

An analysis of property income of households in China

—A comparative study among China, the United States and Japan

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Based on international comparison, this paper finds that the excessively low share of property income is a main cause for the low share of resident income in national income in China. During the past two decades, the average share of resident income in the primary distribution of national income in China is 25.32% and 16.76%, the share of property income is 15.62% and 3.36% and the share of labor remuneration is 12.84% and 12.77%, which are all lower than that of the United States and Japan respectively. Structural decomposition of national income distribution in China, the United States and Japan indicates that excessively low return on investment (ROI) of is the primary cause for excessively low property income in China. Contrary to economic logic, ROI in China has been lower than that in the United States and Japan where capital is more adequate for the past decade. After all, the excessively low real interest rate due to interest rate control is the primary cause for excessively low property income in China, while the lack of financial products caused by financial market access restrictions also restrains the growth of property income in China.

Keywords: property income, international comparison, interest rate control

1. Introduction

When discussing the structural imbalance in national income distribution, many factors have been studied, such as the extensive way of economic development in government-dominated economic system (Li, *et al.*, 2010), and local government's pursuing GDP as the first priority, income distribution preferring to capital and government (Fang, 2009), the distortion of factor price ratio (Li *et al.*, 2013; Li *et al.*, 2011), the overly low proportion of labor payment (Fang, 2011), and overweighting macro tax (Lv & Yu Kui, 2009; Guo & Lv, 2011). Overall, when discussing the low

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proportion of household's income in national income, present researchers focus on distributing relationship between capital and labor when analyzing the proportion of factors distribution, and focus on distributing relationship between the government and households when studying the distribution among different departments. But national income distribution does not only involve different production factors (capital payment and labor payment), different economic departments (production tax levied by governments and other income, but also the distribution of factors payment in different departments (capital payments distribution). Present researches mainly focus on the former two. However, there is no sufficient research on capital payment distribution in different departments, especially the impact on national income distribution caused by financial markets in present researches. A recent research (Li & Li, 2015) shows that the capital distribution among different departments has important influence on the structural imbalance of national income distribution and the proportion of resident's income and consumption. Though there is no best or standardized proportion among national income distribution and the ratio of household property income, it is helpful for us to know the existing problems and contributing factors through comparing the proportion of national income distribution among different nations and the ratio of household's property income and their forming reasons. Therefore, this paper will discuss further the reason of the excessively low property income of Chinese households and the influence on the structural imbalance in national income.

2. Comparison of proportion and structure of household income among China, USA and Japan

International comparison requires that comparative objects can be compared at statistical specifications, and related data is relatively completed and lasts for a relatively long time. Considering these requirements, we chose USA and Japan as comparison objects, whose National Account and Cash Flows Statement are perfect, in order to survey the difference of income proportion among China, USA and Japan and its causes.¹

The pattern of national income distribution is mainly determined by the primary

¹ The reason of choosing these three nations to be compared is that the structures of these three nations' national income distribution basically have a comparable basis of data. Chinese current Cash Flows Statement was referenced from SNA Standard in 1993, and edited based on our own situation. National Account Table of Japan was also edited based on the same standard, while American data origin from national income and NIPA in 2013, issued by Bureau of Economic Analysis, which referred as the SNA standard in the version of 2008. Compared with 1993 version, the most difference in 2008 version is that research and development (R&D) was accounted into fixed capital formed item. This difference has quite little influence to National Income Item, especially to the structure data of household income. In addition, the USA and Japan focus on direct financing and indirect financing respectively. It also reflects the influence to household property income from different financial market structure.

income distribution. In the primary income distribution, the household income is divided into labor payment, property income and individual retained earnings by the source. We can learn from Table 1,¹ during the period of 1992-2012, mean proportion of labor payment is 81.36%, which was the most important income source. Mean proportion of individual retained earnings was 12.88%, far lower than labor income, and the mean proportion of property income was the lowest, only 5.97%.²

Table 1

The proportion of absolute value of all kinds of household income in primary distribution (Billion Yuan)

