electric Fan	0.15	0.72	0.08	0.47		0.19	0.54	0.00	0.45	
Air Conditioner	0.03	0.70	0.05	0.54		0.19	0.75	0.18	0.60	
Fan Heater	0.04	0.39	0.06	0.58		0.19	0.40	0.18	0.60	
“Kotatsu” Heater	0.08	0.49	-0.05	0.37	*	0.25	1.29	0.09	0.30	
TV Set	0.05	0.40	0.15	0.47		0.25	0.86	0.00	0.00	
Stereo Sound System	-0.16	0.44	0.02	0.48	**	0.06	0.44	0.00	0.00	
CD Radio Cassette Recorder	0.14	0.51	0.03	0.50		0.19	0.54	0.09	0.54	
VCR	-0.03	0.52	-0.02	0.62		0.00	0.52	0.09	0.30	
Video Camera	-0.04	0.31	0.02	0.28		0.00	0.00	0.18	0.40	*
Telephone	0.11	0.75	0.00	0.93		0.13	0.72	0.00	0.77	
Bicycle	0.09	0.92	0.17	1.09		0.25	0.68	0.45	1.13	
Car	-0.01	0.31	0.11	0.53		0.06	0.25	0.27	0.47	
TV Game	0.05	0.90	0.03	0.68		0.19	0.40	0.00	0.45	
Word Processor	-0.04	0.35	0.03	0.43		0.25	0.45	0.00	0.45	
Personal Computer	0.09	0.55	0.09	0.38		0.06	0.44	0.09	0.30	
FAX	0.03	0.23	0.02	0.28		0.06	0.44	0.09	0.30	
Mobile Phone	0.00	0.00	1.18	0.46	**	0.00	0.00	1.18	0.40	**

Others (547)	Spiritually Depressed (98)
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Purchase of household possession of durable consumer good within a year	NN (74)		NY (66)		Sig.	NN (16)		NY (11)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.09	0.29	0.05	0.22		0.17	0.39	0.00	0.00	
Cupboard	0.09	0.29	0.05	0.22		0.17	0.39	0.00	0.00	
Microwave	0.00	0.00	0.00	0.00		0.17	0.39	0.00	0.00	
Refrigerator	0.13	0.34	0.05	0.22		0.00	0.00	0.00	0.00	
Automatic Dishwasher	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
Vacuum Cleaner	0.17	0.39	0.19	0.51		0.08	0.29	0.33	0.52	
Laundry Machine	0.00	0.00	0.05	0.22		0.08	0.29	0.00	0.00	
Cloths Dryer	0.00	0.00	0.00	0.00		0.08	0.29	0.00	0.00	
Sewing Machine	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
Electric Fan	0.00	0.00	0.14	0.36	*	0.17	0.39	0.33	0.82	
Air Conditioner	0.00	0.00	0.14	0.65		0.08	0.29	0.00	0.00	
Fan Heater	0.09	0.29	0.00	0.00		0.08	0.29	0.00	0.00	
“Kotatsu” Heater	0.00	0.00	0.00	0.00		0.08	0.29	0.00	0.00	
TV Set	0.09	0.29	0.33	0.58	*	0.17	0.39	0.17	0.41	
Stereo Sound System	0.00	0.00	0.14	0.36	*	0.00	0.00	0.00	0.00	
CD Radio Cassette Recorder	0.09	0.29	0.00	0.00		0.00	0.00	0.00	0.00	
VCR	0.04	0.21	0.10	0.30		0.17	0.39	0.00	0.00	
Video Camera	0.04	0.21	0.05	0.22		0.00	0.00	0.00	0.00	
Telephone	0.17	0.65	0.14	0.48		0.50	1.17	0.00	0.00	
Bicycle	0.13	0.46	0.19	0.40		0.33	0.49	0.00	0.00	
Car	0.09	0.29	0.19	0.51		0.33	0.49	0.17	0.41	
TV Game	0.13	0.34	0.10	0.30		0.00	0.00	0.17	0.41	
Word Processor	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
Personal Computer	0.17	0.39	0.14	0.36		0.25	0.45	0.00	0.00	
FAX	0.17	0.39	0.10	0.30		0.00	0.00	0.00	0.00	
Mobile Phone	0.26	0.62	0.24	0.44		0.42	0.51	0.17	0.41	

Time-use patterns (minutes)	Others (547)					Spiritually Depressed (98)					
	NN (74)		NY (66)		Sig.	NN (16)		NY (11)		Sig.	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD		
Wife, Working Days	Weekdays-Commuting (work/school)	0.82	18.18	-2.67	26.45		-0.31	31.51	5.64	48.91	
	Work	6.68	88.05	1.53	172.95		10.50	38.32	0.18	183.96	
	Study	-1.84	22.19	-10.29	72.49		3.69	25.53	-5.45	42.04	
	House-Keeping and Taking Care of Children	-6.15	156.49	-32.65	184.99		-18.31	99.02	27.00	123.80	
	Hobby, Leisure and Going out	19.63	102.62	13.44	150.17		12.13	79.18	-0.45	156.47	
	Sleep, Eat, Personal Hygiene	-13.23	130.35	38.00	168.15	**	-4.31	105.08	-26.91	152.68	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	-3.34	28.09	-0.91	7.68		-0.13	0.50	0.45	1.51	
	Work	1.70	24.30	-12.74	61.83	*	-18.94	74.95	-16.09	54.37	
	Study	3.29	43.52	-14.55	75.21	*	-7.69	42.83	27.55	82.01	
	House-Keeping and Taking Care of Children	27.07	175.78	-14.42	190.43		-21.63	194.57	-16.36	146.96	
	Hobby, Leisure and Going out	-0.86	136.03	-1.14	177.94		63.81	162.42	-16.36	211.44	
	Sleep, Eat, Personal Hygiene	-27.11	188.36	43.76	170.28	**	-22.19	155.15	11.00	172.13	
Husband, Working Days	Weekdays-Commuting (work/school)	7.69	39.47	-4.72	66.52		-6.88	48.99	-11.60	24.84	
	Work	-16.72	117.91	-7.83	202.83		53.00	82.28	-60.00	152.78	
	Study	1.02	29.89	-1.21	36.25		-15.00	42.43	24.00	32.86	
	House-Keeping and Taking Care of Children	6.56	54.44	-7.98	89.71		-22.13	77.40	-48.00	80.55	
	Hobby, Leisure and Going out	13.64	118.94	1.26	132.28		14.75	61.36	48.60	79.53	
	Sleep, Eat, Personal Hygiene	-5.10	92.98	24.55	126.64		-50.75	148.70	47.00	148.31	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.00	0.00	-4.67	33.70		0.00	0.00	-11.20	25.04	
	Work	-11.90	86.12	-10.38	54.09		30.00	84.85	-12.00	26.83	
	Study	-0.98	62.40	-7.10	45.59		-30.00	64.14	12.60	26.53	
	House-Keeping and Taking Care of Children	9.54	137.95	-5.40	139.21		-36.75	226.56	-24.60	137.35	
	Hobby, Leisure and Going out	1.70	204.76	-9.12	224.42		104.75	207.29	71.80	205.91	
	Sleep, Eat, Personal Hygiene	7.84	233.74	35.63	213.88		-74.75	212.00	-47.40	155.54	

(\* p<0.1, \*\* p<0.05)

Table 51-d. Comparisons of mean and SD between NN and NY of mobile phone after stratifying the sample

into sub-groups by life events – Wife working

Indicators for ultimate utility	Others (931)					Wife - Working (1421)				
	NN (169)		NY (108)		Sig.	NN (175)		NY (135)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.030	0.630	-0.060	0.690		-0.020	0.670	-0.070	0.660	
Life Satisfaction	-0.010	0.730	-0.030	0.770		-0.110	0.800	0.050	0.910	
Living Standard	0.000	0.530	-0.010	0.630		-0.050	0.590	0.010	0.470	

	Others (931)					Wife - Working (1421)				
	NN (169)		NY (108)		Sig.	NN (175)		NY (135)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.11	0.42	0.03	0.57		-0.02	0.33	-0.03	0.80	

Household spending allocation for the month of September (1,000 Yen)	Others (931)					Wife - Working (1421)				
	NN (169)		NY (108)		Sig.	NN (175)		NY (135)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.68	31.55	3.30	29.75		3.93	26.82	5.65	22.80	
Housing (Rent/Mortgage)	-1.30	22.48	-0.66	26.94		4.79	77.63	-10.60	99.46	
Water, Gas, Electricity	0.15	9.48	1.29	9.43		0.36	7.38	1.20	8.56	
Furniture and Household Appliances	0.43	9.89	1.15	18.01		-0.33	14.72	1.27	16.27	
Clothing and Shoes	-0.74	11.99	-0.66	12.13		-0.29	19.31	3.19	18.18	
Medical and Insurance	-0.51	18.27	1.02	25.35		-0.21	11.57	2.04	18.08	
Transportation	1.12	29.43	12.56	95.22		9.84	76.14	-4.08	87.13	
Communication	0.80	5.15	4.75	10.96	**	1.54	4.35	3.41	8.49	**
Education	3.09	15.56	2.74	15.04		-0.16	32.09	1.60	14.62	
Hobby and Leisure	1.64	20.53	-5.18	24.52	**	-1.43	18.87	-0.38	20.00	
Going out	-1.36	18.25	1.76	25.76		-0.70	18.93	-0.31	16.64	
Allowances	-3.35	20.59	4.68	18.74	**	0.62	23.96	2.21	17.87	

Household possession of durable consumer good	Others (931)					Wife - Working (1421)				
	NN (169)		NY (108)		Sig.	NN (175)		NY (135)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.07	0.36	0.03	0.48		0.04	0.33	0.02	0.45	
Cupboard	0.03	0.47	0.07	0.47		0.01	0.44	0.01	0.49	
Microwave	0.05	0.24	0.06	0.30		0.03	0.29	-0.01	0.33	
Refrigerator	0.02	0.23	0.04	0.30		0.01	0.41	0.01	0.43	
Automatic Dishwasher	0.00	0.15	0.01	0.26		0.01	0.15	-0.01	0.17	
Vacuum Cleaner	0.02	0.41	0.05	0.48		0.07	0.44	-0.02	0.50	*
Laundry Machine	0.04	0.23	0.04	0.30		0.02	0.30	0.01	0.32	
Cloths Dryer	0.02	0.29	0.03	0.29		0.01	0.13	-0.03	0.21	*
Sewing Machine	0.04	0.31	0.03	0.29		0.05	0.29	0.00	0.37	
Electric Fan	0.17	0.62	0.06	0.53		0.09	0.60	0.13	0.73	
Air Conditioner	0.03	0.66	0.19	0.74	*	0.10	0.78	0.04	0.71	
Fan Heater	0.07	0.64	0.05	0.55		0.06	0.53	0.01	0.43	
“Kotatsu” Heater	0.10	0.60	-0.06	0.79	**	-0.03	0.48	-0.05	0.43	
TV Set	0.07	0.48	0.06	0.58		0.06	0.58	0.07	0.63	
Stereo Sound System	-0.06	0.42	0.00	0.47		0.02	0.42	0.02	0.41	
CD Radio Cassette Recorder	0.09	0.54	0.03	0.55		0.08	0.42	0.02	0.48	
VCR	0.01	0.49	0.11	0.55		0.02	0.46	0.06	0.58	
Video Camera	0.03	0.28	0.06	0.34		0.00	0.30	0.02	0.26	
Telephone	0.12	0.69	0.19	0.84		0.12	0.83	0.06	0.80	
Bicycle	0.10	0.88	0.32	1.08	*	-0.02	0.75	0.10	0.79	
Car	0.04	0.31	0.06	0.39		0.01	0.31	0.09	0.48	*
TV Game	0.07	0.61	0.19	0.66		0.03	0.71	0.05	0.58	
Word Processor	-0.01	0.36	0.02	0.39		-0.05	0.37	-0.01	0.36	
Personal Computer	0.07	0.48	0.19	0.54	**	0.11	0.45	0.15	0.54	
FAX	0.06	0.30	0.12	0.35		-0.01	0.25	0.04	0.37	
Mobile Phone	0.00	0.00	1.18	0.41	**	0.00	0.00	1.21	0.51	**

Purchase of household possession of durable consumer good within a year	Others (931)					Wife - Working (1421)				
	NN (169)		NY (108)		Sig.	NN (175)		NY (135)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.19	0.03	0.16		0.09	0.29	0.02	0.15	
Cupboard	0.04	0.19	0.03	0.16		0.09	0.29	0.00	0.00	**
Microwave	0.04	0.19	0.05	0.22		0.09	0.29	0.02	0.15	
Refrigerator	0.08	0.27	0.00	0.00	*	0.09	0.29	0.07	0.26	
Automatic Dishwasher	0.00	0.00	0.00	0.00		0.02	0.15	0.00	0.00	
Vacuum Cleaner	0.15	0.39	0.03	0.16	*	0.11	0.32	0.14	0.42	
Laundry Machine	0.04	0.19	0.05	0.22		0.09	0.29	0.02	0.15	
Cloths Dryer	0.01	0.11	0.00	0.00		0.02	0.15	0.00	0.00	

Sewing Machine	0.00	0.00	0.05	0.32		0.00	0.00	0.02	0.15	
Electric Fan	0.08	0.27	0.23	0.70	*	0.09	0.29	0.07	0.34	
Air Conditioner	0.03	0.16	0.03	0.16		0.18	0.54	0.10	0.48	
Fan Heater	0.05	0.22	0.03	0.16		0.05	0.21	0.02	0.15	
“Kotatsu” Heater	0.01	0.11	0.00	0.00		0.05	0.21	0.00	0.00	
TV Set	0.10	0.30	0.15	0.43		0.11	0.32	0.17	0.44	
Stereo Sound System	0.04	0.19	0.05	0.22		0.02	0.15	0.05	0.22	
CD Radio Cassette Recorder	0.05	0.22	0.03	0.16		0.05	0.21	0.00	0.00	
VCR	0.05	0.22	0.20	0.61	*	0.11	0.32	0.12	0.33	
Video Camera	0.05	0.22	0.05	0.22		0.05	0.21	0.00	0.00	
Telephone	0.14	0.55	0.10	0.38		0.32	0.83	0.10	0.37	
Bicycle	0.30	0.58	0.13	0.33	*	0.16	0.37	0.12	0.33	
Car	0.16	0.40	0.15	0.36		0.11	0.32	0.07	0.34	
TV Game	0.14	0.35	0.25	0.49		0.05	0.21	0.05	0.22	
Word Processor	0.01	0.11	0.00	0.00		0.00	0.00	0.00	0.00	
Personal Computer	0.16	0.37	0.25	0.49		0.09	0.29	0.12	0.33	
FAX	0.05	0.22	0.03	0.16		0.05	0.21	0.10	0.30	
Mobile Phone	0.31	0.59	0.35	0.58		0.30	0.55	0.21	0.47	

