

# Econ 613 HW1

Yuanke Yan

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## Exercise 1

- (1) Number of households surveyed in 2007: 10498.
- (2) Number of households with marital status “Couple with kids” in 2005: 3374.
- (3) Number of individuals surveyed in 2008: 25510.
- (4) Number of individuals aged between 25 and 35 in 2016: 2765.
- (5) Cross-table of gender/profession is shown in Table 1.

Table 1: Cross-table of gender/profession

Profession	0	11	12	13	21	22	23	31	33	34	35	37	38	42	43	44
Female	11	30	8	29	63	65	8	68	85	184	50	179	78	258	437	1
Male	19	57	19	78	213	114	48	98	107	142	59	260	368	110	117	2
Profession	45	46	47	48	52	53	54	55	56	62	63	64	65	67	68	69
Female	153	410	82	22	782	27	584	353	696	64	35	29	19	147	120	40
Male	95	340	429	215	169	182	98	101	74	443	520	246	159	237	177	82

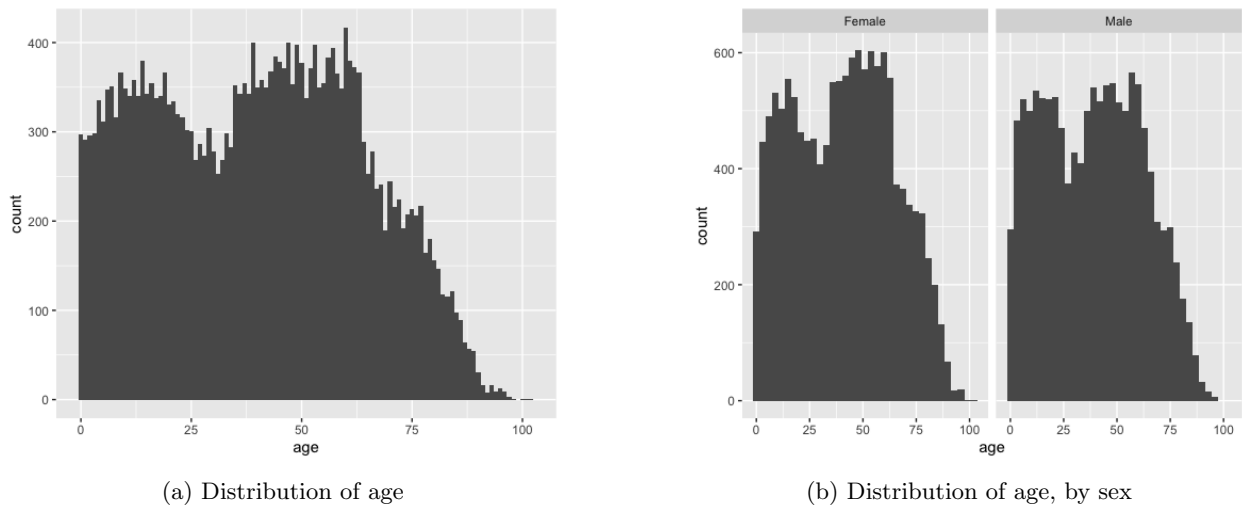
- (6) Distribution of wage in 2005 and 2019 is shown in Table 2.

Table 2: istribution of wage in 2005 and 2019

Year	Mean	Std.dev	Inter docile ratio	Gini
2005	21930.71	18575.86	52.86257	0.4021228
2019	29226.47	25714.49	13.27561	0.3800469

- (7) Distribution of age in 2010 is shown in Figure 1

Figure 1: Distribution of age in 2010



The distribution of age for women has a fatter tail on the right, meaning there’s more elderly women than men.

- (8) Number of individuals in Paris in 2011: 3514.

## Exercise 2

(5) Number of households with more than four family members each year is shown in Table 3. Note that since the panel is highly unbalanced, we cannot track households across years, and we don’t know of the households whose number of members is consistently above four in the whole period. Similar arguments hold for the following questions.

- (6) Number of households in which at least one member is unemployed each year is shown in Table 4.

(7) Number of households in which at least two members are of the same profession each year is shown in Table 5.

(8) Number of individuals in the panel that are from household-Couple with kids each year is shown in Table 6.

Table 3: Number of households with more than four family members each year

Year	2004	2005	2006	2007	2008	2009	2010	2011
count	745	814	862	874	814	810	821	785
Year	2012	2013	2014	2015	2016	2017	2018	2019
count	816	749	783	763	753	703	647	692

Table 4: Number of households in which at least one member is unemployed each year

Year	2004	2005	2006	2007	2008	2009	2010	2011
count	950	1039	1030	975	909	1045	1110	1071
Year	2012	2013	2014	2015	2016	2017	2018	2019
count	1205	1177	1187	1227	1137	1103	991	1086

(9) Number of individuals in the panel that are from Paris each year is shown in Table 7.