Year	Total income at primary distribution	Labor income and its proportion		Property income and its proportions		Individual retained earnings and its proportions	
1992	1779.5	573.7	82.59%	119.1	6.70%	190.7	10.72%
1993	2207.5	694.8	82.32%	180.0	8.15%	210.2	9.52%
1994	3134.1	985.0	80.43%	277.4	8.85%	336.1	10.72%
1995	3902.5	1223.6	82.22%	297.1	7.61%	396.6	10.16%
1996	4462.9	1427.5	83.10%	368.9	8.27%	585.4	13.12%
1997	5153.8	1625.0	81.24%	337.7	6.55%	629.1	12.21%
1998	5485.0	1785.1	80.80%	360.8	6.58%	692.2	12.62%
1999	5755.3	1924.3	81.90%	305.0	5.30%	736.9	12.80%
2000	6581.1	1913.7	79.38%	306.5	4.66%	1050.3	15.96%
2001	7124.9	2070.1	80.74%	294.4	4.13%	1077.5	15.12%
2002	7680.2	2302.3	83.98%	298.3	3.88%	931.7	12.13%
2003	8651.2	2572.6	82.92%	321.2	3.71%	1156.4	13.37%
2004	9749.0	2964.7	83.04%	376.8	3.87%	1277.1	13.10%
2005	11252.0	3422.0	82.78%	448.1	3.98%	1488.8	13.23%
2006	13111.0	3915.4	81.13%	724.6	5.53%	1749.9	13.35%
2007	15881.0	4660.9	80.55%	982.9	6.19%	2105.7	13.26%
2008	18540.0	5472.3	81.18%	1179.2	6.36%	2309.1	12.45%
2009	20654.0	6018.7	80.84%	1135.9	5.50%	2822.6	13.67%
2010	24186.0	6853.1	78.92%	1295.7	5.36%	3803.8	15.73%
2011	28428.0	8038.5	78.24%	1885.3	6.63%	4300.5	15.13%
2012	31946.0	9366.8	80.31%	2433.7	7.62%	3856.7	12.07%

Source: Calculated based on cash flow table.

¹ Household property income in this paper is defined according to the SNA (2008), “the income that was produced when the owner of two kinds of property, that is financial property and natural property, hand in these two properties to other organizations”. Residents’ housing is not financial property, either natural resources, so the income from housing cannot be accounted into household property income. The increased property from the residents’ self-own housing should be called as holding returns, and the increase in value by selling this kind of property is called the realized holding returns. Renting house is viewed as operating rent, and the income from renting should be recorded in Business preserve item.

² Here we referred the accounting method used by Bai and Qian (2009), in which individual stock income was defined as household department added-value minus its labor payment expenditure of this department, production tax net payment and property expense.

From 1992 to 2012, mean value of household income's share in primary distribution of national income was 63.3%, which was lower than that of the United States of America by 25.32 percentage points, and lower than that of Japan by 16.76 percentage points (Table 2).

Table 2

The share of household income in primary distribution of national income in China, USA and Japan (%)

Year	China	The United States of America	Japan
1992	66.06	90.92	-
1993	62.61	90.70	-
1994	65.15	89.52	86.64
1995	65.25	89.35	85.40
1996	68.43	88.90	83.08
1997	66.02	88.69	83.04
1998	66.06	89.76	84.05
1999	65.05	89.32	83.02
2000	67.15	90.25	81.34
2001	65.93	90.46	80.69
2002	64.49	89.12	79.40
2003	64.09	88.38	78.32
2004	61.14	87.70	76.33
2005	61.28	86.59	76.11
2006	60.73	86.94	76.37
2007	59.61	88.76	75.46
2008	58.66	90.51	77.74
2009	60.69	87.79	80.42
2010	60.50	85.48	77.72
2011	60.67	86.63	79.20
2012	61.65	87.10	78.58
Mean	63.39	88.71	80.15

Source: Calculated based on CEIC database.

Household income is the total of three types of incomes. Therefore, the gap of final income proportion can be decomposed into all kinds of gaps of all kinds of income origins. According to the sources of income (Table 3), the share's mean value in this period of household labor remuneration in China was 51.47%, while the proportion in USA is 64.31%. The former is lower than the latter by 12.84 percentage point. The ratio of the former's share in national income to the latter one is 0.8:1. However, the gap is even larger in terms of property income proportion. The mean of proportion of property income of Chinese residence is only 3.78%, while the same proportion is 19.4% in USA. The former is 15.62 percentage point lower than the latter, and the ratio between them is 0.19:1. Obviously, as far as the impact on the gap of the proportion of household's income between China and America, the impact from the financial income proportion gap is larger than the payment of labor proportion gap. The share

gap between two nations is 61.69%, which is caused by property income share gap. Compared to Japan, the share of Chinese household labor payment is 12.77 percentage point lower. The ratio between them is 0.8:1. In property income proportion, the former is 3.36 percentage point lower than the latter. The ratio between them is 0.53:1. In the national income share gap between China and Japan, labor remuneration share gap is the primary influence factor, while the share of property income gap accounts for 18.74% of the entire household income share gap, which is still an important factor that cannot be neglected.