		Others (931)				Wife - Working (1421)					
		NN (169)		NY (108)		Sig.	NN (175)		NY (135)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Time-use patterns (minutes)										
	Weekdays-Commuting (work/school)	-1.90	12.33	-6.92	22.19	**	2.48	27.46	2.36	30.50	
	Work	-26.46	109.25	-61.79	167.39	**	27.45	114.92	23.16	156.72	
	Study	2.09	63.24	-9.07	70.08		-3.70	30.10	-0.41	31.49	
	House-Keeping and Taking Care of Children	10.00	212.01	39.25	221.60		-18.65	118.53	-11.05	145.57	
	Hobby, Leisure and Going out	29.61	147.72	8.50	165.52		3.25	91.04	-8.80	135.89	
Wife Weekends/Holidays	Sleep, Eat, Personal Hygiene	-11.41	168.42	33.06	185.61	**	-10.21	132.60	-6.46	150.99	
	Weekends-Commuting (work/school)	1.05	10.30	0.56	19.38		-0.70	26.67	0.02	0.78	
	Work	-0.36	4.62	-0.56	5.80		1.03	62.20	4.95	95.64	
	Study	1.42	47.21	-12.31	63.79	**	5.18	61.72	4.59	53.95	
	House-Keeping and Taking Care of Children	21.09	197.70	24.29	229.62		-7.91	141.15	1.65	149.32	
	Hobby, Leisure and Going out	1.51	178.25	-39.27	199.91	*	-4.55	185.89	1.65	188.22	
Husband, Working Days	Sleep, Eat, Personal Hygiene	-28.24	189.46	24.26	195.29	**	7.27	185.67	-10.04	197.24	
	Weekdays-Commuting (work/school)	1.18	46.34	-3.47	54.76		5.31	46.21	-2.66	39.22	
	Work	0.72	80.62	-2.39	140.52		-3.62	123.29	13.72	144.96	
	Study	-0.45	29.76	-3.27	37.51		2.39	19.13	2.73	16.30	
	House-Keeping and Taking Care of Children	0.41	71.08	-1.08	66.79		-2.44	43.96	-6.33	75.91	
	Hobby, Leisure and Going out	11.47	85.22	-7.01	115.73		12.63	127.34	-4.96	123.57	
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	-11.53	106.72	21.21	135.95	**	-6.47	103.68	-5.73	131.09	
	Weekends-Commuting (work/school)	0.00	0.00	-3.77	26.18	*	-0.03	0.31	0.97	7.81	
	Work	-8.09	64.59	-3.16	57.64		-5.81	72.59	6.42	61.01	
	Study	-1.27	53.31	-11.45	75.47		10.88	52.69	-9.29	47.59	**
	House-Keeping and Taking Care of Children	19.22	168.91	-15.04	188.83		10.93	141.29	2.83	186.39	
	Hobby, Leisure and Going out	-3.27	231.46	22.18	249.83		-15.38	207.75	9.29	259.02	
Sleep, Eat, Personal Hygiene	-5.14	252.89	10.67	231.76		-1.73	211.78	-9.38	241.17		

(\* p<0.1, \*\* p<0.05)

Table 51-e. Comparisons of mean and SD between NN and NY of mobile phone after stratifying the sample into sub-groups by life events – Wife housekeeper

Indicators for ultimate utility	Others (1492)				Wife - House keeper (860)					
	NN (190)		NY (145)		Sig.	NN (154)		NY (98)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.030	0.690	-0.060	0.660		-0.020	0.600	-0.080	0.680	
Life Satisfaction	-0.090	0.800	0.050	0.900		-0.030	0.730	-0.030	0.770	
Living Standard	-0.050	0.580	0.030	0.510		0.010	0.530	-0.050	0.600	

		Others (1492)				Wife - House keeper (860)					
		NN (190)		NY (145)		Sig.	NN (154)		NY (98)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	

Number of Family Members	-0.02	0.36	-0.01	0.79		0.12	0.40	0.00	0.57	**
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Household spending allocation for the month of September (1,000 Yen)	Others (1492)					Wife - House keeper (860)				
	NN (190)		NY (145)		Sig.	NN (154)		NY (98)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.66	26.03	5.66	23.63		3.99	32.77	3.05	29.40	
Housing (Rent/Mortgage)	4.79	74.65	-9.39	96.13		-1.90	22.82	-1.44	27.73	
Water, Gas, Electricity	0.37	7.10	1.23	8.35		0.12	9.92	1.24	9.80	
Furniture and Household Appliances	-0.33	14.13	0.95	15.85		0.51	10.35	1.61	18.72	
Clothing and Shoes	-0.54	18.78	2.62	17.89		-0.48	12.11	-0.21	12.18	
Medical and Insurance	-0.22	11.27	1.93	17.56		-0.53	19.02	1.07	26.51	
Transportation	8.94	73.17	-3.81	84.07		1.39	30.66	13.86	99.90	
Communication	1.55	4.21	3.54	9.08	**	0.71	5.35	4.69	10.49	**
Education	-0.16	31.15	1.61	14.44		3.41	15.41	2.85	15.33	
Hobby and Leisure	-1.37	18.15	-1.07	19.61		1.86	21.46	-4.64	25.52	**
Going out	-0.46	18.71	-0.93	16.52		-1.72	18.45	2.89	26.52	
Allowances	0.55	23.00	2.62	19.16		-3.64	21.54	4.33	16.90	**

Household possession of durable consumer good	Others (1492)					Wife - House keeper (860)				
	NN (190)		NY (145)		Sig.	NN (154)		NY (98)		Sig..
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.06	0.34	0.01	0.46		0.05	0.35	0.04	0.47	
Cupboard	0.03	0.47	0.01	0.49		0.01	0.44	0.08	0.47	
Microwave	0.05	0.32	0.00	0.35		0.02	0.18	0.05	0.26	
Refrigerator	0.03	0.42	0.01	0.43		-0.01	0.16	0.04	0.28	*
Automatic Dishwasher	0.02	0.16	-0.02	0.19	*	-0.01	0.14	0.02	0.25	
Vacuum Cleaner	0.08	0.44	-0.03	0.49	**	0.00	0.40	0.07	0.48	
Laundry Machine	0.05	0.33	0.01	0.33		0.01	0.16	0.04	0.28	
Cloths Dryer	0.01	0.13	-0.03	0.20	*	0.03	0.30	0.03	0.30	
Sewing Machine	0.06	0.30	-0.01	0.37	**	0.02	0.29	0.05	0.26	
Electric Fan	0.12	0.68	0.12	0.73		0.14	0.52	0.07	0.52	
Air Conditioner	0.11	0.77	0.02	0.70		0.01	0.66	0.22	0.74	**
Fan Heater	0.06	0.53	0.02	0.45		0.06	0.65	0.03	0.55	
“Kotatsu” Heater	0.01	0.53	-0.05	0.43		0.06	0.57	-0.07	0.82	
TV Set	0.07	0.59	0.06	0.63		0.05	0.45	0.08	0.57	
Stereo Sound System	0.02	0.44	0.03	0.42		-0.07	0.40	-0.02	0.48	
CD Radio Cassette Recorder	0.08	0.42	0.02	0.48		0.09	0.55	0.03	0.56	
VCR	0.03	0.48	0.06	0.58		0.00	0.47	0.11	0.55	*
Video Camera	0.01	0.30	0.03	0.27		0.03	0.28	0.05	0.33	
Telephone	0.15	0.85	0.04	0.79		0.08	0.64	0.22	0.86	
Bicycle	0.02	0.77	0.10	0.78		0.07	0.86	0.34	1.11	**
Car	0.02	0.32	0.09	0.47		0.02	0.29	0.06	0.40	
TV Game	0.03	0.69	0.05	0.57		0.06	0.63	0.20	0.67	*
Word Processor	-0.03	0.39	-0.01	0.34		-0.03	0.33	0.02	0.41	
Personal Computer	0.11	0.44	0.14	0.52		0.06	0.49	0.21	0.56	**
FAX	0.01	0.26	0.05	0.38		0.05	0.30	0.11	0.35	
Mobile Phone	0.00	0.00	1.19	0.49	**	0.00	0.00	1.19	0.42	**

Purchase of household possession of durable consumer good within a year	Others (1492)					Wife - House keeper (860)				
	NN (190)		NY (145)		Sig..	NN (154)		NY (98)		Sig..
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.08	0.28	0.02	0.15		0.04	0.20	0.03	0.16	
Cupboard	0.08	0.28	0.00	0.00	**	0.04	0.20	0.03	0.16	
Microwave	0.08	0.28	0.02	0.15		0.04	0.20	0.05	0.23	
Refrigerator	0.10	0.31	0.07	0.25		0.07	0.25	0.00	0.00	
Automatic Dishwasher	0.02	0.14	0.00	0.00		0.00	0.00	0.00	0.00	
Vacuum Cleaner	0.10	0.31	0.13	0.40		0.16	0.40	0.03	0.16	*
Laundry Machine	0.08	0.28	0.02	0.15		0.04	0.20	0.05	0.23	
Cloths Dryer	0.02	0.14	0.00	0.00		0.01	0.11	0.00	0.00	
Sewing Machine	0.00	0.00	0.02	0.15		0.00	0.00	0.05	0.33	
Electric Fan	0.08	0.28	0.07	0.33		0.08	0.27	0.24	0.72	*
Air Conditioner	0.17	0.52	0.09	0.47		0.03	0.16	0.03	0.16	
Fan Heater	0.04	0.20	0.02	0.15		0.05	0.22	0.03	0.16	
“Kotatsu” Heater	0.04	0.20	0.00	0.00		0.01	0.11	0.00	0.00	
TV Set	0.10	0.31	0.16	0.42		0.11	0.31	0.16	0.44	
Stereo Sound System	0.02	0.14	0.04	0.21		0.04	0.20	0.05	0.23	
CD Radio Cassette Recorder	0.04	0.20	0.00	0.00		0.05	0.22	0.03	0.16	
VCR	0.10	0.31	0.11	0.32		0.05	0.22	0.22	0.63	**
Video Camera	0.06	0.24	0.00	0.00	*	0.04	0.20	0.05	0.23	
Telephone	0.29	0.80	0.09	0.36		0.14	0.56	0.11	0.39	
Bicycle	0.19	0.39	0.11	0.32		0.29	0.58	0.14	0.35	

Car	0.13	0.33	0.07	0.33		0.16	0.40	0.16	0.37	
TV Game	0.06	0.24	0.07	0.25		0.13	0.34	0.24	0.49	
Word Processor	0.00	0.00	0.00	0.00		0.01	0.11	0.00	0.00	
Personal Computer	0.10	0.31	0.11	0.32		0.16	0.37	0.27	0.51	
FAX	0.04	0.20	0.09	0.29		0.05	0.22	0.03	0.16	
Mobile Phone	0.27	0.54	0.20	0.46		0.33	0.60	0.38	0.59	

		Others (1492)				Wife - House keeper (860)					
		NN (190)		NY (145)		Sig.	NN (154)		NY (98)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Time-use patterns (minutes)										
	Weekdays-Commuting (work/school)	1.29	28.24	-0.36	33.42		-0.85	6.85	-3.81	14.60	**
	Work	22.11	118.02	-5.37	192.71		-25.11	106.34	-27.90	117.03	
	Study	0.05	49.23	0.81	42.20		-2.00	49.33	-11.78	63.93	
	House-Keeping and Taking Care of Children	-17.17	119.23	1.27	155.75		10.98	218.66	26.02	220.49	
	Hobby, Leisure and Going out	9.29	106.91	-0.74	143.22		24.69	139.67	-1.77	159.51	
Wife Weekends/Holidays	Sleep, Eat, Personal Hygiene	-14.14	147.31	5.50	156.51		-6.65	155.81	19.25	184.32	
	Weekends-Commuting (work/school)	0.30	27.40	1.27	15.02		0.00	0.00	-1.24	8.72	*
	Work	0.95	59.65	4.19	92.41		-0.39	4.83	0.00	0.00	
	Study	8.28	66.35	4.69	53.68		-2.73	35.94	-14.20	64.77	*
	House-Keeping and Taking Care of Children	-9.18	139.20	6.06	148.44		25.47	203.56	20.08	237.66	
	Hobby, Leisure and Going out	1.23	190.79	-11.42	191.82		-4.96	171.00	-24.08	198.35	
Husband, Working Days	Sleep, Eat, Personal Hygiene	-1.59	198.62	-1.40	196.39		-20.90	174.50	14.98	197.79	
	Weekdays-Commuting (work/school)	5.31	46.21	-1.77	39.28		1.18	46.34	-4.15	55.00	
	Work	-3.62	123.29	14.14	142.92		0.72	80.62	-3.05	141.90	
	Study	2.39	19.13	2.65	16.07		-0.45	29.76	-3.34	37.91	
	House-Keeping and Taking Care of Children	-2.44	43.96	-6.97	75.04		0.41	71.08	-0.49	67.26	
	Hobby, Leisure and Going out	12.63	127.34	-5.71	121.92		11.47	85.22	-6.49	116.85	
Husband, Weekends/Holidays	Sleep, Eat, Personal Hygiene	-6.47	103.68	-4.70	129.39		-11.53	106.72	21.02	137.34	**
	Weekends-Commuting (work/school)	-0.03	0.31	0.94	7.70		0.00	0.00	-3.85	26.46	*
	Work	-5.81	72.59	6.22	60.08		-8.09	64.59	-3.23	58.26	
	Study	10.88	52.69	-9.01	46.89	**	-1.27	53.31	-11.70	76.27	
	House-Keeping and Taking Care of Children	10.93	141.29	4.54	184.10		19.22	168.91	-16.66	190.34	
	Hobby, Leisure and Going out	-15.38	207.75	2.75	260.40		-3.27	231.46	27.17	248.22	
	Sleep, Eat, Personal Hygiene	-1.73	211.78	-4.63	243.64		-5.14	252.89	7.68	229.92	

(\* p<0.1, \*\* p<0.05)

Table 51-f. Comparisons of mean and SD between NN and NY of mobile phone after stratifying the sample into sub-groups by life events – Housing situation – own house

Indicators for ultimate utility	Others (844)				Sig.	Own House (1508)				Sig.
	NN (127)		NY (84)			NN (217)		NY (159)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.070	0.640	-0.110	0.580		0.000	0.650	-0.040	0.710	
Life Satisfaction	-0.040	0.790	0.040	0.800		-0.070	0.750	0.010	0.880	
Living Standard	0.010	0.540	-0.010	0.570		-0.040	0.570	0.010	0.530	

Number of Family Members	Others (844)				Sig.	Own House (1508)				Sig.
	NN (127)		NY (84)			NN (217)		NY (159)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
	0.07	0.52	-0.15	0.86	**	0.03	0.27	0.08	0.60	

Household spending allocation for the month of September (1,000 Yen)	Others (844)				Sig.	Own House (1508)				Sig.
	NN (127)		NY (84)			NN (217)		NY (159)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.82	33.85	-0.65	23.42		3.80	26.17	7.38	27.05	
Housing (Rent/Mortgage)	1.20	22.98	4.83	16.74		2.14	70.39	-12.00	93.12	*
Water, Gas, Electricity	0.69	7.32	1.60	7.01		0.01	9.08	1.05	9.83	
Furniture and Household Appliances	1.16	10.68	-0.89	9.92		-0.61	13.53	2.33	19.72	*
Clothing and Shoes	-0.78	15.65	0.71	12.13		-0.35	16.41	1.88	17.55	
Medical and Insurance	-0.28	11.71	0.82	10.17		-0.40	16.96	1.99	25.65	
Transportation	9.59	94.49	-8.43	109.94		3.20	12.24	9.52	78.88	
Communication	1.16	4.43	3.55	9.24	**	1.18	4.97	4.25	9.91	**

