35th IARIW GENERAL CONFERENCE
SESSION 12: IMPROVING THE MEASUREMENT OF HOUSEHOLD
FINANCES IN SURVEYS

IT-SILC Measurement of the Household Finance, Wealth and Consumption

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OVERVIEW

❑ The Consumption & Wealth Module in Italy

❑   Improvements in the estimation of the value of the main residence and financial assets

❑   Quality assessment with external sources

❑ Concluding remarks & Future developments

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THE CONSUMPTION & WEALTH MODULE

❑ In Italy the Consumption & Wealth Module (EU-Grant Agreement) is carried out together with the annual 2017 IT-SILC data collection (29,952 households)

❑ The goal of C&W module: the measurement of joint distribution on income-consumption-wealth at household level

❑ The C&W module gives us the opportunity to improve the estimation of the value of the main residence and financial assets in IT-SILC data processing

❑ The collection of new variables on food consumption and transport, jointly with the already available data on housing costs, enables to achieve a reliable prediction of total consumption expenditures to be used in the statistical matching applications

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THE WEALTH MODULE: Value of main residence

	HV010T4	
	Value of main residence	
Don't know	3131	19.70
0	1	0.01
Value	**12763**	**80.30**

	HV020T4	
	Possession of second (more) residence(s)	
Don't answer	87	0.21
Don't know	3	0.01
Yes	2801	6.61
No	39502	93.18

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THE PRODUCTION PROCESS: value of main residence

❑ The Module's raw data were submitted to the control, correction and imputation process: (i) detection and removal of the outliers through a trimming procedure; (ii) imputation only for the value of the main residence, the food at home and the value of the financial activities

❑ For the first time, the 2017 tax returns were used to estimate, starting from the cadastral value of the residence, a market value of the main residence
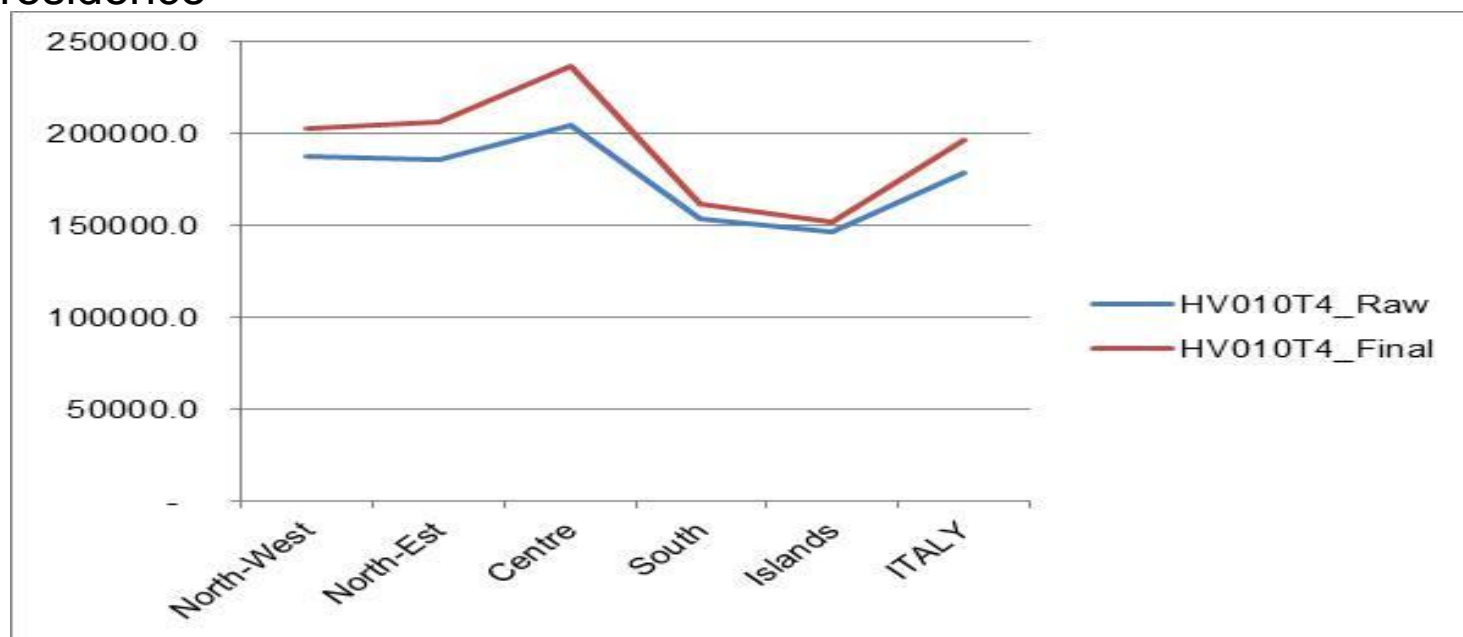
THE COMPARISON WITH SHIW