(10) Household(s) with the most members each year is shown in Table 8.

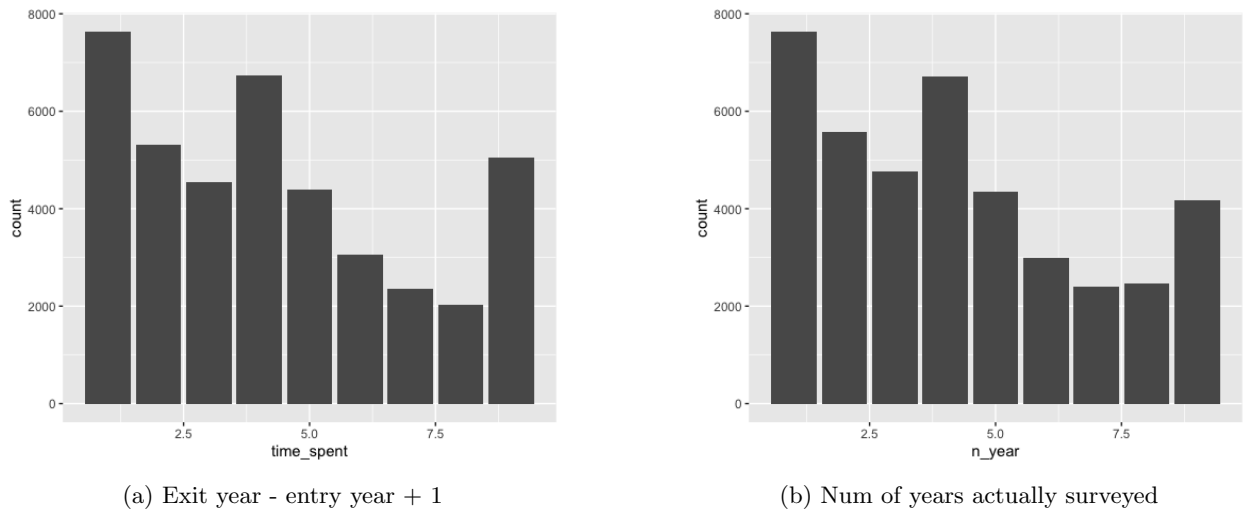
The two households with the most members ever are 2207811124040100 and 2510263102990100. Each had 14 members at one time of survey.

(11) Number of households present in 2010 and 2011: 8984.

### Exercise 3

(1) Distribution of time spent in the survey among households is shown in Figure 2. The left panel defines "time spent" as exit year - entry year + 1; the right panel uses the number of years actually surveyed.

Figure 2: Distribution of time spent in the survey



(2) First ten rows of whether an household just moved into its current dwelling at the year of survey is shown in Table 9. Share of individuals in that situation across years is plotted in Figure 3 as part of the answer to (4).

(3) First ten rows of whether an household just moved into its current dwelling at the year of survey is shown in Table 10. Share of individuals in that situation across years is plotted in Figure 3 as part of the answer to (4).

(4) Share of individual migrating at the year of survey by two types of measurement is plotted in Figure 3.

(5) Among households who migrate, the proportion of having at least one family member changed his/her profession or employment status is 62.5%. The number of households having that situation is 1122.

### Exercise 4

Percentage of attrition each year is shown in Table 11. Here percentage of attrition is defined as the ratio of the number of individuals dropping off in the data panel next year to the number all individuals in the panel this year.

Table 5: Number of households in which at least two members are of the same profession each year

Year	2004	2005	2006	2007	2008	2009	2010	2011
count	4275	4717	4870	4996	5010	4919	5189	5206
Year	2012	2013	2014	2015	2016	2017	2018	2019
count	5568	5280	5327	5341	5300	5028	4994	5307

Table 6: Number of individuals in the panel that are from household-Couple with kids each year

Year	2004	2005	2006	2007	2008	2009	2010	2011
count	11993	13217	13637	13963	13481	13286	13726	13801
Year	2012	2013	2014	2015	2016	2017	2018	2019
count	14403	13103	13228	13008	12967	11963	11444	12151

Table 7: Number of individuals in the panel that are from Paris each year

Year	2004	2005	2006	2007	2008	2009	2010	2011
count	3494	3734	3658	3735	3559	3524	3607	3514
Year	2012	2013	2014	2015	2016	2017	2018	2019
count	3679	2288	2576	3033	2946	2836	2797	2924