Education	3.38	15.19	1.61	10.19		0.30	29.73	2.37	16.74	
Hobby and Leisure	0.06	19.75	-2.24	18.47		0.09	19.77	-2.65	24.00	
Going out	-2.61	18.11	1.65	24.18		-0.10	18.83	0.06	19.44	
Allowances	-0.28	17.22	3.90	12.02	*	-1.94	24.99	2.99	20.86	**

Household possession of durable consumer good	Others (844)					Own House (1508)				
	NN (127)		NY (84)		Sig.	NN (217)		NY (159)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.08	0.35	-0.01	0.29	**	0.04	0.34	0.04	0.53	
Cupboard	-0.02	0.36	0.05	0.31		0.04	0.50	0.04	0.55	
Microwave	0.04	0.20	0.07	0.34		0.04	0.30	-0.01	0.31	
Refrigerator	0.02	0.33	0.04	0.33		0.01	0.33	0.01	0.41	
Automatic Dishwasher	-0.02	0.12	0.00	0.00		0.02	0.17	-0.01	0.26	
Vacuum Cleaner	0.03	0.35	-0.01	0.48		0.06	0.46	0.02	0.50	
Laundry Machine	0.04	0.20	0.05	0.31		0.03	0.30	0.01	0.32	
Cloths Dryer	0.00	0.22	-0.02	0.27		0.02	0.22	0.01	0.24	
Sewing Machine	0.00	0.28	0.04	0.33		0.07	0.30	0.00	0.34	**
Electric Fan	0.09	0.49	0.06	0.50		0.15	0.67	0.13	0.72	
Air Conditioner	-0.02	0.66	0.05	0.44		0.12	0.75	0.13	0.84	
Fan Heater	0.08	0.43	0.05	0.41		0.05	0.66	0.01	0.53	
“Kotatsu” Heater	0.00	0.40	0.02	0.27		0.05	0.62	-0.10	0.73	**
TV Set	0.03	0.45	0.08	0.44		0.08	0.58	0.06	0.68	
Stereo Sound System	-0.02	0.32	0.04	0.39		-0.02	0.47	0.00	0.46	
CD Radio Cassette Recorder	0.03	0.42	0.05	0.49		0.12	0.51	0.01	0.53	**
VCR	0.04	0.48	0.06	0.47		0.00	0.47	0.09	0.61	*
Video Camera	-0.01	0.27	0.05	0.26		0.03	0.30	0.04	0.32	
Telephone	0.10	0.64	0.06	0.63		0.13	0.83	0.14	0.91	
Bicycle	0.06	0.81	0.26	0.91	*	0.03	0.82	0.16	0.95	
Car	0.04	0.32	0.12	0.42		0.01	0.30	0.06	0.45	
TV Game	0.06	0.61	0.15	0.75		0.04	0.69	0.09	0.53	
Word Processor	-0.02	0.37	0.01	0.42		-0.03	0.36	0.00	0.34	
Personal Computer	0.09	0.49	0.17	0.46		0.08	0.44	0.17	0.58	*
FAX	0.02	0.22	0.06	0.36		0.03	0.31	0.08	0.37	
Mobile Phone	0.00	0.00	1.17	0.41	**	0.00	0.00	1.21	0.49	**

Purchase of household possession of durable consumer good within a year	Others (844)					Own House (1508)				
	NN (127)		NY (84)		Sig.	NN (217)		NY (159)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.06	0.23	0.02	0.16		0.02	0.14	0.04	0.19	
Cupboard	0.06	0.23	0.01	0.11		0.02	0.14	0.05	0.21	
Microwave	0.06	0.23	0.04	0.19		0.04	0.19	0.03	0.18	
Refrigerator	0.08	0.27	0.04	0.19		0.07	0.25	0.10	0.30	
Automatic Dishwasher	0.01	0.09	0.00	0.00		0.00	0.07	0.01	0.08	
Vacuum Cleaner	0.14	0.37	0.09	0.32		0.09	0.29	0.08	0.27	
Laundry Machine	0.06	0.23	0.04	0.19		0.06	0.24	0.07	0.26	
Cloths Dryer	0.02	0.13	0.00	0.00		0.02	0.14	0.01	0.08	
Sewing Machine	0.00	0.00	0.04	0.25	*	0.03	0.17	0.04	0.19	
Electric Fan	0.08	0.27	0.15	0.55		0.10	0.29	0.14	0.43	
Air Conditioner	0.08	0.35	0.06	0.36		0.10	0.35	0.08	0.34	
Fan Heater	0.05	0.22	0.02	0.16		0.04	0.20	0.04	0.19	
“Kotatsu” Heater	0.02	0.15	0.00	0.00		0.01	0.10	0.02	0.14	
TV Set	0.10	0.31	0.16	0.43		0.13	0.34	0.12	0.33	
Stereo Sound System	0.03	0.18	0.05	0.22		0.05	0.24	0.03	0.16	
CD Radio Cassette Recorder	0.05	0.22	0.01	0.11		0.05	0.21	0.04	0.19	
VCR	0.07	0.26	0.16	0.48		0.07	0.28	0.05	0.22	
Video Camera	0.05	0.22	0.02	0.16		0.06	0.24	0.06	0.24	
Telephone	0.20	0.66	0.10	0.37		0.07	0.42	0.08	0.41	
Bicycle	0.25	0.52	0.12	0.33	**	0.22	0.48	0.20	0.45	
Car	0.15	0.38	0.11	0.35		0.17	0.40	0.14	0.35	
TV Game	0.10	0.31	0.15	0.39		0.12	0.37	0.08	0.28	
Word Processor	0.01	0.09	0.00	0.00		0.01	0.12	0.01	0.08	
Personal Computer	0.14	0.35	0.18	0.42		0.15	0.36	0.09	0.29	
FAX	0.05	0.22	0.06	0.24		0.05	0.22	0.09	0.31	
Mobile Phone	0.31	0.57	0.28	0.53		0.35	0.61	0.37	0.62	

Wife, Working Days	Time-use patterns (minutes)	Others (844)					Own House (1508)				
		NN (127)		NY (84)		Sig.	NN (217)		NY (159)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
	Weekdays-Commuting (work/school)	-1.02	20.01	-2.15	32.17		1.12	22.34	-1.53	24.74	
	Work	-13.81	121.23	-18.58	181.31		9.67	110.96	-12.18	158.84	
	Study	-6.16	56.13	-0.15	46.27		2.21	44.56	-6.41	55.19	*

	House-Keeping and Taking Care of Children	22.40	198.24	16.33	203.56		-20.30	151.59	8.46	174.00	*
	Hobby, Leisure and Going out	13.19	126.18	-8.51	160.37		17.88	120.83	2.76	143.98	
	Sleep, Eat, Personal Hygiene	-13.33	145.76	16.29	177.09		-9.33	154.25	8.21	163.43	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	-0.01	0.43	-1.39	9.41	*	0.27	25.61	1.15	14.37	
	Work	-2.86	28.14	-1.39	78.47		2.24	51.49	4.59	67.42	
	Study	-0.92	37.98	1.43	50.27		5.83	62.86	-5.24	63.21	*
	House-Keeping and Taking Care of Children	39.42	185.30	26.93	221.84		-13.07	160.59	3.55	169.27	
	Hobby, Leisure and Going out	-24.61	174.24	-47.14	211.79		12.06	185.35	-0.13	182.64	
	Sleep, Eat, Personal Hygiene	-14.00	187.68	22.86	191.45		-8.08	188.78	-4.26	199.43	
Husband, Working Days	Weekdays-Commuting (work/school)	5.33	50.06	4.71	44.67		1.22	43.78	-6.54	50.29	
	Work	3.80	105.63	7.31	207.66		-3.97	95.48	2.96	102.76	
	Study	-2.55	28.79	-0.14	36.75		2.67	24.15	-1.07	27.76	
	House-Keeping and Taking Care of Children	1.87	69.37	-4.82	101.38		-2.32	56.69	-2.58	52.38	
	Hobby, Leisure and Going out	10.27	100.47	-13.08	157.88		12.95	105.78	-3.16	97.61	
	Sleep, Eat, Personal Hygiene	-11.34	102.45	7.12	140.35		-8.42	107.45	11.35	132.09	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.03	0.31	0.08	12.56		0.00	0.00	-2.69	23.62	
	Work	-8.24	45.23	14.63	74.04	**	-6.55	78.91	-5.41	50.20	
	Study	1.89	41.47	-18.43	101.88	*	4.42	59.78	-7.11	40.22	*
	House-Keeping and Taking Care of Children	41.62	169.88	30.61	203.38		-0.43	149.11	-24.73	178.33	
	Hobby, Leisure and Going out	-17.02	223.26	-80.86	237.90		-2.14	222.13	60.12	248.17	**
	Sleep, Eat, Personal Hygiene	-17.65	218.45	52.86	184.80	*	5.05	249.09	-19.69	251.70	

(\* p<0.1, \*\* p<0.05)

Table 51-g. Comparisons of mean and SD between NN and NY of mobile phone after stratifying the sample into sub-groups by life events – Housing situation – company/school owned housing

Indicators for ultimate utility	Others (2117)				Sig.	Company/school owned housing (235)				Sig.
	NN (317)		NY (218)			NN (27)		NY (25)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.020	0.640	-0.050	0.680		-0.040	0.710	-0.200	0.580	
Life Satisfaction	-0.060	0.770	0.010	0.850		-0.040	0.710	0.040	0.840	
Living Standard	-0.020	0.540	-0.010	0.550		-0.040	0.760	0.080	0.490	

Number of Family Members	Others (2117)				Sig.	Company/school owned housing (235)				Sig.
	NN (317)		NY (218)			NN (27)		NY (25)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
	0.04	0.34	0.00	0.73		0.07	0.73	-0.08	0.40	

Household spending allocation for the month of September (1,000 Yen)	Others (2117)				Sig.	Company/school owned housing (235)				Sig.
	NN (317)		NY (218)			NN (27)		NY (25)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.26	29.41	6.55	24.77		10.19	26.25	-12.36	31.28	**
Housing (Rent/Mortgage)	1.62	59.75	-7.03	80.47		3.93	18.16	1.24	9.66	
Water, Gas, Electricity	0.40	8.37	1.06	9.15		-1.44	9.52	2.80	6.84	*
Furniture and Household Appliances	-0.23	12.78	1.55	17.80		3.26	9.40	-1.64	6.99	**
Clothing and Shoes	-0.50	16.49	1.64	16.42		-0.59	11.06	0.04	9.94	
Medical and Insurance	-0.47	15.76	1.46	22.50		1.00	5.70	2.68	10.64	
Transportation	6.17	57.90	3.13	95.72		-1.67	61.96	4.88	25.77	
Communication	1.28	4.64	4.11	9.09	**	-0.11	6.01	3.12	13.99	
Education	1.32	26.13	1.93	15.04		2.78	13.78	3.68	12.51	
Hobby and Leisure	-0.10	19.53	-1.88	21.67		2.15	22.35	-8.00	26.26	
Going out	-0.73	18.47	0.68	19.89		-4.56	19.80	-0.04	30.63	
Allowances	-1.23	22.57	3.67	19.16	**	-2.48	21.00	0.12	5.86	

Household possession of durable consumer good	Others (2117)				Sig.	Company/school owned housing (235)				Sig.
	NN (317)		NY (218)			NN (27)		NY (25)		
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.06	0.36	0.03	0.47		0.00	0.00	-0.04	0.35	
Cupboard	0.03	0.45	0.05	0.50		-0.15	0.46	-0.04	0.20	
Microwave	0.04	0.27	0.02	0.32		0.04	0.19	0.00	0.29	

Refrigerator	0.01	0.30	0.02	0.39		0.04	0.59	0.00	0.29	
Automatic Dishwasher	0.01	0.15	0.00	0.23		-0.04	0.19	0.00	0.00	
Vacuum Cleaner	0.04	0.43	0.02	0.49		0.15	0.36	-0.08	0.49	*
Laundry Machine	0.03	0.27	0.03	0.32		0.04	0.19	0.00	0.29	
Cloths Dryer	0.02	0.22	0.00	0.24		0.00	0.28	0.00	0.29	
Sewing Machine	0.06	0.28	0.00	0.34	*	-0.11	0.42	0.08	0.28	*
Electric Fan	0.13	0.62	0.11	0.67		0.11	0.42	0.08	0.49	
Air Conditioner	0.07	0.74	0.11	0.74		0.04	0.44	0.04	0.61	
Fan Heater	0.06	0.59	0.02	0.49		0.07	0.47	0.04	0.45	
“Kotatsu” Heater	0.04	0.54	-0.07	0.64	**	-0.07	0.62	0.04	0.20	
TV Set	0.07	0.52	0.06	0.63		-0.04	0.71	0.08	0.40	
Stereo Sound System	-0.02	0.42	0.01	0.43		-0.04	0.44	0.00	0.50	
CD Radio Cassette Recorder	0.09	0.49	0.01	0.49	*	0.04	0.34	0.12	0.67	
VCR	0.01	0.46	0.08	0.58		0.04	0.59	0.12	0.44	
Video Camera	0.02	0.29	0.03	0.29		0.00	0.28	0.12	0.33	
Telephone	0.11	0.75	0.11	0.85		0.19	0.96	0.16	0.55	
Bicycle	0.03	0.81	0.18	0.93	**	0.11	0.89	0.32	0.99	
Car	0.01	0.28	0.07	0.45	**	0.15	0.53	0.12	0.33	
TV Game	0.05	0.67	0.13	0.64		0.00	0.55	-0.04	0.35	
Word Processor	-0.03	0.36	0.00	0.36		0.00	0.39	0.04	0.45	
Personal Computer	0.09	0.46	0.17	0.56	**	0.11	0.51	0.12	0.33	
FAX	0.03	0.29	0.08	0.38	*	0.00	0.00	0.04	0.20	
Mobile Phone	0.00	0.00	1.20	0.48	**	0.00	0.00	1.12	0.33	**