Table 3

The share of three income resources to National Income in China, USA and Japan (%)

Year	Labor remuneration share			Property income share			The share of retained earnings		
	China	USA	Japan	China	USA	Japan	China	USA	Japan
1992	54.56	66.75	-	4.42	19.70	-	7.08	4.46	-
1993	51.54	66.40	-	5.11	19.61	-	5.96	4.69	-
1994	52.39	65.31	66.69	5.77	19.44	11.74	6.99	4.76	8.21
1995	53.65	64.86	66.90	4.97	19.56	10.69	6.63	4.93	7.82
1996	54.42	64.10	65.96	5.41	19.88	9.35	8.59	4.92	7.76
1997	53.64	63.88	66.17	4.33	19.92	8.86	8.06	4.89	8.01
1998	53.38	64.62	66.80	4.35	20.23	8.46	8.34	4.91	8.79
1999	53.27	64.99	66.00	3.45	19.33	7.93	8.33	5.00	9.09
2000	53.31	65.75	65.47	3.13	19.48	7.16	10.72	5.02	8.71
2001	53.23	65.83	65.75	2.72	19.39	6.21	9.97	5.23	8.73
2002	54.16	65.09	64.59	2.50	18.75	5.51	7.82	5.28	9.29
2003	53.15	64.52	63.26	2.38	18.69	5.14	8.57	5.17	9.91
2004	50.77	63.94	61.81	2.36	18.76	5.23	8.01	5.00	9.30
2005	50.73	63.05	61.59	2.44	18.61	5.57	8.11	4.92	8.95
2006	49.27	62.49	61.56	3.36	19.69	6.23	8.11	4.76	8.58
2007	48.01	64.10	60.44	3.69	19.92	6.59	7.90	4.74	8.43
2008	47.62	65.01	62.99	3.73	20.36	6.31	7.31	5.15	8.44
2009	49.06	64.22	65.01	3.34	18.03	6.15	8.29	5.54	9.26
2010	47.75	62.50	62.56	3.24	17.65	6.01	9.52	5.33	9.14
2011	47.47	61.94	63.87	4.02	19.46	6.24	9.18	5.22	9.10
2012	49.51	61.17	63.17	4.70	20.88	6.38	7.44	5.05	9.03
mean	51.47	64.31	64.24	3.78	19.40	7.15	8.14	5.00	8.77

Source: Calculated based on CEIC database.

Although at present the share of property income in Chinese household total income is the lowest, the impact of the gap of property income source on household income share is quite significant, because it is the primary factor in the income gap between Chinese and American people, and the second factor in the income gap between China and Japan. As capital stock per capita and labor production efficiency in China are both far less than those in USA and Japan, even if the labor market in China is undistorted, logically, reasonable labor payment proportion should be also lower than the current level of America and Japan. Considering from the share of labor remuneration in

national income of China, America and Japan, though there is a great space for increasing the share of labor payment to improve national income distribution structure and increase the share of household income, it is relatively limited when compared to increasing the share of property income. That is to say, excessively low property income is the most important reason for the low share of household income, but it is neglected by most research.

3. Analysis of causes for low property income in China

The proportion of Household property income in National income can be decomposed as the proportion of after-tax capital remuneration in national incomes and the proportion of resident property income in capital remuneration, that is:

$$\begin{aligned} \frac{\text{Household Property Income}}{\text{national income}} &= \frac{\text{after-tax return on capital}}{\text{National Income}} \times \frac{\text{Household Property Income}}{\text{After-tax return on capital}} \\ &= \left(1 - \frac{\text{Net value of production tax}}{\text{national income}} - \frac{\text{labor remuneration}}{\text{national income}} - \frac{\text{personal business surplus}}{\text{national income}} \right) \\ &\quad \times \frac{\text{household property income}}{\text{after-tax return on capital}} \end{aligned}$$

Therefore, the share of household property income is determined commonly by two distributions. One is the national income in all kinds of production factors, and the other is the capital remuneration in all kinds of institutional departments. In the first distribution, from 1992 to 2012, even though the share of non-labor payments in China is far higher than that of America and Japan (the mean value is separately higher by 12.84 and 12.77 percentage points), as the share of net value of production tax is higher in China (the mean value is higher than that of America and Japan by 13.37 and 12.77 percent point respectively), so the mean value of the share of after-tax return on capital remuneration in China, on the contrary, is lower than that of America by 3.67 points, and only higher than Japan by 8.89 percentage points (Table 4).

After-tax return on capital remuneration is distributed into all kinds of institutional departments mainly through financial market. Before this distribution, the proportion of this remuneration in national income of China is slightly lower than that of USA, but is clearly higher than that of Japan. However, after the distribution of financial market, the share of Chinese resident property income is far less than that of USA, and also obviously lower than that of Japan. This means that the higher proportion of production tax in China is an important reason that resulted in a property income proportion gap between China and America or Japan. The second distribution, that is the capital remuneration distribution in all kinds of economic departments, mainly resulted in the gap of the proportion of resident property income in China, America, and Japan.