Table 8: Household(s) with the most members each year

Year	idmen
2004	1208045118450100, 1607839058220100, 1610263040580100, 1804363114960100
2005	1607839058220100
2006	1607839058220100
2007	2207811124040100
2008	1700707001000100, 1811109095380100, 2006865025180100
2009	1700707001000100
2010	2510263102990100
2011	1905191114960100, 2202243098040100
2012	1905191114960100, 2202243098040100
2013	2202243098040100
2014	2106457101960100, 2200896118640100, 2209201025180100, 2701042078730100 2707811117610100, 271026302006010, 2905191059550100, 2905459051770100
2015	3000896115750100
2016	3000896115750100
2017	3000896115750100
2018	3000896115750100
2019	2806477001000100, 3200528124040100, 3300896124060100, 3402178051020100

Table 9: First ten rows of whether an household just moved into its current dwelling

idmen	year	just_entered
1200010012930100	2004	FALSE
1200010040580100	2004	FALSE
1200010040580100	2005	FALSE
1200010066630100	2004	FALSE
1200010066630100	2005	TRUE
1200010082450100	2004	FALSE
1200010082450100	2005	FALSE
1200010086440100	2004	FALSE
1200010086440100	2005	FALSE
1200010102990100	2004	FALSE

Table 10: First ten rows of whether an household just migrated

idmen	year	just_migrated
1200010012930100	2004	FALSE
1200010040580100	2004	FALSE
1200010040580100	2005	FALSE
1200010066630100	2004	FALSE
1200010066630100	2005	TRUE
1200010082450100	2004	FALSE
1200010082450100	2005	FALSE
1200010086440100	2004	FALSE
1200010086440100	2005	FALSE
1200010102990100	2004	FALSE

Figure 3: Share of individual migrating at the year of survey: two types of measurement

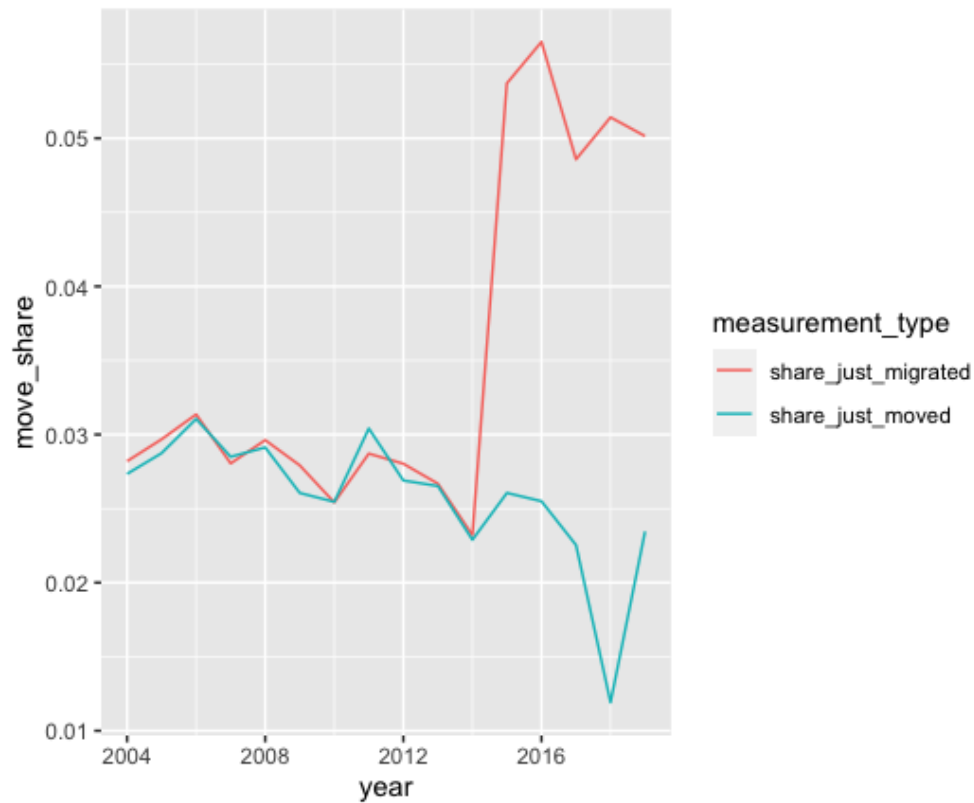


Table 11: Percentage of attrition each year

Year	2004	2005	2006	2007	2008	2009	2010	2011
count	13.53	20.01	17.87	22.67	20.56	18.38	19.36	16.99
Year	2012	2013	2014	2015	2016	2017	2018	
count	25.46	22.00	21.92	21.73	25.08	24.42	24.33	