Purchase of household possession of durable consumer good within a year	Others (2117)					Company/school owned housing (235)				
	NN (317)		NY (218)		Sig.	NN (27)		NY (25)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.20	0.03	0.18		0.11	0.32	0.00	0.00	*
Cupboard	0.06	0.24	0.02	0.13		0.04	0.19	0.00	0.00	
Microwave	0.07	0.26	0.05	0.22		0.00	0.00	0.00	0.00	
Refrigerator	0.08	0.28	0.05	0.22		0.07	0.27	0.00	0.00	
Automatic Dishwasher	0.01	0.10	0.00	0.00		0.00	0.00	0.00	0.00	
Vacuum Cleaner	0.14	0.38	0.05	0.29		0.11	0.32	0.17	0.38	
Laundry Machine	0.07	0.26	0.02	0.13		0.00	0.00	0.08	0.28	
Cloths Dryer	0.02	0.14	0.00	0.00		0.00	0.00	0.00	0.00	
Sewing Machine	0.00	0.00	0.05	0.29	*	0.00	0.00	0.00	0.00	
Electric Fan	0.08	0.28	0.19	0.63		0.07	0.27	0.04	0.20	
Air Conditioner	0.10	0.39	0.07	0.41		0.00	0.00	0.04	0.20	
Fan Heater	0.04	0.20	0.03	0.18		0.07	0.27	0.00	0.00	
“Kotatsu” Heater	0.02	0.14	0.00	0.00		0.04	0.19	0.00	0.00	
TV Set	0.10	0.31	0.19	0.48		0.11	0.32	0.08	0.28	
Stereo Sound System	0.02	0.14	0.07	0.26		0.07	0.27	0.00	0.00	
CD Radio Cassette Recorder	0.04	0.20	0.02	0.13		0.07	0.27	0.00	0.00	
VCR	0.07	0.26	0.17	0.53		0.07	0.27	0.13	0.34	
Video Camera	0.05	0.22	0.02	0.13		0.04	0.19	0.04	0.20	
Telephone	0.24	0.73	0.07	0.32	*	0.07	0.27	0.17	0.48	
Bicycle	0.23	0.49	0.14	0.35		0.33	0.62	0.08	0.28	*
Car	0.14	0.35	0.10	0.36		0.15	0.46	0.13	0.34	
TV Game	0.11	0.32	0.14	0.40		0.07	0.27	0.17	0.38	
Word Processor	0.01	0.10	0.00	0.00		0.00	0.00	0.00	0.00	
Personal Computer	0.13	0.34	0.17	0.42		0.15	0.36	0.21	0.41	
FAX	0.04	0.20	0.05	0.22		0.07	0.27	0.08	0.28	
Mobile Phone	0.28	0.55	0.36	0.58		0.41	0.64	0.08	0.28	**

	Time-use patterns (minutes)	Others (2117)					Company/school owned housing (235)				
		NN (317)		NY (218)		Sig.	NN (27)		NY (25)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.59	22.15	-1.67	25.12		-2.59	11.55	-2.36	43.61	
	Work	4.93	114.00	-16.07	162.63	*	-44.37	121.86	0.12	201.36	
	Study	-1.53	50.71	-5.51	49.63		6.93	25.36	6.84	71.44	
	House-Keeping and Taking Care of Children	-8.26	169.34	11.15	187.11		38.04	189.58	11.56	162.55	
	Hobby, Leisure and Going out	18.48	117.89	2.57	147.55		-11.04	169.42	-33.48	166.42	
	Sleep, Eat, Personal Hygiene	-12.66	150.16	10.04	167.28		11.04	161.72	19.48	177.18	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.17	21.15	0.56	12.94		0.11	0.58	-2.36	12.44	
	Work	0.57	46.04	3.07	73.92		-2.22	11.55	-2.40	44.09	
	Study	3.60	57.09	-4.93	58.61	*	0.11	16.67	14.52	60.67	
	House-Keeping and Taking Care of Children	2.18	170.83	11.98	186.74		55.89	178.64	9.28	212.84	
	Hobby, Leisure and Going out	4.96	181.41	-12.33	192.39		-77.52	173.42	-52.72	209.46	

Husband, Working Days	Sleep, Eat, Personal Hygiene	-12.33	188.89	1.89	193.04		13.63	180.47	33.68	228.42	
	Weekdays-Commuting (work/school)	1.81	46.93	-4.19	47.81		13.48	37.36	10.00	60.75	
	Work	-1.38	98.81	11.81	127.47		3.24	107.66	-89.92	255.36	
	Study	0.73	27.29	-2.45	27.71		-0.10	1.04	20.00	53.26	*
	House-Keeping and Taking Care of Children	-0.76	60.23	-5.12	67.00		-0.19	78.27	20.08	106.57	
	Hobby, Leisure and Going out	12.00	106.85	-10.67	117.40	*	11.14	59.23	50.17	125.12	
	Sleep, Eat, Personal Hygiene	-8.58	102.83	12.06	132.04	*	-19.86	132.09	-14.83	163.58	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	-0.01	0.20	-1.99	21.69		0.00	0.00	0.00	0.00	
	Work	-8.43	70.47	0.79	61.39		5.71	18.05	0.00	0.00	
	Study	2.95	55.07	-11.86	66.25	**	8.57	28.70	5.25	54.00	
	House-Keeping and Taking Care of Children	13.46	159.78	-14.46	186.07		43.00	145.64	74.58	193.13	
	Hobby, Leisure and Going out	-3.06	219.21	26.88	253.65		-59.71	251.97	-105.58	216.29	
	Sleep, Eat, Personal Hygiene	-3.93	239.37	0.28	239.53		-2.71	220.68	30.25	176.47	

(\* p<0.1, \*\* p<0.05)

Table 51-h. Comparisons of mean and SD between NN and NY of mobile phone after stratifying the sample into sub-groups by life events – Husband's annual income > 5 million Yen

Indicators for ultimate utility	Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
	NN (104)		NY (76)		Sig.	NN (148)		NY (98)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.040	0.710	-0.050	0.760		-0.030	0.550	-0.050	0.580	
Life Satisfaction	-0.100	0.820	-0.090	0.910		-0.030	0.690	0.060	0.800	
Living Standard	-0.090	0.660	-0.050	0.590		0.010	0.510	0.020	0.540	

	Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
	NN (104)		NY (76)		Sig.	NN (148)		NY (98)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Number of Family Members	0.13	0.37	0.11	0.76		0.03	0.30	-0.01	0.44	

Household spending allocation for the month of September (1,000 Yen)	Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
	NN (104)		NY (76)		Sig.	NN (148)		NY (98)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	5.17	31.58	5.47	26.01		3.79	33.96	6.98	31.24	
Housing (Rent/Mortgage)	-1.62	25.03	-1.18	22.66		4.16	84.60	-14.58	117.93	
Water, Gas, Electricity	-0.95	11.19	2.62	10.43	**	1.01	8.34	1.29	9.66	
Furniture and Household Appliances	-0.05	13.72	3.04	17.68		-0.05	14.11	0.53	21.47	
Clothing and Shoes	-0.52	12.81	0.64	10.49		0.43	14.24	1.14	17.71	
Medical and Insurance	-1.76	13.48	3.75	25.21	*	0.61	18.22	1.14	24.83	
Transportation	3.44	24.57	3.82	17.92		8.58	85.91	5.13	142.57	
Communication	1.23	4.84	4.46	6.55	**	0.98	5.50	4.02	9.71	**
Education	2.15	36.65	1.78	14.81		2.78	18.38	2.33	18.29	
Hobby and Leisure	0.18	13.78	-2.74	16.07		0.72	23.97	-2.84	29.34	
Going out	-1.02	19.02	2.68	18.47		-1.28	20.85	0.15	25.30	
Allowances	-0.89	17.33	4.05	17.66	*	-2.29	30.07	5.15	23.81	**

Household possession of durable consumer good	Husband's annual income < 5 mill. Yen (855)				Husband's annual income > 5 mill. Yen (893)					
	NN (104)		NY (76)		Sig.	NN (148)		NY (98)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.06	0.36	0.09	0.47		0.01	0.27	0.03	0.44	
Cupboard	-0.05	0.49	0.09	0.41	**	0.01	0.40	0.03	0.53	
Microwave	0.01	0.22	0.03	0.28		0.01	0.18	0.04	0.25	
Refrigerator	-0.01	0.30	0.04	0.26		-0.03	0.33	0.02	0.35	
Automatic Dishwasher	0.02	0.20	0.00	0.23		-0.01	0.08	0.01	0.18	
Vacuum Cleaner	0.00	0.39	0.04	0.47		0.04	0.45	0.01	0.47	
Laundry Machine	0.00	0.24	0.03	0.36		0.01	0.18	0.04	0.25	
Cloths Dryer	0.01	0.26	0.01	0.31		0.02	0.25	0.01	0.23	
Sewing Machine	0.01	0.33	0.01	0.31		0.04	0.26	0.02	0.29	
Electric Fan	0.13	0.54	0.16	0.61		0.11	0.54	0.05	0.54	
Air Conditioner	0.05	0.60	0.20	0.59	*	0.05	0.86	0.13	0.67	
Fan Heater	0.10	0.74	0.08	0.54		0.05	0.55	-0.02	0.50	
"Kotatsu" Heater	0.04	0.39	-0.03	0.40		0.01	0.61	-0.12	0.83	
TV Set	0.06	0.60	0.14	0.65		0.05	0.43	0.05	0.42	
Stereo Sound System	0.00	0.37	0.01	0.53		-0.05	0.46	0.00	0.43	
CD Radio Cassette Recorder	0.01	0.41	-0.05	0.51		0.15	0.59	0.06	0.47	
VCR	-0.03	0.45	0.11	0.62	*	0.02	0.53	0.02	0.54	
Video Camera	-0.02	0.34	0.01	0.26		0.03	0.27	0.05	0.33	

Telephone	0.11	0.71	0.07	0.75		0.07	0.77	0.24	0.92	
Bicycle	0.07	0.93	0.30	1.07		0.03	0.86	0.17	0.96	
Car	-0.02	0.37	0.11	0.53	*	0.03	0.28	0.07	0.36	
TV Game	-0.06	0.72	0.21	0.68	**	0.10	0.75	0.08	0.60	
Word Processor	-0.07	0.32	0.01	0.31	*	-0.01	0.33	0.02	0.41	
Personal Computer	0.11	0.44	0.20	0.43		0.08	0.52	0.18	0.58	
FAX	-0.01	0.30	0.05	0.22		0.05	0.27	0.13	0.42	*
Mobile Phone	0.00	0.00	1.14	0.35	**	0.00	0.00	1.34	0.59	**

Purchase of household possession of durable consumer good within a year	Husband's annual income < 5 mill. Yen (855)					Husband's annual income > 5 mill. Yen (893)				
	NN (104)		NY (76)		Sig.	NN (148)		NY (98)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.02	0.14	0.00	0.00		0.06	0.24	0.04	0.20	
Cupboard	0.02	0.14	0.03	0.18		0.06	0.24	0.00	0.00	
Microwave	0.06	0.24	0.03	0.18		0.04	0.20	0.08	0.28	
Refrigerator	0.06	0.24	0.00	0.00		0.10	0.31	0.08	0.28	
Automatic Dishwasher	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
Vacuum Cleaner	0.10	0.31	0.10	0.30		0.19	0.45	0.00	0.00	**
Laundry Machine	0.02	0.14	0.03	0.18		0.06	0.24	0.00	0.00	
Cloths Dryer	0.02	0.14	0.00	0.00		0.00	0.00	0.00	0.00	
Sewing Machine	0.00	0.00	0.00	0.00		0.00	0.00	0.08	0.40	
Electric Fan	0.08	0.28	0.13	0.34		0.04	0.20	0.20	0.82	
Air Conditioner	0.06	0.32	0.03	0.18		0.02	0.14	0.04	0.20	
Fan Heater	0.06	0.24	0.03	0.18		0.04	0.20	0.00	0.00	
"Kotatsu" Heater	0.02	0.14	0.00	0.00		0.00	0.00	0.00	0.00	
TV Set	0.17	0.38	0.19	0.40		0.04	0.20	0.16	0.47	
Stereo Sound System	0.04	0.20	0.10	0.30		0.04	0.20	0.04	0.20	
CD Radio Cassette Recorder	0.04	0.20	0.00	0.00		0.04	0.20	0.04	0.20	
VCR	0.04	0.20	0.03	0.18		0.08	0.28	0.36	0.76	**
Video Camera	0.02	0.14	0.06	0.25		0.08	0.28	0.00	0.00	
Telephone	0.19	0.67	0.13	0.43		0.13	0.49	0.08	0.40	
Bicycle	0.29	0.58	0.13	0.34		0.19	0.49	0.20	0.41	
Car	0.13	0.39	0.13	0.34		0.15	0.36	0.20	0.50	
TV Game	0.08	0.28	0.13	0.34		0.15	0.36	0.20	0.50	
Word Processor	0.02	0.14	0.00	0.00		0.00	0.00	0.00	0.00	
Personal Computer	0.15	0.36	0.23	0.43		0.19	0.39	0.24	0.52	
FAX	0.04	0.20	0.06	0.25		0.06	0.24	0.04	0.20	
Mobile Phone	0.25	0.56	0.42	0.67		0.33	0.60	0.24	0.44	

Time-use patterns (minutes)	Husband's annual income < 5 mill. Yen (855)					Husband's annual income > 5 mill. Yen (893)					
	NN (104)		NY (76)		Sig.	NN (148)		NY (98)		Sig.	
	Mean	SD	Mean	SD		Mean	SD	Mean	SD		
Wife, Working Days	Weekdays-Commuting (work/school)	1.73	17.53	-0.67	20.38		0.48	17.11	-3.67	16.59	*
	Work	1.32	146.23	-16.62	164.58		-3.61	103.33	-14.44	130.84	
	Study	0.10	26.56	-8.66	66.21		-4.51	50.00	-4.36	34.81	
	House-Keeping and Taking Care of Children	-12.17	211.37	35.58	235.61		-2.20	175.58	-0.70	182.26	
	Hobby, Leisure and Going out	23.28	129.06	-8.55	153.71		17.31	121.32	-17.26	143.15	**
	Sleep, Eat, Personal Hygiene	-17.93	152.56	-3.92	172.53		-4.55	145.34	43.77	168.41	**
Wife Weekends/Holidays	Weekends-Commuting (work/school)	-0.04	0.31	-0.70	6.91		0.00	0.00	-0.05	0.51	
	Work	0.59	10.05	8.67	62.51		0.00	48.99	-8.05	53.78	
	Study	2.36	29.38	-7.03	68.61		0.00	40.21	-7.95	41.31	
	House-Keeping and Taking Care of Children	18.31	190.52	36.37	238.89		4.52	187.91	-3.67	192.74	
	Hobby, Leisure and Going out	-12.21	194.00	-14.22	175.28		6.09	172.32	-22.97	208.24	
	Sleep, Eat, Personal Hygiene	-11.63	187.57	-25.93	187.42		-11.70	175.08	44.36	196.49	**
Husband, Working Days	Weekdays-Commuting (work/school)	2.24	47.37	-4.68	51.64		3.19	45.60	-2.02	46.89	
	Work	-9.51	116.49	-1.46	173.74		4.92	85.47	8.41	114.86	
	Study	1.17	23.90	-0.09	31.10		0.32	27.59	-1.30	30.46	
	House-Keeping and Taking Care of Children	2.97	66.25	12.50	73.39		-3.25	58.58	-14.65	66.46	
	Hobby, Leisure and Going out	21.29	114.88	-1.74	137.80		5.45	94.84	-9.36	103.30	
	Sleep, Eat, Personal Hygiene	-12.27	123.43	-2.16	151.42		-7.66	91.19	18.91	120.32	*
Husband, Weekends/Holidays vs	Weekends-Commuting (work/school)	-0.03	0.30	0.94	7.64		0.00	0.00	-3.90	26.60	*
	Work	-5.57	38.81	15.00	66.68	**	-8.30	81.48	-9.82	50.49	
	Study	4.36	38.97	-16.90	82.19	**	2.82	61.11	-5.90	49.53	
	House-Keeping and Taking Care of Children	26.07	152.69	-2.47	216.98		9.33	162.50	-11.71	163.41	

Hobby, Leisure and Going out	1.33	241.00	20.37	280.82		-14.12	209.45	14.41	231.63	
Sleep, Eat, Personal Hygiene	-28.95	236.21	-16.94	196.62		12.87	237.49	16.91	260.00	