Table 4

The proportion of after-tax returns on capital to national income in China, USA and Japan (%)

year	China	USA	Japan
1992	23.85	28.17	
1993	26.85	28.39	
1994	25.04	29.16	16.67
1995	25.51	29.58	16.71
1996	21.29	30.44	17.49
1997	22.54	30.62	17.11
1998	21.60	29.90	14.79
1999	21.90	29.55	15.35
2000	23.75	28.75	16.43
2001	24.79	28.56	15.92
2002	25.62	29.14	16.71
2003	25.31	29.89	17.67
2004	28.30	30.60	19.57
2005	28.26	31.68	19.97
2006	29.82	32.35	20.03
2007	30.83	30.78	21.53
2008	32.55	29.49	18.76
2009	30.31	29.96	16.35
2010	29.56	31.84	18.85
2011	30.06	32.47	17.34
2012	29.76	33.37	18.26
mean	26.55	30.22	17.66

Sources: Data calculated based on CEIC database. Among them, Chinese data comes from Cash Flows Statement; American data comes from the USA Federal Reserve; Japanese data origins from Institute of Economics and Society of Japanese Cabinet Office. The same below.

But, there are obvious gaps (Table 5) when comparing the obtained capital remuneration by Chinese Household in the second distribution with American and Japanese Household. Between 1992 and 2012, the mean value of proportion of property income in total capital remuneration in China was only 7.77%, while the proportion in America and Japan reached to 63.28% and 20.32% respectively. In the case that the mean share of after-tax capital remuneration in China was only slightly lower than that in the USA, the share of Chinese resident property income in total capital remuneration was 55.51 percentage points lower than that of USA, which only accounted for 12.28% of that of the USA. In the case that the mean share of after-tax capital remuneration in China is 8.98 percentage points higher than Japan, the share of Chinese resident property income in total capital was instead 12.62 percentage points lower than Japan, which only accounted for 32.24% of that of Japan.

Table 5

The share of Chinese, American, and Japanese households' property income in their nations' total returns on capital (%)

Year	Chinese Residents Property Income/returns to total capital (1)	USA household income/total capital remuneration (2)	Japan household income/total capital remuneration (3)	(1) / (2)	(1) / (3)
1992	11.48	70.86	-	16.20	-
1993	11.94	69.46	-	17.19	-
1994	14.11	66.22	41.55	21.31	41.55
1995	12.44	67.25	35.93	18.50	35.93
1996	13.48	65.87	27.40	20.46	27.40
1997	11.22	65.02	25.77	17.26	25.77
1998	11.26	68.03	27.46	16.55	27.46
1999	8.90	64.89	24.24	13.72	24.24
2000	5.71	68.66	20.20	8.32	20.20
2001	4.95	68.55	16.45	7.22	16.45
2002	4.60	63.54	13.07	7.24	13.07
2003	4.43	61.17	11.60	7.24	11.60
2004	4.19	57.63	11.18	7.27	11.18
2005	4.39	56.26	12.39	7.80	12.39
2006	5.81	59.18	15.09	9.82	15.09
2007	6.22	65.53	16.53	9.49	16.53
2008	5.86	67.57	18.44	8.67	18.44
2009	5.55	59.44	18.94	9.34	18.94
2010	4.98	51.34	16.17	9.70	16.17
2011	5.40	54.74	18.38	9.86	18.38
2012	6.18	57.71	17.81	10.71	17.81
Mean value	7.77	63.28	20.45	12.27	37.97

Source: Calculated based on CEIC Database.

Notes: On the row of mean value, the value in the last two columns are the result that the first column divide the second column and the result that the first column divided the third column respectively, rather than the result of average value of the whole column.

Property income of household mainly comes from individual holding financial assets. The scale of financial assets of Chinese household is far less than that of USA and Japan, so whether this big gap of property income is caused by the gap of financial assets? We calculated the financial assets of Chinese household from 1992 to 2012 using the data from China Financial Stability Report (2012) which was issued by People's Bank of China, and the data from 2004 to 2012 comes directly from this report. For the scale of financial assets from 1992 to 2003, based on the data in 1991, we estimated it by using flow data of household financial dealing in cash flows statement. For the year 2011 and 2012, we used the stock data in 2010 from China Financial Stability Report (2012) (Table 6).

Table 6

Chinese household financial assets scale between 1992 and 2012 (100 million yuan)

	Financial assets	RMB Currency	saving	Security	Security Bond	Security Stocks	Share of Security investment fund	Security customer margin	Insurance Reserves Found	financing fund on commission	Others (net)
1992	16744	3469	11545	-	-	-	-	-	-	-	-
1993	21806	4692	14764	-	-	-	-	-	-	-	-
1994	29572	5831	21519	-	-	-	-	-	-	-	-
1995	38440	6308	29662	-	-	-	-	-	-	-	-
1996	49432	7042	38521	-	-	-	-	-	-	-	-
1997	60609	8142	46280	-	-	-	-	-	-	-	-
1998	73074	8963	53407	-	-	-	-	-	-	-	-
1999	85289	10764	59622	-	-	-	-	-	-	-	-
2000	96158	11722	64332	-	-	-	-	-	-	-	-
2001	110276	12551	73762	-	-	-	-	-	-	-	-
2002	129997	13822	86911	-	-	-	-	-	-	-	-
2003	153107	15797	103617	-	-	-	-	-	-	-	-
2004	180369	17820	129575	15190	6293	8897	1905	1339	14113	-	-
2005	209083	19945	150551	14399	6534	7865	2449	1566	18315	-	-
2006	251600	22469	171737	23945	6944	17001	5618	3128	22680	-	-
2007	335495	25211	181840	58311	6707	51604	29716	9904	27097	-	-
2008	342870	28622	228478	25139	4981	20157	17011	4760	37831	-	-
2009	410869	31982	268650	49997	2623	47374	8383	5695	46226	-	-
2010	494832	37691	315642	59169	2692	56477	7346	4447	52667	14975	-
2011	502246	42318	352797	-	-	-	-	-	-	-	-
2012	511952	45580	411352	-	-	-	-	-	-	-	-