❑ TENURE STATUS

	SHIW14	SHIW16	SILC17
Owner	16642470	17389972	17741403
	67.73	68.14	68.72
NON-Owner	7929524	8132297	8075644.9
	32.26	31.87	31.28
Total	24571994	25522269	25817048

❑ HV010T4 VALUE OF MAIN RESIDENCE

	N Obs	N	N Miss	Mean	Median	MIN	Q1	Q3	MAX	Sum
SHIW14	**8156**	5826	0	219198	180000	10000	120000	250000	2500000	3,648,000,800,000
SHIW16	**7421**	5303	1	204828	160000	10000	100000	250000	3500000	3,561,816,700,000
SILC17	**22226**	15894	6332	196393	150000	3238	110000	230000	3000000	3,484,285,600,000
Ministry of Economy and Finance 2014				190550						

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THE WEALTH MODULE: FINANCIAL ASSETS

- PV010T4 PV020T4 Possession and Value of deposits/bank accounts

PV010T4	Frequency	Percent
Yes	33151	**78.20**
No	9242	21.80

PV020T4	Frequency	Percent
Don't answer	11698	35.29
0	2226	**6.71**
Value	19227	**58.00**

- Possession and Value of bonds, shares publicly traded or mutual funds

PV030T4	Frequency	Percent
Yes	2401	5.66
No	39992	94.34

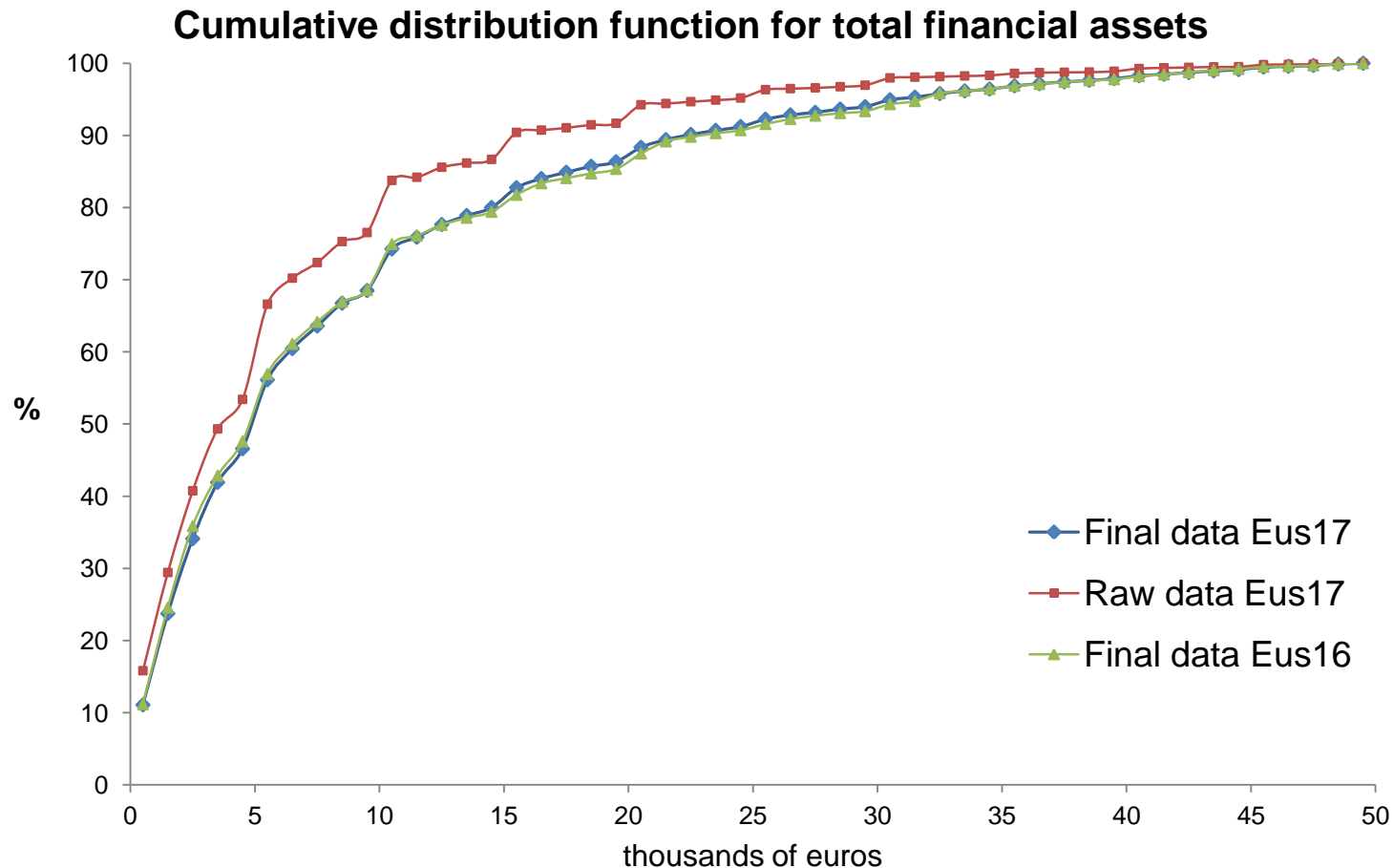| PV040T4	Frequency	Percent
Don't know	804	33.49
0	43	**1.79**
Value	1554	**64.72**