(\* p<0.1, \*\* p<0.05)

Table 51-i. Comparisons of mean and SD between NN and NY of mobile phone after stratifying the sample into sub-groups by life events – Wife’s annual income > 1 million Yen

Indicators for ultimate utility	Wife’s annual income < 1 mill. Yen (1308)					Wife’s annual income > 1 mill. Yen (371)				
	NN (216)		NY (139)		Sig.	NN (128)		NY (104)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Happiness	-0.030	0.590	-0.060	0.680		-0.020	0.730	-0.080	0.660	
Life Satisfaction	-0.060	0.770	-0.040	0.850		-0.050	0.760	0.090	0.840	
Living Standard	-0.020	0.610	0.000	0.590		-0.020	0.480	0.000	0.480	

Number of Family Members	Wife’s annual income < 1 mill. Yen (1308)					Wife’s annual income > 1 mill. Yen (371)				
	NN (216)		NY (139)		Sig.	NN (128)		NY (104)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
	0.09	0.36	0.01	0.48	*	-0.03	0.42	-0.03	0.93	

Household spending allocation for the month of September (1,000 Yen)	Wife’s annual income < 1 mill. Yen (1308)					Wife’s annual income > 1 mill. Yen (371)				
	NN (216)		NY (139)		Sig.	NN (128)		NY (104)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Food	3.91	31.23	3.09	26.82		3.63	25.52	6.63	25.05	
Housing (Rent/Mortgage)	3.57	70.02	-12.64	98.09	*	-1.20	25.21	2.45	25.66	
Water, Gas, Electricity	-0.22	9.14	1.08	8.52		1.06	7.15	1.45	9.51	
Furniture and Household Appliances	-0.15	13.82	0.93	19.42		0.37	10.16	1.61	13.25	
Clothing and Shoes	0.25	12.28	1.00	14.17		-1.80	21.05	2.12	17.94	
Medical and Insurance	-1.11	16.82	1.48	22.90		0.91	11.97	1.72	19.76	
Transportation	2.04	26.71	10.26	83.88		11.49	88.74	-5.97	99.39	
Communication	0.96	4.95	4.04	9.65	**	1.53	4.44	3.96	9.74	**
Education	2.15	19.25	3.51	17.29		0.24	33.30	0.23	10.36	
Hobby and Leisure	0.52	19.76	-3.34	25.93		-0.66	19.75	-1.40	15.98	
Going out	-1.14	16.34	2.26	20.72	*	-0.83	21.92	-1.60	21.64	
Allowances	-1.68	24.55	4.96	17.85	**	-0.74	18.37	1.10	18.66	

Household possession of durable consumer good	Wife’s annual income < 1 mill. Yen (1308)					Wife’s annual income > 1 mill. Yen (371)				
	NN (216)		NY (139)		Sig.	NN (128)		NY (104)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.33	0.01	0.45		0.08	0.37	0.04	0.48	
Cupboard	0.03	0.48	0.06	0.46		0.00	0.42	0.02	0.50	
Microwave	0.02	0.27	0.00	0.21		0.07	0.26	0.05	0.43	
Refrigerator	0.00	0.31	0.01	0.26		0.02	0.37	0.04	0.50	
Automatic Dishwasher	0.00	0.15	0.00	0.17		0.02	0.15	-0.01	0.26	
Vacuum Cleaner	0.00	0.41	-0.02	0.46		0.12	0.43	0.05	0.53	
Laundry Machine	0.03	0.29	0.01	0.28		0.04	0.23	0.05	0.35	
Cloths Dryer	0.02	0.25	-0.01	0.26		0.01	0.15	0.00	0.24	
Sewing Machine	0.03	0.30	0.04	0.33		0.06	0.30	-0.02	0.34	
Electric Fan	0.13	0.63	0.09	0.59		0.13	0.58	0.12	0.73	
Air Conditioner	0.04	0.66	0.17	0.70	*	0.10	0.82	0.02	0.75	
Fan Heater	0.09	0.66	-0.01	0.50		0.01	0.43	0.08	0.48	
“Kotatsu” Heater	0.06	0.60	-0.10	0.72	**	-0.02	0.45	0.00	0.44	
TV Set	0.08	0.53	0.06	0.57		0.03	0.55	0.07	0.66	
Stereo Sound System	-0.04	0.40	0.01	0.46		0.01	0.46	0.02	0.42	
CD Radio Cassette Recorder	0.09	0.51	0.05	0.53		0.08	0.43	-0.01	0.49	
VCR	0.00	0.50	0.07	0.57		0.05	0.43	0.10	0.57	
Video Camera	0.03	0.30	0.03	0.32		-0.02	0.28	0.06	0.27	**
Telephone	0.13	0.79	0.14	0.82		0.09	0.73	0.09	0.83	
Bicycle	0.07	0.85	0.22	1.02		-0.02	0.75	0.17	0.81	*
Car	0.00	0.26	0.05	0.42		0.06	0.37	0.12	0.47	
TV Game	0.05	0.74	0.14	0.65		0.05	0.52	0.08	0.57	
Word Processor	-0.02	0.35	0.02	0.39		-0.05	0.39	-0.02	0.34	
Personal Computer	0.05	0.47	0.14	0.46	*	0.15	0.44	0.20	0.63	
FAX	0.04	0.29	0.11	0.33	*	0.00	0.25	0.03	0.41	
Mobile Phone	0.00	0.00	1.24	0.50	**	0.00	0.00	1.13	0.40	**

Purchase of household possession of durable consumer good within a year	Wife’s annual income < 1 mill. Yen (1308)					Wife’s annual income > 1 mill. Yen (371)				
	NN (216)		NY (139)		Sig.	NN (128)		NY (104)		Sig.
	Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Dining Set	0.04	0.19	0.02	0.15		0.10	0.30	0.03	0.16	
Cupboard	0.04	0.19	0.02	0.15		0.10	0.30	0.00	0.00	*

Microwave	0.06	0.24	0.07	0.25		0.05	0.22	0.00	0.00	
Refrigerator	0.06	0.24	0.00	0.00	*	0.12	0.33	0.08	0.27	
Automatic Dishwasher	0.00	0.00	0.00	0.00		0.02	0.15	0.00	0.00	
Vacuum Cleaner	0.15	0.39	0.07	0.25		0.12	0.33	0.11	0.39	
Laundry Machine	0.04	0.19	0.02	0.15		0.10	0.30	0.05	0.23	
Cloths Dryer	0.01	0.11	0.00	0.00		0.02	0.15	0.00	0.00	
Sewing Machine	0.00	0.00	0.05	0.30		0.00	0.00	0.03	0.16	
Electric Fan	0.07	0.26	0.20	0.67		0.10	0.30	0.08	0.36	
Air Conditioner	0.02	0.16	0.05	0.21		0.19	0.55	0.08	0.49	
Fan Heater	0.06	0.24	0.02	0.15		0.02	0.15	0.03	0.16	
“Kotatsu” Heater	0.01	0.11	0.00	0.00		0.05	0.22	0.00	0.00	
TV Set	0.09	0.28	0.18	0.45		0.14	0.35	0.13	0.41	
Stereo Sound System	0.04	0.19	0.05	0.21		0.02	0.15	0.05	0.23	
CD Radio Cassette Recorder	0.05	0.22	0.02	0.15		0.05	0.22	0.00	0.00	
VCR	0.06	0.24	0.20	0.59	*	0.10	0.30	0.11	0.31	
Video Camera	0.06	0.24	0.05	0.21		0.02	0.15	0.00	0.00	
Telephone	0.13	0.54	0.14	0.46		0.33	0.85	0.05	0.23	*
Bicycle	0.28	0.57	0.16	0.37		0.19	0.40	0.08	0.27	
Car	0.13	0.38	0.18	0.45		0.17	0.38	0.03	0.16	**
TV Game	0.11	0.31	0.20	0.46		0.10	0.30	0.08	0.27	
Word Processor	0.01	0.11	0.00	0.00		0.00	0.00	0.00	0.00	
Personal Computer	0.16	0.37	0.25	0.49		0.10	0.30	0.11	0.31	
FAX	0.04	0.19	0.05	0.21		0.07	0.26	0.08	0.27	
Mobile Phone	0.28	0.55	0.43	0.62		0.36	0.62	0.11	0.31	**

		Wife’s annual income < 1 mill. Yen (1308)				Wife’s annual income > 1 mill. Yen (371)					
Time-use patterns (minutes)		NN (216)		NY (139)		Sig.	NN (128)		NY (104)		Sig.
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-0.79	14.48	-1.70	18.77		2.23	29.78	-1.80	36.04	
	Work	7.55	109.72	3.91	134.36		-9.88	123.59	-38.69	199.79	
	Study	-1.70	48.44	-9.97	55.45		0.53	50.65	3.38	46.86	
	House-Keeping and Taking Care of Children	-12.28	195.76	-4.69	203.09		8.26	118.61	32.26	154.68	
	Hobby, Leisure and Going out	26.20	140.15	-13.79	159.51	**	-0.71	83.43	15.62	134.36	
	Sleep, Eat, Personal Hygiene	-19.73	163.67	23.90	185.82	**	4.21	126.05	-6.09	139.91	
Wife Weekends/Holidays	Weekends-Commuting (work/school)	0.82	9.12	0.41	17.06		-0.96	31.28	0.07	0.70	
	Work	2.24	46.94	-5.64	44.03		-2.90	39.33	13.41	95.74	*
	Study	-0.82	47.26	-6.43	60.62		10.43	65.77	1.81	56.71	
	House-Keeping and Taking Care of Children	13.49	195.49	-1.97	211.88		-5.70	120.66	30.02	152.55	**
	Hobby, Leisure and Going out	6.71	176.61	-6.51	195.25		-15.72	190.55	-29.93	192.83	
	Sleep, Eat, Personal Hygiene	-25.19	180.12	17.01	186.29	**	15.29	199.23	-10.65	209.74	
Husband, Working Days	Weekdays-Commuting (work/school)	2.04	47.36	-3.42	52.82		5.65	42.09	-2.00	27.51	
	Work	-0.98	103.24	5.27	150.02		-1.00	84.12	0.22	106.18	
	Study	0.54	27.80	-1.92	33.36		1.12	18.58	3.81	14.76	
	House-Keeping and Taking Care of Children	-0.30	66.34	-1.35	76.73		-2.25	40.79	-10.97	35.43	
	Hobby, Leisure and Going out	16.25	106.20	-7.79	126.52	*	-4.31	92.19	0.47	80.32	
	Sleep, Eat, Personal Hygiene	-14.79	106.02	11.29	139.30	*	10.13	101.41	5.09	113.03	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.00	0.00	-2.78	22.50	*	-0.06	0.43	2.03	11.32	
	Work	-6.87	68.79	-2.81	49.67		-8.57	63.64	15.48	87.53	
	Study	1.82	56.93	-8.97	67.96		9.80	35.19	-17.26	54.05	**
	House-Keeping and Taking Care of Children	16.37	163.96	4.79	175.84		14.59	136.54	-60.10	225.44	*
	Hobby, Leisure and Going out	-2.51	221.37	6.07	246.89		-29.51	226.60	62.19	276.03	
	Sleep, Eat, Personal Hygiene	-8.54	242.07	4.12	246.11		14.86	219.18	-4.10	185.47	

(\* p<0.1, \*\* p<0.05)

F. Panel Analysis 3: Comparisons of mean values of the variables between NN and NY of the cases which experienced no happiness-shifting life events

Explanation: Tables 52-54 show the comparisons of mean and SD of the variables between NN and NY of

the cases which experienced no happiness-shifting life happenings

Table 52. Comparisons of mean and SD of the variables between NN and NY of cloth dryer who experienced no happiness-shifting life events

Indicators for ultimate utility	NN (656)		NY (14)		Significant
	Mean	SD	Mean	SD	
Happiness	-0.052	0.675	-0.071	0.730	
Life Satisfaction	-0.008	0.862	0.357	1.277	
Living Standard	-0.014	0.578	-0.071	0.730	

	NN (656)		NY (14)		Significant
	Mean	SD	Mean	SD	
Family member in the household	0.119	0.422	0.071	0.267	

Household spending allocation for the month of September (1,000 Yen)	NN (656)		NY (14)		Significant
	Mean	SD	Mean	SD	
Food	1.52	28.38	-8.57	50.54	
Housing (Rent/Mortgage)	1.68	21.17	-2.21	10.18	
Water, Gas, Electricity	0.96	9.30	-0.07	7.23	
Furniture and Household Appliances	-0.17	11.54	0.50	12.96	
Clothing and Shoes	1.17	15.33	8.21	17.39	*
Medical and Insurance	-0.05	20.60	-3.50	18.84	
Transportation	6.40	89.05	-65.93	199.08	**
Communication	2.38	8.77	2.29	8.31	
Education	1.70	15.34	3.79	18.56	
Hobby and Leisure	0.28	28.62	7.07	33.07	
Going out	0.30	19.71	7.50	31.36	
Allowances	0.21	24.23	12.79	36.05	*

Household possession of durable consumer good	NN (656)		NY (14)		Significant
	Mean	SD	Mean	SD	
Dining Set	0.01	0.32	0.07	0.27	
Cupboard	-0.02	0.33	-0.07	0.27	
Microwave	0.00	0.24	0.07	0.27	
Refrigerator	0.00	0.22	0.14	0.36	**
Automatic Dishwasher	0.00	0.19	0.00	0.00	
Vacuum Cleaner	0.01	0.37	0.36	0.63	**
Laundry Machine	0.00	0.21	0.07	0.27	
Cloths Dryer	0.00	0.00	1.00	0.00	
Sewing Machine	0.02	0.32	0.07	0.47	
Electric Fan	0.04	0.46	0.14	0.53	
Air Conditioner	0.02	0.52	0.29	1.27	*
Fan Heater	0.01	0.44	0.57	1.09	**
“Kotatsu” Heater	-0.02	0.35	0.07	0.27	
TV Set	0.04	0.45	0.43	0.65	**
Stereo Sound System	0.02	0.43	0.14	0.53	
CD Radio Cassette Recorder	0.03	0.50	-0.07	0.47	
VCR	0.00	0.55	0.43	1.16	**
Video Camera	0.03	0.29	0.00	0.00	
Telephone	0.03	0.64	0.57	0.94	**
Bicycle	0.10	0.76	0.21	1.12	
Car	0.02	0.36	0.21	0.70	*
TV Game	0.09	0.68	0.00	0.96	
Word Processor	-0.01	0.34	0.14	0.53	*
Personal Computer	0.11	0.44	0.07	0.47	
FAX	0.04	0.31	0.14	0.53	
Mobile Phone	0.19	0.61	0.29	0.73	

	Time-use patterns (minutes)	NN (656)		NY (14)		Significant
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-0.39	29.34	0.14	22.16	
	Work	-2.62	165.48	68.14	241.01	
	Study	0.02	39.16	8.57	21.79	
	House-Keeping and Taking Care of Children	9.84	209.28	-7.93	323.95	
	Hobby, Leisure and Going out	-2.11	150.56	21.36	112.04	
	Sleep, Eat, Personal Hygiene	-4.16	175.15	-90.29	183.33	*
Weekends/Holiday	Weekends-Commuting (work/school)	0.17	10.50	0.00	0.00	
	Work	-2.98	73.00	4.29	16.04	
	Study	-1.19	43.30	4.29	16.04	