Sources: Statistical Yearbook of China, Almanac of China's Finance and Banking, China Financial Stability Report 2012.

Notes: (1) The estimated results are the values of native currency from 1992 to 2003 and 2011, 2012. The data from 1992 to 2003 was calculated as 80% of the total currency according to Wang Chunzheng (1995), and the data of 2011 and 2012 was estimated according to the average value from 2004 to 2010. (2) Insurance Reserve Found include pensions and insurance. The report of Chinese Financial Steady (2012) compared the shares of insurance and pensions in household Financial Assets with this index in the USA, Britain, Germany and Japan.

During the passed 2 decades, the scale of financial assets held by Chinese household is growing rapidly. In 2012, the scale of household financial assets is 30.58 times of that in 1992. The yearly growth rate reached to 18.65%. In 2012, financial assets per capita reached to 37810.34 Yuan, which is 26.46 times of that in 1992. The yearly growth rate on average is 17.80%. If we calculate based on the unchanged price in 1978, the scale of financial assets of comparative price per capita in 2012 is 10.87 times of that in 1992. The yearly growth rate is 12.67%. The above yearly growth rate all surpassed the economic growth rate in the same period. However, compared with the United States of America and Japan, the scale of financial assets of Chinese household is still relatively small. In 2012, the total scale of Chinese household

financial assets was only 18.25% of that of USA, and 41.69% of that of Japan (Table 7). When considering on the level of per capita, the gap among China, USA and Japan is larger. In 2012, the financial capital stock per capita in China was only 4.23% of USA, and 3.92% of Japan.

Table 7

Financial capital scale comparison among China, USA and Japan

Year	Household financial assets total volume (billion dollars)			Per capita financial assets (\$)		
	China	USA	Japan	China	USA	Japan
1992	304	14181	-	259	55606	-
1993	378	15236	-	319	59105	-
1994	343	15701	-	286	60312	-
1995	460	17737	-	380	67493	-
1996	595	18977	-	486	71549	-
1997	731	21719	10622	591	81106	84195
1998	883	24450	10045	707	90472	79424
1999	1030	28157	12305	819	103254	97142
2000	1162	26914	13073	916	95382	102996
2001	1332	25701	11418	1044	90153	89683
2002	1571	23623	11319	1223	82081	88788
2003	1850	27098	12576	1431	93337	98483
2004	2179	30943	13585	1676	105591	106307
2005	2552	33310	14260	1951	112628	111608
2006	3155	36840	13645	2400	123379	106683
2007	4410	38574	13138	3338	127906	102617
2008	4935	31718	14119	3716	104207	110231
2009	6015	34551	15949	4507	112541	124569
2010	7309	39100	17115	5451	126404	133652
2011	8363	40292	18837	5769	129314	147395
2012	10098	44433	19452	5990	141563	152549

Source: Arranged based on CEIC database.

Seen from the financial assets structure, saving deposit is still the most important part of financial assets of Chinese household (Table 8). Though the scale of household saving has a declining trend, in 2012 the proportion of residential saving deposit in financial assets rose up to 80.35% again. The proportion of insurance reserve fund and stock in household financial assets recently increased quickly. This change represents that the demand for diversified financial assets allocation of Chinese household began to rise, and the awareness of investment, financing and risk aversion was enhanced.

Table 8
Chinese household financial assets structure between 1992 and 2012 (%)