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THE PRODUCTION PROCESS: value of financial assets

❑ The impact of editing & imputation on the estimation of Total financial assets held by individuals. End of year 2016

TOTAL FINANCIAL ASSETS	Number of cases	Weighted cases (thousands)	Mean (euros)	Sum (million of euros)
Observed	**19,400**	**22,020**	**14,898**	**328,055**
- RAW DATA	*12,788*	*13,906*	*9,365*	*130,231*
- RAW DATA+ Capital Accumulation	*1,232*	*1,541*	*28,901*	*44,525*
- LONGITUDINAL DATA(REPLACED)	*5380*	*6,572*	*23,323*	*153,299*
Imputed by model	*7,715*	*8,808*	*9,518*	*83,834*
Retrieved by longitudinal data	*7,766*	*9,922*	*14,003*	*138,941*
Final data	**34,881**	**40,750**	**13,517**	**550,830**

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THE PRODUCTION PROCESS: value of financial assets

❑ Comparison of the distributions of the Total financial assets respectively for raw and final data 2017 versus final data 2016

Cumulative distribution function for total financial assets

Legend:
- Final data Eus17
- Raw data Eus17
- Final data Eus16

x-axis: thousands of euros
y-axis: %

COMPARISONS WITH SHIW: value of hh deposit

❑ HV030T4: HOUSEHOLD'S POSSESSION OF DEPOSIT/ BANK ACCOUNT

At least one deposit in the household	SHIW14	SHIW16	SILC17
no	1682794	1782744	1808538
	6.85	6.99	7.01
yes	22889201	23739525	24008510
	93.15	93.01	92.99
Total	24571994	25522269	25817048

❑ HV040T4: VALUE of households' savings deposits/account held by Banks & P.O.

	N Obs	N	N Miss	Mean	Median	MIN	Q1	Q3	MAX	Sum
SHIW14	8156	7578	578	12221	5000	0	1500	10900	2000000	279,732,901,331
SHIW16	7421	6918	503	14630	5000	0	1601	12171	1770271	347,312,309,911
SILC17	22226	20856	1370	15480	8717	20	3392	19610	248510	371,646,293,327

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# COMPARISONS WITH SHIW: other hh financial assets

❑ HV050T4:   HOUSEHOLD'S POSSESSION OF BOND, SHARES PUBLICLY TRADED OR MUTUAL FUNDS

At least one financial asset (other than deposit)	SHIW14	SHIW16	SILC17
no	18495878	20004096	19309140
	75.27	78.38	74.79
sì	6076116	5518174	6507908
	24.73	21.62	25.21
Total	24571994	25522269	25817048