	House-Keeping and Taking Care of Children	22.54	211.85	73.07	251.46	
	Hobby, Leisure and Going out	-18.72	204.80	-38.36	111.86	
	Sleep, Eat, Personal Hygiene	0.60	198.49	-47.14	203.10	
Husband, Working Days	Weekdays-Commuting (work/school)	-1.96	46.05	5.36	66.61	
	Work	1.41	122.36	-54.64	62.32	
	Study	0.89	38.64	16.36	100.72	
	House-Keeping and Taking Care of Children	2.92	62.34	16.45	47.29	
	Hobby, Leisure and Going out	5.96	99.21	-22.91	94.69	
	Sleep, Eat, Personal Hygiene	-8.43	131.24	34.45	156.97	
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.37	14.49	0.00	0.00	
	Work	-1.27	102.42	0.00	0.00	
	Study	0.27	55.99	-18.00	56.92	
	House-Keeping and Taking Care of Children	18.69	169.22	6.30	165.88	
	Hobby, Leisure and Going out	-11.43	235.56	-84.60	281.02	
	Sleep, Eat, Personal Hygiene	-5.94	224.00	107.10	239.54	

(\* p<0.1, \*\* p<0.05)

Table 53. Comparisons of mean and SD of the variables between NN and NY of personal computer who experienced no happiness-shifting life events

Indicators for ultimate utility	NN (183)		NY (23)		Significant
	Mean	SD	Mean	SD	
Happiness	-0.033	0.755	0.000	0.426	
Life Satisfaction	0.044	0.837	0.130	0.757	
Living Standard	-0.016	0.633	0.174	0.491	

	NN (656)		NY (14)		Significant
	Mean	SD	Mean	SD	
Family member in the household	-0.010	0.310	0.040	0.210	

Household spending allocation for the month of September (1,000 Yen)	NN (183)		NY (23)		Significant
	Mean	SD	Mean	SD	
Food	1.92	25.24	-9.78	24.56	**
Housing (Rent/Mortgage)	-0.65	12.52	4.04	13.04	*
Water, Gas, Electricity	0.81	8.83	-0.35	6.95	
Furniture and Household Appliances	0.14	8.72	-0.26	12.94	
Clothing and Shoes	-0.90	13.43	2.96	10.62	
Medical and Insurance	0.44	10.88	-4.09	11.83	*
Transportation	8.64	75.28	-39.43	207.78	**
Communication	2.25	7.43	3.52	9.64	
Education	1.04	21.64	7.00	22.69	
Hobby and Leisure	-1.85	17.87	1.57	37.48	
Going out	0.26	12.69	-2.17	11.15	
Allowances	-1.03	23.55	1.17	12.11	

Household possession of durable consumer good	NN (183)		NY (23)		Significant
	Mean	SD	Mean	SD	
Dining Set	0.01	0.37	0.00	0.00	
Cupboard	-0.04	0.40	-0.04	0.47	
Microwave	0.01	0.27	0.00	0.00	
Refrigerator	-0.01	0.39	0.00	0.30	
Automatic Dishwasher	0.01	0.18	-0.09	0.29	**
Vacuum Cleaner	0.04	0.43	0.13	0.63	
Laundry Machine	-0.01	0.31	0.00	0.00	
Cloths Dryer	-0.02	0.16	0.00	0.00	
Sewing Machine	0.02	0.38	0.04	0.37	
Electric Fan	0.07	0.79	0.13	0.55	
Air Conditioner	0.03	0.57	0.13	0.92	
Fan Heater	0.02	0.64	0.13	0.76	
“Kotatsu” Heater	-0.05	0.42	-0.13	0.46	
TV Set	0.01	0.65	0.09	0.67	
Stereo Sound System	0.02	0.50	0.04	0.64	
CD Radio Cassette Recorder	0.03	0.51	0.00	0.52	
VCR	-0.01	0.64	-0.17	0.72	
Video Camera	0.03	0.24	-0.04	0.37	
Telephone	-0.03	0.80	0.13	0.81	
Bicycle	0.07	0.75	-0.09	0.67	
Car	0.01	0.41	-0.04	0.21	
TV Game	0.18	0.75	-0.04	0.64	
Word Processor	0.02	0.31	-0.13	0.34	**
Personal Computer	0.00	0.00	1.00	0.00	
FAX	0.00	0.31	0.13	0.46	*

Mobile Phone	0.22	0.60	0.39	0.84
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	Time-use patterns (minutes)	NN (183)		NY (23)		Significant
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	0.32	29.60	0.22	24.65	
	Work	1.86	107.35	-5.22	43.39	
	Study	-0.70	28.79	7.70	20.72	
	House-Keeping and Taking Care of Children	-6.26	118.62	-5.96	147.88	
	Hobby, Leisure and Going out	3.45	125.08	-56.96	175.25	**
	Sleep, Eat, Personal Hygiene	2.51	163.61	69.61	182.64	*
Wife Weekends/Holiday	Weekends-Commuting (work/school)	0.68	13.92	2.70	12.51	
	Work	0.97	110.54	-26.13	106.75	
	Study	1.02	45.37	5.22	30.88	
	House-Keeping and Taking Care of Children	-9.56	160.38	10.00	179.21	
	Hobby, Leisure and Going out	-2.01	188.54	-116.87	236.54	**
	Sleep, Eat, Personal Hygiene	9.49	212.01	122.74	196.97	**
Husband, Working Days	Weekdays-Commuting (work/school)	2.08	45.22	37.31	121.54	**
	Work	-10.17	94.89	7.94	104.57	
	Study	-1.06	22.45	3.94	14.97	
	House-Keeping and Taking Care of Children	1.50	47.24	-0.06	53.30	
	Hobby, Leisure and Going out	14.19	133.13	-75.19	111.42	**
	Sleep, Eat, Personal Hygiene	-0.32	150.84	22.69	179.28	
Husband, Weekends/Holiday	Weekends-Commuting (work/school)	-0.02	11.63	0.00	0.00	
	Work	-3.69	99.59	3.75	15.00	
	Study	2.12	30.98	7.69	20.43	
	House-Keeping and Taking Care of Children	-14.30	168.33	-52.44	113.34	
	Hobby, Leisure and Going out	5.26	241.09	-157.31	232.70	**
	Sleep, Eat, Personal Hygiene	10.63	266.56	194.94	231.35	**

(\* p<0.1, \*\* p<0.05)

Table 54. Comparisons of mean and SD of the variables between NN and NY of mobile phone who experienced no happiness-shifting life events

Indicators for ultimate utility	NN (45)		NY (20)		Significant
	Mean	SD	Mean	SD	
Happiness	-0.044	0.424	0.000	0.459	
Life Satisfaction	0.022	0.783	0.100	1.165	
Living Standard	0.044	0.520	0.000	0.459	

	NN (656)		NY (14)		Significant
	Mean	SD	Mean	SD	
Family member in the household	0.040	0.210	0.000	0.000	

Household spending allocation for the month of September (1,000 Yen)	NN (45)		NY (20)		Significant
	Mean	SD	Mean	SD	
Food	9.07	44.04	-6.75	24.73	
Housing (Rent/Mortgage)	0.16	7.78	-0.70	7.14	
Water, Gas, Electricity	-0.87	8.26	0.00	4.13	
Furniture and Household Appliances	1.04	7.24	0.15	5.99	
Clothing and Shoes	-0.42	15.62	0.30	9.51	
Medical and Insurance	1.62	11.25	-0.05	9.13	
Transportation	31.96	148.88	0.80	6.89	
Communication	0.33	5.88	2.60	6.44	
Education	4.58	12.64	-1.25	6.21	*
Hobby and Leisure	0.60	21.81	0.30	10.40	
Going out	-0.62	10.40	-3.70	20.55	
Allowances	-3.24	19.09	3.85	13.18	

Household possession of durable consumer good	NN (45)		NY (20)		Significant
	Mean	SD	Mean	SD	
Dining Set	0.11	0.38	-0.05	0.22	*
Cupboard	-0.04	0.30	0.05	0.39	
Microwave	0.02	0.15	-0.05	0.22	
Refrigerator	-0.02	0.34	-0.05	0.22	
Automatic Dishwasher	-0.04	0.21	0.00	0.00	
Vacuum Cleaner	0.13	0.34	-0.05	0.51	*
Laundry Machine	0.02	0.15	-0.05	0.22	
Cloths Dryer	0.04	0.21	-0.10	0.45	*
Sewing Machine	0.04	0.30	0.05	0.22	
Electric Fan	0.04	0.42	0.05	0.39	
Air Conditioner	-0.11	0.96	0.10	0.55	
Fan Heater	0.04	0.30	0.10	0.31	

"Kotatsu" Heater	-0.09	0.36	-0.05	0.22	
TV Set	0.02	0.40	0.15	0.49	
Stereo Sound System	0.02	0.15	-0.05	0.22	
CD Radio Cassette Recorder	0.04	0.37	0.20	0.41	
VCR	0.04	0.42	0.15	0.37	
Video Camera	0.00	0.21	0.05	0.22	
Telephone	0.11	0.53	0.30	0.73	
Bicycle	-0.02	0.75	0.25	0.79	
Car	0.00	0.00	0.10	0.45	
TV Game	0.11	0.49	0.15	0.75	
Word Processor	0.00	0.37	0.10	0.55	
Personal Computer	0.13	0.55	-0.05	0.22	
FAX	-0.02	0.15	0.05	0.22	
Mobile Phone	0.00	0.00	1.10	0.31	**

Time-use patterns (minutes)		NN (45)		NY (20)		Significant
		Mean	SD	Mean	SD	
Wife, Working Days	Weekdays-Commuting (work/school)	-2.64	17.47	-8.85	29.10	
	Work	-9.29	69.87	27.20	105.52	
	Study	-14.67	81.02	-3.05	23.64	
	House-Keeping and Taking Care of Children	-28.16	134.64	2.90	93.96	
	Hobby, Leisure and Going out	26.42	114.55	6.05	146.78	
	Sleep, Eat, Personal Hygiene	31.93	123.48	-29.65	149.78	*
Wife, Weekends/Holidays	Weekends-Commuting (work/school)	-0.04	0.30	0.10	0.45	
	Work	-8.00	45.41	21.00	118.85	
	Study	1.47	33.09	-12.00	41.75	
	House-Keeping and Taking Care of Children	-9.02	128.47	47.85	144.88	
	Hobby, Leisure and Going out	-21.49	178.26	-24.15	210.05	
	Sleep, Eat, Personal Hygiene	33.49	168.20	-32.80	154.80	
Husband, Working Days	Weekdays-Commuting (work/school)	12.65	58.44	9.25	60.87	
	Work	-1.90	82.72	24.75	100.34	
	Study	-5.90	35.67	4.83	17.38	
	House-Keeping and Taking Care of Children	-9.68	46.63	-1.00	68.19	
	Hobby, Leisure and Going out	18.68	81.11	45.42	142.87	
	Sleep, Eat, Personal Hygiene	0.10	95.36	-65.25	137.20	*
Husband, Weekends/Holidays	Weekends-Commuting (work/school)	0.00	0.00	0.25	26.23	
	Work	-15.48	57.90	35.00	141.20	
	Study	5.81	32.33	-5.00	40.11	
	House-Keeping and Taking Care of Children	35.03	146.74	-24.92	233.74	
	Hobby, Leisure and Going out	-23.29	244.87	-30.08	348.43	
	Sleep, Eat, Personal Hygiene	-3.81	196.55	24.75	174.14	

(\* p<0.1, \*\* p<0.05)

## G. Additional Analysis

For calculation of CO<sub>2</sub> emissions from expenditure data, expenditure tables were developed for average per family member for 1998, 1999 and 2000 calculated by two different methods. One way of calculating the income and monthly expenditure per family member was dividing the variables per household (Table 55) by average number of household family members of 4.01, 4.02 and 4.05 for 1998, 1999 and 2000, respectively. Tables 56 show cross section results per year

Table 55. Household income and household expenditure 1998, 1999 and 2000.

Household income (10,000 yen)	1998		1999		2000	
	Mean	SD	Mean	SD	Mean	SD
Husband	554.04	282.63	555.46	274.25	559.05	277.63
Wife	149.05	169.17	148.88	171.77	144.50	173.03
Own business	1.21	13.73	0.54	5.49	0.43	4.08
Other member	241.73	427.96	201.13	432.93	175.81	383.16

Household expenditure for the month of Sep. (1,000 Yen)	1998		1999		2000	
	Mean	SD	Mean	SD	Mean	SD
Food	51.94	35.09	57.17	38.58	58.32	38.23
Housing (Rent/Mortgage)	19.73	41.23	21.27	45.20	22.16	53.34
Water, Gas, Electricity	15.52	15.21	16.22	13.31	17.32	14.00
Furniture and Household Appliances	6.26	32.71	4.28	13.00	4.57	12.97
Clothing and Shoes	11.48	15.02	11.39	14.61	12.37	15.82
Medical and Insurance	7.46	17.43	6.55	14.29	6.97	23.59
Transportation	8.95	10.86	19.33	57.68	17.69	52.65
Communication	5.48	7.03	8.57	7.95	10.48	9.95
Education	12.90	19.36	14.97	25.63	15.80	25.08
Hobby and Leisure	11.69	18.77	11.31	22.66	10.82	18.70
Going out	12.64	15.33	11.48	15.00	11.84	18.04
Allowances	24.71	27.46	23.64	27.96	23.88	27.18
Total	188.78		206.17		212.20	
Total per year	2265.32		2474.04		2546.41	

Table 56. Income and expenditure per family member for 1998, 1999 and 2000. The income and monthly expenditure per item were divided by average numbers of family members per household of 4.01, 4.02 and 4.05 for 1998, 1999 and 2000, respectively.

Household income (10,000 yen)	1998	1999	2000
	Mean	Mean	Mean
Husband	138.16	138.17	138.04
Wife	37.17	37.04	35.68
Own business	0.30	0.14	0.11
Other member	60.28	50.03	43.41
Total	235.92	225.38	217.23

Monthly Expenditure (1,000 yen)	1998	1999	2000
	Mean	Mean	Mean
Food	12.95	14.22	14.40
Housing (Rent/Mortgage)	4.92	5.29	5.47
Water, Gas, Electricity	3.87	4.03	4.28
Furniture and Household Appliances	1.56	1.06	1.13
Clothing and Shoes	2.86	2.83	3.05
Medical and Insurance	1.86	1.63	1.72
Transportation	2.23	4.81	4.37
Communication	1.37	2.13	2.59
Education	3.22	3.72	3.90
Hobby and Leisure	2.92	2.81	2.67
Going out	3.15	2.86	2.92
Allowances	6.16	5.88	5.90
Total	47.08	51.29	52.40
Total per year	564.92	615.43	628.74

Table 57 shows shifts (changes) in income and expenditure per household and Table 58 show shifts in income and expenditure per family member in 1998-1999 and 1999-2000. The latter one was divided by the

average number of family members instead of the change of the number in family members.

Table 57. Shifts in income and expenditure per household (1998-1999 and 1999-2000).