Year	Currency	Deposit	Security: bond	Security: stocks	Insurance reserve	The share of security investment fund	Others
1992	20.72	68.95	-	-	-	-	-
1993	21.52	67.71	-	-	-	-	-
1994	19.72	72.77	-	-	-	-	-
1995	16.41	77.16	-	-	-	-	-
1996	14.25	77.93	-	-	-	-	-
1997	13.43	76.36	-	-	-	-	-
1998	12.27	73.09	-	-	-	-	-
1999	12.62	69.91	-	-	-	-	-
2000	12.19	66.90	-	-	-	-	-
2001	11.38	66.89	-	-	-	-	-
2002	10.63	66.86	-	-	-	-	-
2003	10.32	67.68	-	-	-	-	-
2004	9.88	71.84	3.49	4.93	7.82	1.06	0.98
2005	9.54	72.01	3.13	3.76	8.76	1.17	1.64
2006	8.93	68.26	2.76	6.76	9.01	2.23	2.05
2007	7.51	54.20	2.00	15.38	8.08	8.86	3.97
2008	8.35	66.64	1.45	5.88	11.03	4.96	1.69
2009	7.78	65.39	0.64	11.53	11.25	2.04	1.37
2010	7.62	63.79	0.54	11.41	10.64	1.48	4.51
2011	8.43	70.24	-	-	-	-	-
2012	8.90	80.35	-	-	-	-	-

Sources: Calculated based on The Report of Chinese Financial Steady (2012), Cash Flows Statement.

Notes: This report only lists the total of household financial assets and its sub-item data from 2004 to 2010.

We estimate other years' domestic currency and saving data, according to the date of Cash Flows Statement. We cannot calculate the percentage of the other items due to a lack of data..

In terms of the residential financial assets structure, China is similar to Japan in the dominant position of banks and indirect financing the largest part of financial assets of household in the two countries is saving deposit, while in the USA, where direct financing dominates, the allocation of financial assets of the household is dispersed (Table 9). In the financial assets of Japanese household, the share of bank deposit is basically stable at about 50%. The share of insurance and pension is also extremely steady at about 26.5%, and the share of fixed-returns bonds is relatively stable in recent decade. Though the share of saving deposit in Japanese household financial assets is the largest, the average level is still lower than that of China by 19.13%, in the close period of Chinese sample that we researched (1997-2012). Japanese family allocated more financial resources in the field of insurance and pensions. The proportion of financial assets of Chinese and Japanese residents in the field is 17.16% in 2010. In the USA, the allocation of family financial assets also reflects the structure of financial market whose major share is direct financing. In the financial assets held by American households, the largest proportion is shares in various companies, insurance and

pension funds, while the shares of deposits, bonds and various types of investment funds are roughly the same. This shows that the American families are more and more inclined to holding stocks and bonds by owning various investment funds indirectly, rather than directly investing in the stock market and picking stocks and bonds.

Table 9

Households financial assets structure in Japan, USA from 1992-2014 (%)

Year	Currency		Saving		Bond		Stock and fund share		Insurance and pension	
	Japan	USA	Japan	USA	Japan	USA	Japan	USA	Japan	USA
1992		3.13		13.75		10.88		39.18		33.05
1993		3.29		12.08		10.75		40.38		33.50
1994		3.16		11.21		11.61		40.08		33.94
1995		2.76		10.69		11.42		41.4		33.73
1996		2.34		10.40		10.97		42.96		33.33
1997	2.26	1.92	51.87	9.94	7.00	10.08	6.68	44.67	26.78	33.39
1998	2.44	1.65	52.87	9.19	6.30	9.44	6.17	47.04	27.07	32.67
1999	2.55	1.53	51.03	8.57	5.80	8.75	9.85	49.02	26.08	32.14
2000	2.51	1.20	51.36	8.58	5.83	8.20	8.60	50.18	26.65	31.84
2001	2.82	1.33	52.71	10.09	5.48	8.54	6.53	46.15	27.24	33.89
2002	2.94	1.32	52.18	11.15	4.52	8.28	6.04	43.73	29.37	35.52
2003	2.95	1.31	50.58	11.56	4.40	7.73	7.38	43.56	29.07	35.84
2004	2.97	0.99	50.33	11.05	4.94	9.30	8.22	44.5	28.30	34.15
2005	3.26	0.74	46.85	11.11	5.84	8.95	12.67	45.62	26.58	33.57
2006	3.26	0.53	46.16	11.15	6.81	8.84	12.52	46.86	26.33	32.62
2007	3.39	0.31	47.75	11.20	7.81	8.65	9.03	47.86	27.20	31.97
2008	3.59	0.36	51.11	12.68	6.39	10.60	6.01	42.78	28.75	33.59
2009	3.55	0.73	50.75	13.47	6.72	11.99	6.35	38.29	28.28	35.51
2010	3.63	0.71	51.00	12.90	6.72	10.95	6.75	39.27	27.80	36.17
2011	3.60	1.09	52.09	12.57	5.97	9.79	6.47	40.56	27.84	35.98
2012	3.62	1.42	51.40	12.53	6.03	8.88	7.20	41.4	27.63	35.77
2013	3.50	1.57	49.63	11.85	6.61	7.62	9.46	44.47	26.70	34.50
2014	3.51	1.72	49.03	11.56	7.13	6.53	9.54	46.32	26.37	33.87

Sources: Calculated based on the data from Japanese Bank, Federal Reserves of USA.