❑ HV060T4:   VALUE OF BOND, SHARES PUBLICLY TRADED OR MUTUAL FUNDS

	N Obs	N	N Miss	Mean	Median	MIN	Q1	Q3	MAX	Sum
SHIW14	8156	2206	5950	54558	25000	0	10000	51046	5108000	331,503,204,447
SHIW16	7421	1738	5683	62877	23270	9	10000	50297	4700220	346,968,300,896
SILC17	22226	5168	17058	25164	10000	50	3360	29477	650066	163,762,136,574

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COMPARISONS WITH SHIW: distributional shapes

Value of deposits

Value of financial activities

SHIW14
SHIW16
SILC17

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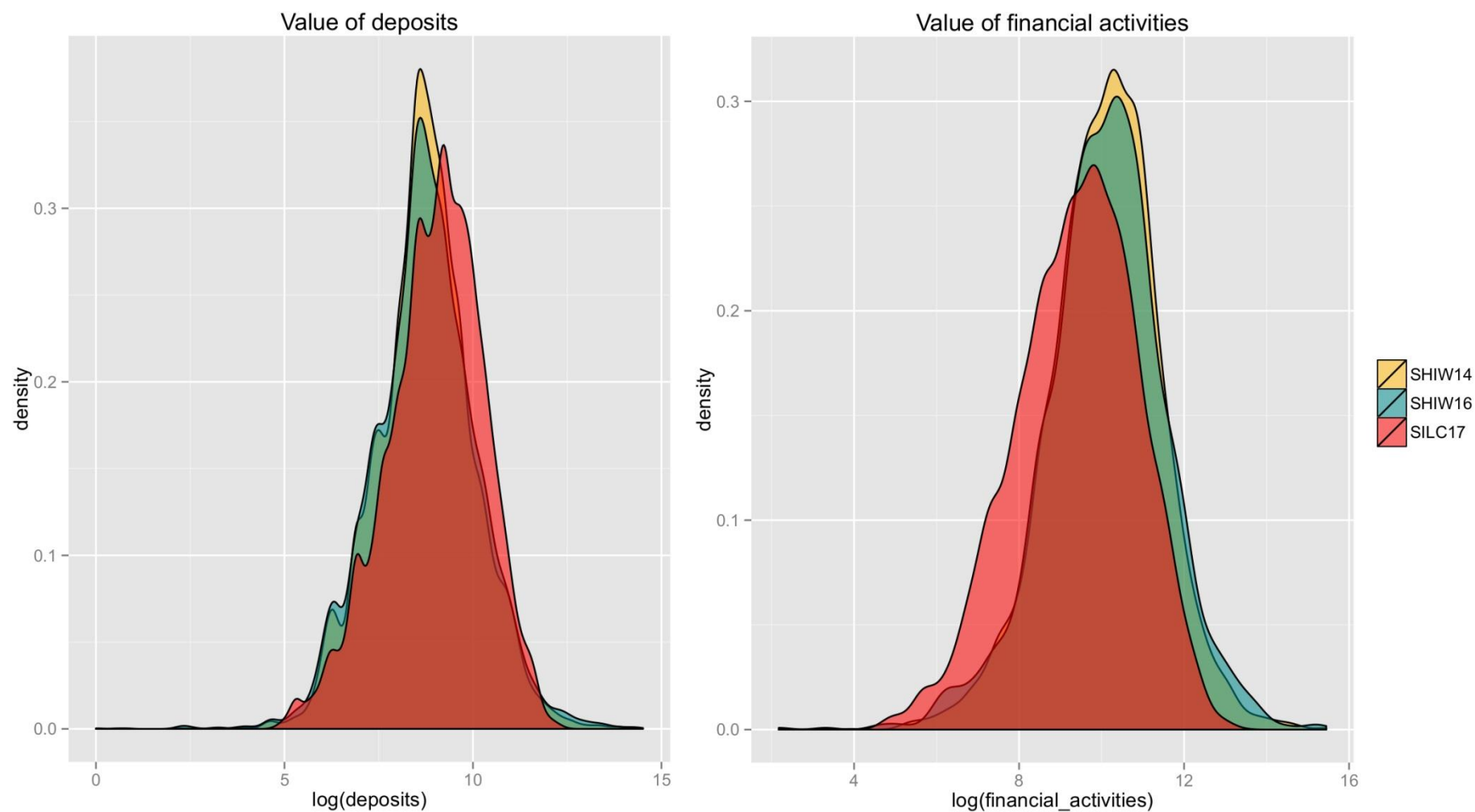
THE CONSUMPTION MODULE

