IS HOUSING VIA MORTGAGE AFFORDABLE IN ALBANIA?

EVIDENCES FROM A COMPOSITE AGGREGATED INDEX-BASED ANALYSIS

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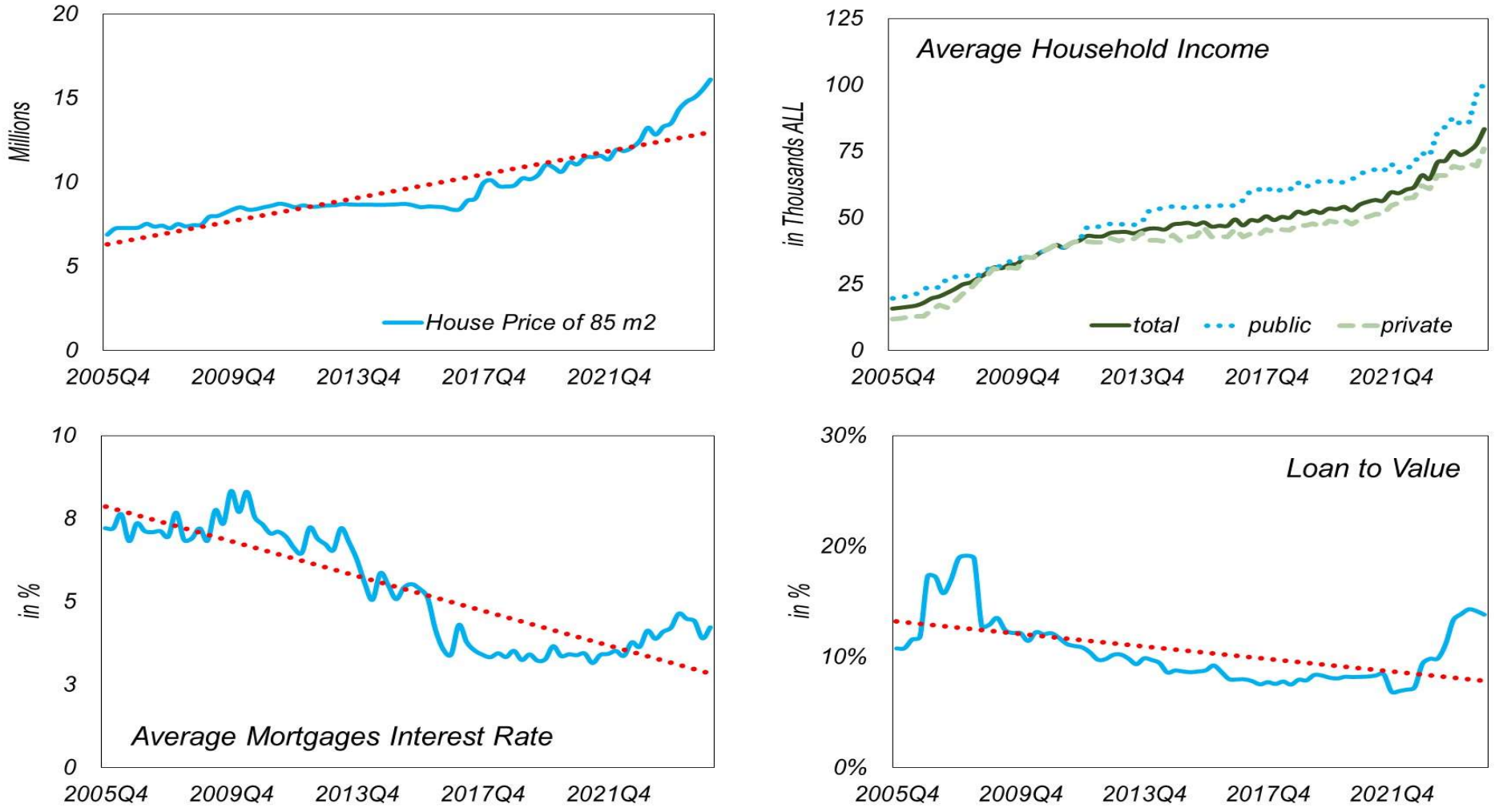
Introduction … (1 – 2)

Figure 1. House price, interest rate, income and loan-to-value, over 2005 – 2024.



Source: Bank of Albania, INSTAT, Author's calculations.

The aim of this paper is two-fold, upon which it:

1. *Develops a comprehensive metric for assessing housing affordability in the context of Albania;*

2. *Evaluates households' ability to qualify for a mortgage based on key financial indicators;*

Following the approach of Biljanovska, *et al.*, (2023), our Housing Affordability Index (HAI) focuses on two key dimensions:

1. The ability of a dual-income household to qualify for a mortgage loan to purchase an average-priced, optimally sized home, considering financial costs, income type, loan maturity, and other relevant economic factors;

2. Listings of single-family homes and apartments (*and exclude listings of rentals, land parcels, mobile homes, or commercial properties*).

HAI provides us with a way to track over time (on quarterly basis) whether housing is becoming more or less affordable for the typical household (family).