Notes: In this table the data about Japan comes from household financial balance sheet issued by Japanese Bank. There is always about 5% error between the sub-item data and the total in the sheet every year.

Excessively low return on investment is the main reason for low share of property income in China. In China whose stock of capital per capita is lower than that in the US and Japan, the actual returns rate on capital of investment of Chinese household, on the contrary, is lower than that in the US and Japan where capital is adequate. This is a paradox against the general principles of economics.

Chinese household property income per capita was 1797.42 Yuan in 2012, which is 17.68 times of that of 1992, and the yearly growth rate is 15.44%, which is lower than financial assets per capita growth rate in the same period by 2.36 percentage points. If we calculate based on the unchanged price in 1978, the comparable property income

per capita in 2012 is 7.26 times of that of 1992, with an average annual growth of 10.42%, which is lower than the growth of comparable price of financial assets per capita by 3.07 points. Average growth of property income per capita has been lower than that of the scale of financial assets per capita, which indicates that the ROI of household financial assets has been declining in the past two decades. If we define the ROI as property income divided by financial assets except currency, we found that during the data period, the nominal return on investment of Chinese residents has always been low after a rapid decline in 1994–2004. In the years of 1994–2004 nominal ROI rapidly decreased to 2.32% from 11.68%, then rebounded a little. However, it only rebound to 5.22% in 2012, just close to the 1998 level. After taking into account inflation, the real returns on residents' financial assets in China are significantly lower than the United States after 2002 and lower than that of Japan in most years (Figure 1).

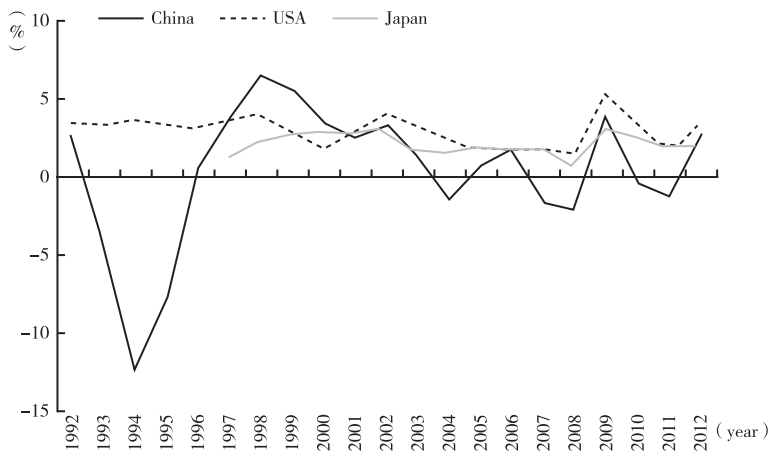


Figure 1. Returns on actual financial assets comparison between 1993 and 2012

Sources: The data was arranged and calculated based on China Financial Stability Report (2012), Chinese Statistics Annual Book, and some related data from Federal Reserves of USA, Institute of Economics and Society of Japanese Cabinet's office and Japanese Bank.

Contrary to economic logic, in China that is lack of capital, ROI is not higher but lower than that of USA and Japan whose capital is richer. Between 1992 and 2012, after deducing inflation factor, the average real return on financial investment of Chinese resident was only 0.26%. This level was less than one tenth of that of American residents. Even if we remove the years from 1993 to 1996, in which the ROI was extremely low, from 1997 to 2012, the real ROI in America and Japan was still 1.59 times and 1.17 times of that in China respectively. It is well known that in the normal market economy, the actual ROI of residents on financial investment should be inversely related with its capital scarcity. That is, the scarcer one nation's capital is, the higher marginal production level of capital is, and the higher the marginal payment to

its capital is. Although Chinese financial capital and material capital are both growing up rapidly after the reform and opening-up policy, capital stock per capita is far less than that of USA and Japan.

The estimated data from International Comparison Center at the University of Pennsylvania shows that by 2011, based on purchasing power parity, China's Total Factor Productivity (TFP) is 40.66% and 57.13% of the United States and Japan respectively, and China's capital stock per capita is only 25.79% and 23.47% of that of the United States and Japan respectively. According to the academic estimation, the elasticity of China's capital-output is generally around 0.5, while that of the United States and Japan is 0.3. According to the equation $r = \alpha \cdot A \cdot \kappa^{\alpha-1}$, it is a rough estimation that China's actual return on capital should be 1.33 times and 1.96 times of that of the United States and Japan respectively. Even taking into account the fact that the share of Chinese household financial assets in low-risk assets is high, the current return on investment is still low, and does not match the existing Chinese production technology and capital stock per capita.