Target variables on Consumption included in the module:

- Food at home (weekly)
- Food outside home (weekly)
- Public transport (weekly)
- Private transport (weekly)
- Regular savings (monthly)

➢ In IT-SILC a large set of variables on housing costs is collected yearly
➢ In HBS most of those components is also collected

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CONSUMPTION VARIABLES

An harmonized housing costs variable together with food and transport expenses can be used as good predictors of the total consumption

In HBS 2016 those consumption components represent 63% of total household expenditures

In order to compare the module variables with HBS, we have set-up a list of "harmonised" variables in HBS, using the same components that we have collected in IT-SILC

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COMPARISON WITH HBS YEAR 2016

(Values in euros, weekly/monthly reference period)

	N	Mean	Median	Minimum	Maximum	Sum
FOOD AT HOME						
HBS (Division 01 of COICOP)	15321	104.8	91	1	927	2,687,490,587
SILC	22226	103.9	95	0	1200	2,681,403,926
FOOD OUTSIDE HOME						
HBS	10413	39.8	24	0	516	697,109,817
SILC	14538	63.5	45	1	770	1,073,172,246
PUBLIC TRANSPORT						
HBS	3777	13.8	7	0	417	96,563,361
SILC	3829	12.2	7	0	581	59,322,805
PRIVATE TRANSPORT						
HBS	12985	47.1	41	2	314	1,008,719,806
SILC	17357	51.0	41	1	2354	1,019,928,562
REGULAR SAVINGS						
HBS	3450	390.5	250	0	8250	2,095,643,950
SILC	6461	312.5	200	1	12000	2,215,597,891

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COMPARISON WITH HBS YEAR 2016

The variable "Total transport" (obtained as sum of the public and private components in IT-SILC) is very distant if compared to the division 07 of COICOP "Transport"

Looking at HBS Transport variable, the Division 07 also included the household expenditure for a car or motorbike

(Values in euros, weekly reference period)

	N	Mean	Median	Minimum	Maximum	Sum
HBS Transport (Division 07 of COICOP)	12707	76.8	43	0	1507	1,627,421,319
SILC Total Transport	18480	50.4	41	0	2354	1,079,251,367
Subset of households who didn't bought a car or motorbike in 2016:						
HBS Transport (Division 07 of COICOP)	11803	56.0	39	0	902	1,095,303,524
SILC Total Transport	17429	49.1	39	0	2354	991,320,259

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CONCLUDING REMARKS

❑ The final results of the 2017 C&W module are quite good. Some variables, specifically those included in the household questionnaire, have a high response rate (e.g. food at home). On the other hand, some variables associated to financial assets display a large number of missing data

❑ The data collected on the value of the main residence indicate that about 80% of the owners provided an estimate, the remaining 20% missing is imputed by the "cadastral value" of property (admin data)

❑ The data collected on the financial assets show an acceptable response rate: about 58% on hh savings in deposits and 64% on hh value of bonds, shares publicly traded or mutual funds. Half of missing data is imputed by regression model and the remaining 50% is retrieved by longitudinal basis

❑ The data quality assessment of C&W module with external sources (SHIW and HBS) is quite satisfactory (except for financial assets other than deposits and consumptions of food outside home).

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oppure CONCLUDING REMARKS

❑ In IT-SILC 2017 for the first time we collected new variables on consumption and wealth with stand-alone values and useful for the statistical matching of different surveys

❑ The final results of the C&W module are quite good and the data quality assessment with external sources (SHIW and HBS) is quite satisfactory

❑ The improvements in the measurement of the financial assets:

- new collection strategy in the annual SILC

- new estimation methodology through the application of interest rates to stocks and extensive use of longitudinal data

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FUTURE DEVELOPMENTS

❑ Acquisition of new administrative data (fiscal data on taxation of income from capital investment) for improving the estimation of financial assets

❑ Extension of the C&W module data collection in the current and in the next surveys with some changes in the questionnaire suggested by the experience made

❑ Use of the new variables in the statistical matching of HBS and SHIW for the production in Italy of micro data on the joint distribution of household income, consumption and wealth

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