Shift in household income (10,000 yen)	1998-1999		1999-2000	
	Mean	SD	Mean	SD
Husband	7.92	224.62	8.28	210.80
Wife	3.58	78.45	-4.37	78.09
Own business	-0.65	14.45	-0.11	6.78
Other member	-3.37	307.90	-18.91	324.26

Household expenditure for the month of Sep. (1,000 Yen)	1998-1999		1999-2000	
	Mean	SD	Mean	SD
Food	5.23	28.23	1.15	30.29
Housing (Rent/Mortgage)	1.54	40.27	0.89	58.52
Water, Gas, Electricity	0.70	12.34	1.10	10.91
Furniture and Household Appliances	-1.98	33.09	0.29	17.02
Clothing and Shoes	-0.09	18.14	0.98	16.80
Medical and Insurance	-0.92	21.82	0.42	26.64
Transportation	10.38	57.34	-1.63	72.85
Communication	3.09	8.52	1.91	9.91
Education	2.06	22.70	0.83	23.51
Hobby and Leisure	-0.39	25.76	-0.49	26.65
Going out	-1.16	18.27	0.36	20.14
Allowances	-1.07	25.10	0.23	22.18

Table 58. Shifts in income and expenditure per family member (1998-1999 and 1999-2000). The changes in income and monthly expenditure per item were divided by average number of family members per household of 4.02 and 4.05 for 1999 and 2000, respectively.

Income (10,000 yen) per family member	1998-1999	1999-2000
	Mean	Mean
Husband	1.97	2.05
Wife	0.89	-1.08
Own business	-0.16	-0.03
Other member	-0.84	-4.67

Shift in expenditure per family member for the month of Sep. (1,000 Yen)	1998-1999	1999-2000
	Mean	Mean
Food	1.30	0.28
Housing (Rent/Mortgage)	0.38	0.22
Water, Gas, Electricity	0.17	0.27
Furniture and Household Appliances	-0.49	0.07
Clothing and Shoes	-0.02	0.24
Medical and Insurance	-0.23	0.10
Transportation	2.58	-0.40
Communication	0.77	0.47
Education	0.51	0.21
Hobby and Leisure	-0.10	-0.12
Going out	-0.29	0.09
Allowances	-0.27	0.06

The above method may lead to inaccurate value because the mean values shown in Tables 55 and 57 are weighted mean, and in order to calculate the value per family member accurately, the income and expenditure values must be divided by the household family member at a household base. Therefore, the other way of calculating the average household income and expenditure per family member and their shifts in two years is to calculate them individually. Tables 59 and 60 are developed for the average household expenditures, income and possession of durable goods for the combined 1998-99 and 1999-2000 data (cross sectional data) and shifts of those variables. The data will be used to calculate the average CO<sub>2</sub>-emissions of a household and also see what happens if adjusted for household size.

Table 59. Income and expenditure per family member for 1998, 1999 and 2000. The income and monthly expenditure per item were divided by the numbers of family members per household at individual base.

Household income per family member (per person) (10,000 yen)	1998		1999		2000	
	Mean	SD	Mean	SD	Mean	SD
Husband	144.24	90.85	144.47	91.74	143.19	88.10
Wife	54.94	84.33	56.44	90.81	54.66	91.44
Own business	0.29	3.36	0.13	1.27	0.10	1.06
Other member	60.45	110.88	48.59	104.03	44.37	111.29

Expenditure per family member (per person) for the month of Sep. (1,000 Yen)	1998		1999		2000	
	Mean	SD	Mean	SD	Mean	SD
Food	14.26	10.26	15.75	11.33	15.81	11.05
Housing (Rent/Mortgage)	7.60	15.60	8.20	16.38	8.30	18.30
Water, Gas, Electricity	4.30	4.07	4.54	3.85	4.73	3.80
Furniture and Household Appliances	1.85	10.86	1.28	3.96	1.47	6.26
Clothing and Shoes	3.29	4.87	3.51	5.97	3.84	6.35
Medical and Insurance	2.10	5.56	1.79	3.76	1.90	5.46
Transportation	2.69	4.15	5.82	22.96	4.83	11.40
Communication	1.71	2.70	2.64	3.16	3.12	3.57
Education	2.91	5.20	3.36	5.58	3.57	5.77
Hobby and Leisure	3.32	6.24	3.61	11.19	3.28	8.92
Going out	4.07	5.83	3.77	6.00	3.78	6.27
Allowances	6.61	8.72	6.29	8.94	6.28	8.58
Total per month	54.72		60.57		60.92	
Annual Total	656.69		726.79		731.05	

Table 60. Shifts in income and expenditure per family member for 1998-1999 and 1999-2000. The shifts in income and monthly expenditure per item were divided by the number of family members per household in 1999 and 2000 at individual bases.

Household income per family member (per person) (10,000 yen)	1998-1999		1999-2000	
	Mean	SD	Mean	SD
Husband	2.61	49.67	1.90	46.42
Wife	1.07	31.20	-1.31	28.75
Own business	-0.16	3.46	-0.02	1.64
Other member	-2.72	66.48	-3.92	86.61

Expenditure per family member (per person) for the month of Sep. (1,000 Yen)	1998-1999		1999-2000	
	Mean	SD	Mean	SD
Food	1.65	8.74	0.36	8.54
Housing (Rent/Mortgage)	0.94	11.50	0.60	15.26
Water, Gas, Electricity	0.30	3.33	0.33	2.84
Furniture and Household Appliances	-0.68	14.79	0.25	6.88
Clothing and Shoes	0.12	7.04	0.29	6.66
Medical and Insurance	-0.28	6.43	0.11	6.58
Transportation	3.12	22.88	-0.68	21.09
Communication	0.94	3.00	0.51	3.25
Education	0.39	5.94	0.22	5.46
Hobby and Leisure	0.22	11.14	-0.34	13.11
Going out	-0.41	6.37	-0.04	6.58
Allowances	-0.21	8.28	0.13	6.75

## 4. Comprehensive Discussion

### 4.1. Evaluation of effects of analytical variations

Aiming at the reduction of the variance of happiness elasticities and consumption elasticities and enhancing the robustness of results, we made several attempts to form more homogenous sub-groups. The attempts were: stratifying the sample into married and un-married groups, removing the cases that experienced happiness-shifting life events, removing highly suspected outliers from the sample, combining the two datasets, and extracting only the cases that never experienced happiness-shifting life events. In this section, we would like to discuss the effects of these attempts on the results.

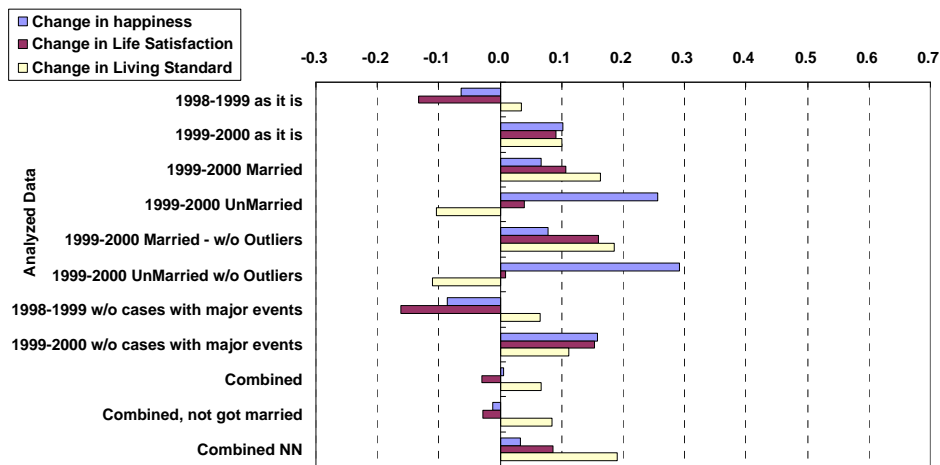
We have produced a total of eleven sets of result outputs. They are as follows:

- (1) 1998-1999 as it is
- (2) 1999-2000 as it is
- (3) 1999-2000 Married
- (4) 1999-2000 Un-Married
- (5) 1999-2000 Married – Highly suspected outliers removed
- (6) 1999-2000 Un-Married – Highly suspected outliers removed
- (7) 1998-1999 Removed the cases experienced happiness-shifting life events
- (8) 1999-2000 Removed the cases experienced happiness-shifting life events
- (9) Combined as it is
- (10) Combined and separated out the cases experienced happiness-shifting life events (ten events)
- (11) Combined and extracted free of happiness-shifting life events

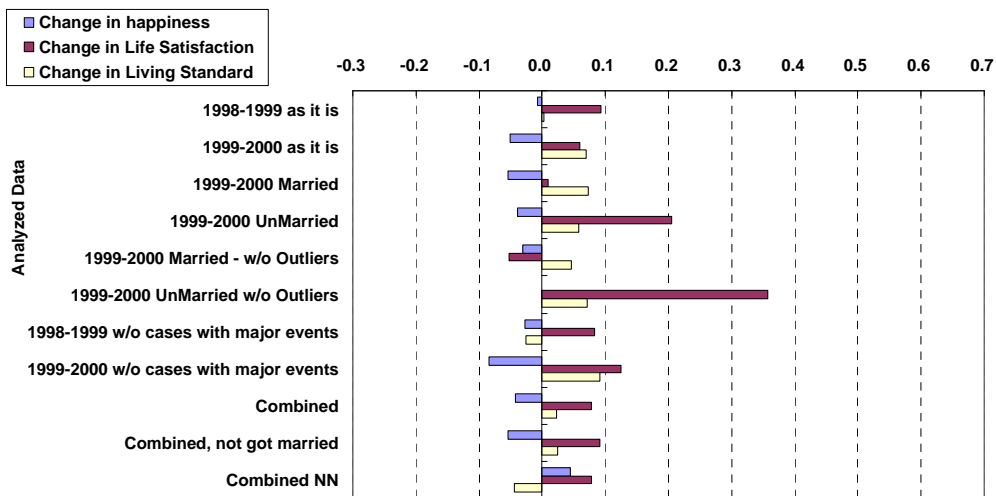
Figures 7-9 and Table 61 show the changes in happiness, life-satisfaction and living standard by adopting three technologies at different data analyzed. For the sake of comparing these changes graphically, the scales of these indicators are kept at constant for three figures.



Figures 7. Changes in happiness, life-satisfaction and living standard by adopting cloth dryer – results from analyzing the same data modified by various conditions



Figures 8. Changes in happiness, life-satisfaction and living standard by adopting personal computer – results from analyzing the same data modified by various conditions.



Figures 9. Changes in happiness, life-satisfaction and living standard by adopting mobile phone – results from analyzing the same data modified by various conditions

Table 61. The compilation of changes in happiness, life satisfaction and living standard – results from analyzing the same data modified by various conditions – and case numbers between the two groups compared.

Assessed activity	Considered sample group	Data from	Change in happiness	Change in Life Satisfaction	Change in Living Standard	Cases NN	Cases NY
using a cloth dryer	1998-1999 as it is	D5, Table 9	-0.12	-0.05	-0.04	906	29
	1999-2000 as it is	D5, Table 12	0.02	0.08	0.04	902	32
	1999-2000 Married	D5, Table 17	0.07	0.00	0.07	637	38
	1999-2000 Un-married	D5, Table 17	-0.23	0.60	-0.20	265	4
	1999-2000 Married - w/o Outliers	D5, Table 36	0.10	-0.03	0.08	601	26
	1999-2000 Un-married w/o Outliers	D5, Table 36	-0.24	0.61	-0.19	254	4
	1998-1999, eliminating cases with major events	D5, Table 30	-0.14	-0.11	-0.01	738	23
	1999-2000, eliminating cases with major events	D5, Table 33	0.13	0.35	-0.04	663	23
	Combined	D5, Table 45	-0.05	0.01	0.00	1808	61
	Combined, not got married	D5, Table 49b	-0.05	0.01	0.03	1758	58
	Combined NN	D5, Table 52	-0.02	0.36	-0.06	656	14
using a personal computer	1998-1999 as it is	D5, Table 10	-0.06	-0.13	0.03	689	135
	1999-2000 as it is	D5, Table 13	0.10	0.09	0.10	555	162
	1999-2000 Married	D5, Table 19	0.07	0.11	0.16	384	129
	1999-2000 Un-married	D5, Table 19	0.26	0.04	-0.10	171	33
	1999-2000 Married - w/o Outliers	D5, Table 37	0.08	0.16	0.19	357	118
	1999-2000 Un-married w/o Outliers	D5, Table 37	0.29	0.01	-0.11	162	31
	1998-1999, eliminating cases with major events	D5, Table 31	-0.09	-0.16	0.07	560	100

	1999-2000, eliminating cases with major events	D5, Table 34	0.16	0.15	0.11	416	107
	Combined	D5, Table 46	0.01	-0.03	0.07	1244	297
	Combined, not got married	D5, Table 50b	-0.01	-0.03	0.08	1220	273
	Combined NN	D5, Table 53	0.03	0.09	0.19	183	23
using a mobile phone	1998-1999 as it is	D5, Table 11	-0.01	0.09	0.00	215	124
	1999-2000 as it is	D5, Table 14	-0.05	0.06	0.07	129	119
	1999-2000 Married	D5, Table 21	-0.05	0.01	0.07	94	87
	1999-2000 Un-married	D5, Table 21	-0.04	0.21	0.06	35	32
	1999-2000 Married - w/o Outliers	D5, Table 38	-0.03	-0.05	0.05	77	66
	1999-2000 Un-married w/o Outliers	D5, Table 38	0.00	0.36	0.07	28	28
	1998-1999, eliminating cases with major events	D5, Table 32	-0.03	0.08	-0.03	178	101
	1999-2000, eliminating cases with major events	D5, Table 35	-0.08	0.12	0.09	98	91
	Combined	D5, Table 47	-0.04	0.08	0.02	344	243
	Combined, not got married	D5, Table 51b	-0.05	0.09	0.03	339	232
	Combined NN	D5, Table 54	0.04	0.08	-0.04	45	20

In order to evaluate the effect of each attempt on increasing the robustness of data, the results from different analytical conditions were compared as follows:

- A. Observation of consistencies in results between two datasets (1998-1999 and 1999-2000):
  1. Comparison between (1) and (2)
  2. Comparison between (7) and (8)
- B. Effects of stratifying the sample into married and un-married groups:
  1. Comparison between (2), (3) and (4)
- C. Effects of removing the cases that experienced happiness-shifting life events:
  1. Comparison between (1) and (7)
  2. Comparison between (2) and (8)
- D. Effects of removing highly suspected outliers from the sample:
  1. Comparison between (3) and (5)
  2. Comparison between (4) and (6)
- E. Effects of combining the two datasets:
  1. Comparisons between (1), (2) and (9)
- F. Effects of extracting only the cases that never experienced happiness-shifting life events (NN):
  1. Comparison between (9) and (11)

The effects were discussed on ultimate utility indicators and consumption variables separately. The following discussions are mainly qualitative description on the observations of the tendencies of quantitative results.

#### 4.2. Evaluation of effects on ultimate utility indicators

- A. Observation of consistencies in results between two datasets (1998-1999 and 1999-2000)

1. Comparison between (1) and (2)

In the case of cloth dryer, happiness, life satisfaction and living standard exhibited negative value in 1998-1999 data and positive value in 1999-2000. In the case of personal computer, the general tendency is the same except that living standard was positive in 1998-1999. In the case of mobile phone, each of the variables tends to shift in the same direction between the two years, and happiness is negative, life satisfaction and living standard are positive.