Apart from the unreasonably low ROI, the deviation between household financial claims and final financial investment return also proved the distortion in capital remuneration distribution. A research (Li and Li, 2015) shows, after the reform and opening-up in China, the scale of Chinese household financial assets increased rapidly. Before 1999, this kind of growth is far higher than that of social productive capital. This means that the claiming right of household to require return on capital is larger and larger. In 1999, the share of financial capital (claims) held by household in social productive capital stock reached to 47.51%. However, in 1999, the share of household property income in total after-tax capital remuneration was only 8.91%. This gap stood out clearly after People's Bank of China reduced interest rate continuously for 8 times. From 1999 to 2006, the proportion of household financial claims in social capital stock declined by less than 4 percentage points, and the range of reduction was only 8.4%, but the proportion of household in the distribution of capital remuneration decreased as high as 34.72%, down to only 5.81%.

Though the USA and Japan carried out interest rate controlling policies in different period, they never exert such significant influence on national income distribution. Direct financing has long dominated financial market in the US, so the share of bank deposit in family financial assets is far less than that of stocks and insurance, and bank deposit is not important to property income. Therefore, interest rate controlling policy has limited influence on household income. The structure of Japanese household financial assets is similar to that of Chinese, but the share of saving is lower than that of China by about 20 percentage points. Except for bank saving, Japanese household can choose many forms of financial assets. In addition, in the distribution of factors, simultaneously, the share of labor payment in USA and Japan is higher than that in China by nearly 13 percentage points. Therefore, under low labor payment proportion

and narrow choosing space of financial products, the influence of interest rate control on Chinese household income is especially obvious. From 1996 to 2002, People's Bank of China continuously reduced interest rate for 8 times, which directly resulted in the large decline of ROI. In the subsequent decade, actual saving interest rate is almost zero, so the household return rate on capital could hardly be improved.¹

The loss of household property income caused by financial control is shocking. A research proved that from 1992 to 2012, interest rate control resulted in 56.67% of due property income was transferred to enterprises and government, and the highest ratio reached to 81.13%. The loss of the household income accounted for about 3.35% of the GDP from 1992 to 2012.

4. Results and conclusions

Based on Cash Flows Statement, this paper decomposed the distributional result of national income. Using USA and Japan as references, we comprehensively compared the distributional structures of national incomes among China, the US and Japan, and try to find out the cause for excessively low share of Chinese household income.

By sorting the data of Cash Flows Statement, we found that in the present Chinese household income structure, most of the income is labor payment, and that property income accounted for the least, which seems to be the least important income source. This might be the reason that most of researches so far considered the distribution among labor and capital factors as the key to turning the structure of the final distribution. However, the result of international comparison showed that the impact on the structure of the final distribution by the gap of property income proportion cannot be neglected, especially in the condition that the share of Chinese household property income at present is extremely low. In the proportion gap of household income between the USA and China, 61.69% was caused by property income gap. Compared with Japan, the number of that is 18.74%. If we consider that at present the level of capital stock per capita and the production efficiency per capita in China are far less than that of two developed countries, then it is normal that the proportion of Chinese plausible labor payment is to some extent lower than that of USA and Japan. In such circumstances, it is clearly important that improving property income and its share's impact on the final distributional structure. Compared with the advanced market economies, the share of Chinese household property income is too low nowadays, which also means that there is a large space to be improved.

Considering the reasons that caused the excessively low Chinese household property income, one comes from the low share of household financial claims in the whole social productive capital stock, for the highest was only 47.5% in the year of

¹ Estimated Method in details see Li and Li (2015).

1999; another comes from controlling low interest rate for long time. Only for the latter, after distributing the factors and taxing the production in Chinese national income distribution, though the share of after-tax capital remuneration was not far less than that of USA, and even higher than that of Japan, but among the three nations, there was a huge gap of the share of household capital remuneration in national income after the allocation of financial market. Between 1992 and 2012, this kind of share of China was on average lower than that of USA by 15.62 percentage points, and lower than Japan by 3.36 percentage points. Through the calculation of checking for three nation's household financial assets, we found that the main reason that caused the excessively low Chinese household property income is the excessively low ROI. In the condition that Chinese capital stock per capita is far less than the USA and Japan, the actual ROI of Chinese household is largely lower than the latter, even allowing for the high share of mid-low risk financial assets ¹, the current ROI is still unreasonable (Li and Li, 2015). The underlying cause for this kind of phenomena is long time lower controlled interest rate and financial market access restrictions.

Besides interest rate control, the lack of financial products is also a restriction for household investment choice, and also a large restriction for the possibility of improving household property income. Even compared to Japan where indirect financing dominates, the share of bank deposit in Chinese household financial assets is quite high. The size of household property income is not only related to that of the household financial assets, but also related to market risks. In current Chinese financial market, most of financial products available to residents are either high risks or low risks, which cannot form the diverse pattern with reasonable distribution from low-end to high-end, so this is a restriction to the possibilities that Chinese household choose different capital portfolio according to their risk preference. Therefore, after lifting interest rate control on deposit, under the premise of assuring market stability, it is of great importance to ease market access restriction and encourage financial products innovation to reverse current situation of excessively low household property income.

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