2. Comparison between (7) and (8)

For all the adopted technologies, the dominant tendency was similar to the comparisons between (1) and (2), which is opposite signs between two data samples. However, obvious difference from the previous case was that the differences between NN and NY exhibited rather large values. The increased changes in happiness, life satisfaction and living standard were probably caused by elimination of cases that experienced happiness-related life events.

- B. Effects of stratifying the sample into married and un-married groups

1. Comparison between (2), (3) and (4)

In the case of cloth dryer, large differences were observed between married and un-married and exhibited opposite signs. Life satisfaction for un-married exhibited a large positive value while happiness and living standard showed large negative values. This large variance was caused by small sample size of four (4) for

un-married. Therefore, the data of married and un-married sample for cloth dryer should be treated as unreliable. In the case of personal computer, all the variables exhibited positive values except for living standard for un-married. Positive large happiness and negative large living standard were observed probably due to a rather small sample size of NY (33) for un-married. In the case of mobile phone, happiness (negative) and living standard (positive) were at about the same levels and directions between married and un-married. Life satisfaction was larger for un-married. Again, the sample size of un-married for NY was rather small (32). There is a possibility that separation of the sample into married and un-married may have an effect on differentiating the homogenous sample. However, due to small sample sizes, it is difficult to confirm the effect at this point.

#### C. Effects of removing the cases that experienced happiness-shifting life events

##### 1. Comparison between (1) and (7)

In the case of cloth dryer, all the variables were negative and the directions were consistent. In the case of personal computer and mobile phone, the direction of each variable was consistent and the larger values were observed for eliminating cases. It indicates that elimination of the cases that experienced happiness-shifting life events from the data have increases the differences between NN and NY by removing noises from the sample.

##### 2. Comparison between (2) and (8)

Though the directions of happiness and life satisfaction were opposite, the general tendency for all the adopted technologies was consistent with the comparison between (1) and (7).

#### D. Effects of removing highly suspected outliers from the sample

##### 1. Comparison between (3) and (5)

In the case of cloth dryer and mobile phone, life satisfaction turned to a negative value after eliminating the outliers, but the others exhibited increased value at the same directions. In the case of mobile phone, larger values in the same directions were observed for happiness and living standard. For life satisfaction, the positive value turned to a negative value by eliminating outliers. From the observations, it is possible that elimination of highly suspected outliers from the sample may increases the differences between NN and NY by removing skewers.

##### 2. Comparison between (4) and (6)

In the case of cloth dryer and personal computer, the general observation was consistent to the comparison between (4) and (6). In the case of mobile phone, living standard has the consistent observation as the previous comparison, while happiness became zero from negative value and life standard increased the positive value slightly by eliminating outliers. Again, the sample size was too small to provide reliable results in these samples.

#### E. Effects of combining the two datasets

##### 1. Comparisons between (1), (2) and (9)

For all the adopted technologies, the common observation was that the values from the combined data fell between those of two separate data sets. It is understandable as the average of the combined data falls between the averages of two datasets.

#### F. Effects of extracting only the cases that never experienced happiness-shifting life events (NN)

##### 1. Comparison between (9) and (11)

In the case of cloth dryer, life satisfaction increased to the positive direction by extracting the NN. Living standard turned from small positive value to a small negative value. The large negative value of happiness became a small negative value. In the case of personal computer, positive happiness and living standard values increased, and negative life satisfaction value increased to a positive value. In the case of mobile phone, life satisfaction did not change, while happiness shifted from a negative value to a positive value and living standard turned from positive to negative. There is a possibility that extraction of those who have not experienced any of the happiness-shifting life events may have an effect on differentiating the homogenous sample. However, the sample sizes of non-adopters of the technologies were 14, 23, and 20 for cloth dryer, personal computer and mobile phone, respectively. Larger numbers are strongly desirable to have robust results.

### 4.3. Evaluation of effects on consumption variables

#### A. Observation of consistencies in results between two datasets (1998-1999 and 1999-2000)

##### 1. Comparison between (1) and (2)

Instead of comparing the data between (1) and (2), I would like to make general statements on the observations of the changes of consumption variables. In the expenditure, standard deviation of transportation was among the largest regardless of adopted technology. Significant differences were observed for clothing and shoes, transportation and going for cloth dryer adopters in 1999-2000. However, no consistency was observed between (1) and (2) in the patterns of expenditure. In the case of personal computer, no consistency was found between (1) and (2) however, the increase of communication expenditure was probably due to the Internet connection. In the case of mobile phone, the item significantly different consistently between (1) and (2) was communication. It was probably directly caused by use of mobile phone. In terms of possession of durable consumer goods, cloth dryer adopters have larger numbers of significant differences than personal computer and mobile phone adopters. For cloth dryer adopters, air conditioner, TV set, and telephone are the consistent items that were significantly differences in possession. Personal computer adopters, have significantly fewer word processors and more mobile phones. And mobile phone adopters have more FAX. In terms of time use, it was difficult to find general consistencies according to the adopted technology. It will be covered in the following sub-sections.

#### B. Effects of stratifying the sample into married and un-married groups

##### 1. Comparison between (2), (3) and (4)

The first impression was that the consumption patterns of married are similar to 'data as it is.' Between married and un-married group, the patterns for time use are inconsistent. For possession of durable consumer goods, no obvious difference was observed between married and un-married.

#### C. Effects of removing the cases that experienced happiness-shifting life events

##### 1. Comparison between (1) and (7)

In the cases of personal computer and mobile phone, the number of significant differences on possession of durable consumer goods increased after removing the cases, while it decreased in the case of cloth dryer. The time-use patterns were rather consistent with 'as it is' after elimination.

##### 2. Comparison between (2) and (8)

No significant effect was observed in any of the patterns of consumption variables for any of the technology cases. It is noteworthy that happiness for personal computer adopters was significantly different after elimination. The expected effect of the removing of the cases from the data was increase of clear distinctions of NN and NY in happiness but the patterns of the changes in consumption variables were expected to be rather consistent. The results show the consistency with our expectation.

#### D. Effects of removing highly suspected outliers from the sample

##### 1. Comparison between (3) and (5)

Our expected effect of removing highly suspected outliers was on minimizing the standard deviation of the results, which in turn increases the number of significant differences between NN and NY. In the case of mobile phone, the transportation expenditure showed smaller standard deviation after removing outliers; however, no significant changes in the mean values were observed. The number of significant differences between NN and NY did not change in all the consumption variables and all the adoption cases except for possession of consumer good in the case of mobile phone which increased from one to four items.

##### 2. Comparison between (4) and (6)

Happiness exhibited significant difference after the removal of outliers. As far as the consumption variables are concerned, no significant effect was observed in any of the technology cases.

#### E. Effects of combining the two datasets

##### 1. Comparisons between (1), (2) and (9)

No significant effect was observed in expenditure or time use for any of the technology cases. The number of significant differences increased after combining the data on possession of durable consumer goods in the cases of personal computer and mobile phone.

#### F. Effects of extracting only the cases that never experienced happiness-shifting life events (NN)

## 1. Comparison between (9) and (11)

The expected effect of the extracting cases free of happiness-shifting life event from the data was the increase of clear distinctions of NN and NY in happiness but no significant changes were observed in any of the ultimate utility indicators. The patterns of the changes in consumption variables were expected to be rather consistent. After extracting only NN from the sample, the SD of the expenditure variables decreased while the number of significant difference did not increase. The number of significant difference actually decreased in possession of durable consumer goods. The difficulty of finding the concrete evidence of this extraction is probably due to the small sample size of NY.

## 4.4. The whole view

In the following sub-sections, we discuss the whole view of the data to lay out some characteristics of the indicators for ultimate utility and consumption variables, and their relationships to the choice of three technologies. Our purpose of this deliverable is to produce a set of output data which shows clear differentiation in ultimate utility indices and consumption patterns between adopters and non-adopters of the technology by varying the sample and analytical conditions. We will therefore discuss also the effects of the data and analytical variations on the results.

### 4.4.1. The whole view from the viewpoint of choice of technology

#### (1) Cloth Dryer

Happiness exhibited a negative value in 1998-1999 and a positive value in 1999-2000 but when combined the two datasets, it fell in the value between the two. Life satisfaction also showed a negative value in 1998-1999 and a positive value in 1999-2000 but fell in the value between the two when combined. For 1999-2000 un-married group, the life satisfaction exhibited a large positive value. When combined, life satisfaction was at the small positive number. For combined data without any cases with happiness-shifting life events, the value exhibited a large positive value. Living standard exhibited small positive and negative values depending on the analytical conditions. However, a large negative value was observed for un-married group.

#### (2) Personal Computer

Happiness exhibited a negative value in 1998-1999 and a positive value in 1999-2000 but when combined, it fell in the value between the two at small positive level. For combined data without any happiness-shifting life events, the value was largely positive. For 1999-200 un-married group, the happiness exhibited a large positive value. Life satisfaction exhibited a negative value in 1998-1999 and a positive value in 1999-2000 but fell in the value between the two and at small negative level, when combined. However, a positive value was observed for combined data without any cases experiencing happiness-shifting life events. Living standard is inclined to exhibit positive values, and a prominent positive value was observed for married group; however, it showed a large negative value for un-married group. The value was kept at a large positive even for the combined data. The value was even larger for those who were free of any happiness-shifting life events in the combined data.

#### (3) Mobile Phone

Happiness was consistently negative throughout the analytical conditions but exhibited a positive value only for the group of without any happiness-shifting life events in the combined data. Life satisfaction was consistently positive except for the married group without highly suspected outliers. A large positive value was observed for un-married group and the combined data. Moreover, a positive value was observed for those who were free of any happiness-shifting life events in the combined data. Living standard was consistently positive throughout the analytical conditions except for the case of eliminating those who experienced happiness-shifting life events in the separate dataset and in the case of the group without any happiness-shifting life events in the combined data.

### 4.4.2. The whole view from the viewpoint of indicators for ultimate utility

One important note to make before discussion is that the elimination of cases was performed according to the happiness-related life events, but not those related to life satisfaction or living standard. Therefore, it was expected that the elimination of cases would have affected the results of happiness directly, if there is any.

Common observations and discussions for happiness, life satisfaction and living standard are that: (1) happiness is inclined to exhibit negative values regardless of adopted technology; (2) life satisfaction tends to

exhibit large positive values regardless of the adopted technology; (3) living standard has slightly more tendency than happiness and life satisfaction to stay closer to zero level either small positive or small negative, depending on the analytical conditions; and (4) all the indices in cloth dryer and personal computer were mixtures of positive and negative values, showing inconsistency. For (3), according to the definition of the variables, the indicator for living standard is determined by each individual based on the economical standard relative to other households. Considering the characteristics of the Japanese inclined to feel comfortable being in the average standard, the observations of living standard being around at the zero level is understandable. Therefore, living standard may not be an appropriate indicator for the purpose of this study.

Between happiness and life satisfaction it is almost impossible to determine from the results which indicator should be more appropriate, and extensive further analysis and discussions are necessary. Instead of making a decision, we would like to raise some issues of this study and hints for further studies to this regard.

We evaluated the changes of ultimate utility and consumption patterns by adopting new technologies, which were durable consumer goods, to a household. The observation was that in the case of adoption of mobile phone, a consistency was observed in terms of the directions of the signs of each indicator regardless of analytical conditions, and the difference (or length of the bars) for life satisfaction was longer than the others. It is implied that adoption of a new technology to a household may be an insufficient impact to shift one's happiness but life satisfaction. According to the definition of variables, life satisfaction is rather rational and objective in comparison to happiness although both are self-reported subjective indicators. Therefore, if testing the effects of a new consumption activity at a level of adopting a new durable consumer good to a household, life satisfaction may be more sensitive than happiness. In this research, only three examples of adopted consumption activities were tested and they were all the same type of activity -- adoption of new durable goods to a household. Therefore, testing other examples of consumption activities that may involve a major shift in lifestyle is strongly desirable to produce more conclusive results. It is important to note that the JPSC dataset does not contain any example of such kind. However, we must mention that the inconsistency of the indicators for adoption of cloth dryer and personal computer is probably caused by small sample size for adopters (NY) of cloth dryer and large imbalances of sample numbers between NN and NY in the case of personal computer. Moreover, elimination of cases was performed according to the happiness-related life events only. The above discussion was made difficult due to such obstacles. Some improvements are desirable for future research to produce more conclusive results.

## 5. Conclusions and Future Tasks

Based on the results and discussion, the following conclusions can be drawn and a set of future tasks are suggested.

### 5.1. Conclusions

- Stratification of the sample into married and un-married groups, removal of the cases that experienced happiness-shifting life events, removal of highly suspected outliers from the sample, combining the two datasets, and extraction of only the cases that never experienced happiness-shifting life events, were performed to increase the robustness of the data by making clear distinction between the target sub-groups. However, none of the attempts was sufficient to made clear effects on observing significant differences in ultimate utility variables between the targeted groups when JPSC dataset was used.
- The JPSC data should contain a great variability in some aspects that we did not evaluate this time even though the selected sample for this study belonged to a similar demographic attributes.
- Happiness for personal computer adopters was significantly different from non-adopters after elimination of highly suspected outliers as well as after removing the cases that experienced happiness-shifting life events. Therefore, the above two method may be a key to create homogeneous sub-groups by removing noises from the sample.

### 5.2. Future Tasks

- Increase the sample sizes of NY and NN. One of the biggest obstacles against discussing the effects of various data and analytical conditions to increase the robustness of the data by distinguishing

homogeneous sample was the small sample size. If the JPSC dataset is used for further analysis, we would recommend increasing the sample size by combining as many panels as possible to increase the robustness.

- Use happiness and life satisfaction as ultimate utility indicators for future studies if they are both available in the dataset. The results suggested that life satisfaction may be more sensitive to the adoption of a new technology to a household. This tendency was obvious particularly in the case of adopting mobile phone, that has balanced sample sizes between NN and NY in the most data conditions (see Figure 7). Although happiness is the main theme of this research as the functional unit of sustainable consumption, testing those two may be helpful to discuss the applicability of these indicators as it is still at an early stage of this research.
- There is a possibility that stratifying the sample into married and un-married group during the analysis may be helpful in making a clear distinction in consumption patterns between NN and NY. Large inconsistencies were observed in results of ultimate utility and consumption variables between married and un-married groups in this study. For the analysis of adoption of cloth dryer and personal computer, ultimate utility variables were inconsistent between datasets and analytical conditions. Therefore, it is possible that the inconsistency was caused by small sample size. However, the table of hypothetical differences between married and un-married women that may possibly cause significant distinctions in consumption patterns (Table 15) may support the possibility.
- There exists a possibility that the combination of removing highly suspected outliers from the sample and extracting only the cases that never experienced happiness-shifting life events have effects on increasing the robustness of results by forming more homogeneous sub-group. Due to lack of sample cases, this possibility was not tested in this study. Further analyses are necessary to be conclusive.
- Rather than testing adoption of consumer goods to a household as consumption activities, testing other examples that may involve major shifts in lifestyle is strongly desirable to produce more conclusive results.

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