The literature … (1 – 2)

"**Housing Affordability**" - the most frequently used terms in the era of rapid urbanization, BUT, to date, no universally acceptable definition exists among the academicians and practitioners, among which in the contest (example) of:

- **Canada's case** - Advory (2019) sees it as: *"…is available at a cost that does not compromise a household's ability to attain other basic needs of life, including needs for food, clothing and access to education…".*

- **UK's case** - London Plan (2019) sees it as: *"…social rented, affordable rented and intermediate housing, provided to eligible households whose needs are not met by the market…"*. Households who are not capable of owning (renting) a house and require assistance from the government.

BUT, as Cai (2017) and Labudová and Sipková (2019) state, it is important that it:

- Distinguishes between ***HOUSING ACCESS*** and ***HOUSING AFFORDABILITY***;

- Treats the relationship between two subjects: ***PEOPLE*** (their incomes) and ***THEIR DWELLING*** (housing expenses);

The term, although a subjective, is very much contingent to *economic development* and *income levels* and its usage may depend also on the locality and may change from region to region [Mia and Zull (2020)];

The literature … (2 – 2)

Defining HA is based on various classifications, mostly via a relative approach (*housing affordability through history*) or a subjective approach (*classic assumption of individual with their rational self-interest*), which includes also a purchase, repayment, and income affordability [Cai (2017)].

1. RA (objective) – is based on objective information (about rent, income, etc.) through housing surveys or administrative data. This approach, falls under a ratio approach, and includes:

   - Ratio Approach (RA) , e.g. 30% or/and 40%, with the official Eurostat affordability indicator, entitled 'housing cost overburden' – applies a ratio of 40% for total housing cost to income.
   - Expenditure-to-Income ratio (EIR) – looks at the ratio between housing expenses to the household income;
   - Residual Income method (RIR) – expresses households' consumption possibilities, after paying for housing expenses, for all other essential (non-housing) expenses of living defined as non-housing 'budget standard' [Stone, (2006)].
   - Price-to-Income ratio (PIR) – assumes if a households pay a higher housing cost to income ratio then they will not have enough income for other necessities.

2. SA - rest on the theoretical assumption of "*homo economicus*" or a rational human being that maximizes utility and profit upon which they pay just what they can afford for given within their financial constraints.

The methodology to build the HAI … (1 – 3)

The construction of a Housing Affordability INDEX, at the aggregate level in the case of Albania, is based on the Price-to-Income Ratio approach, proposed by Biljanovska, *et al.*, (2023), which see HAI as a function of a set of information related to 6 different aspect, e.g.

(i) price of a typical house (*HP*);
(ii) monthly income of a typical household (*HI*);
(iii) monthly expenses on mortgages loan a typical house;
(iv) average mortgage interest rates (*IR*);
(v) typical loan-to-value (*LTV*) ratio;
(vi) and the typical maturity term of a mortgage (LMT);

The value (price) of a typical (optimal) house (*HP*) is estimated by multiplying the average price (*P*) per meter square to buy a house by the average size of a home ($\overline{HS}$). And the monthly mortgage repayment (*PMT*) is estimated as follows:

$$PMT_t = HP_t * LTV_t * \frac{IR_t}{12} * \left[1 - \frac{1}{\left(1 + \frac{IR_t}{12}\right)^{LMT}}\right]^{-1} \quad (1)$$

The methodology to build the HAI … (2 – 3)

Then, *HAI* is calculated as follows:

$$HAI_t = \left(\frac{MEDINC_t}{QINC_t}\right) * 100 \qquad (2)$$

where, *MEDINC* is the median household income and $QINC$ is the necessary annual income a household needs to qualify for a mortgage loan on a typical home, which is obtained as:

$$QINC_t = PMT_t * 2.5 * 12 \qquad (3)$$

where, it is assumed that for a household to qualify for a mortgage loan, the (*PMT*) should not exceed a 40% of the household's monthly income.

Another interesting indicator is the AFFORDABILITY MULTIPLE (HAIM) that describes the multiple of average full-time earnings required to affordably services mortgages repayments under prevailing conditions, calculated as follows:

$$HAIM_t = \frac{100}{HAI_t} \qquad (4)$$

The methodology to build the HAI … (3 – 3)

For each (a) given country, the index shows a moment (situation) or the degree to which a typical (average) family (with two income-people) earning an average income that can just allow them affording to pay a *PMT* (with average interest rate and maturity) for a home valued at the average market price within that given country.

A higher value of the estimated HAI ratio indicates relatively more affordability, while each of the estimated value for the index that is:

- Exactly (=) 100 - affordable conditions or a median-income household has exactly enough income to qualify for a mortgage loan that would be just sufficient to purchase an average-priced home, or that mortgage repayments are exactly **40 percent of earnings**.

- More (>) than 100 - favourable affordability or PMT are less than **40 percent of earnings** and that a household has more than the qualifying income.

- Less (<) than 100 - unfavourable affordability or PMT absorb more than **40 percent of earnings** and therefore a household does not have the sufficient income to qualify for a mortgage on an average-priced house.

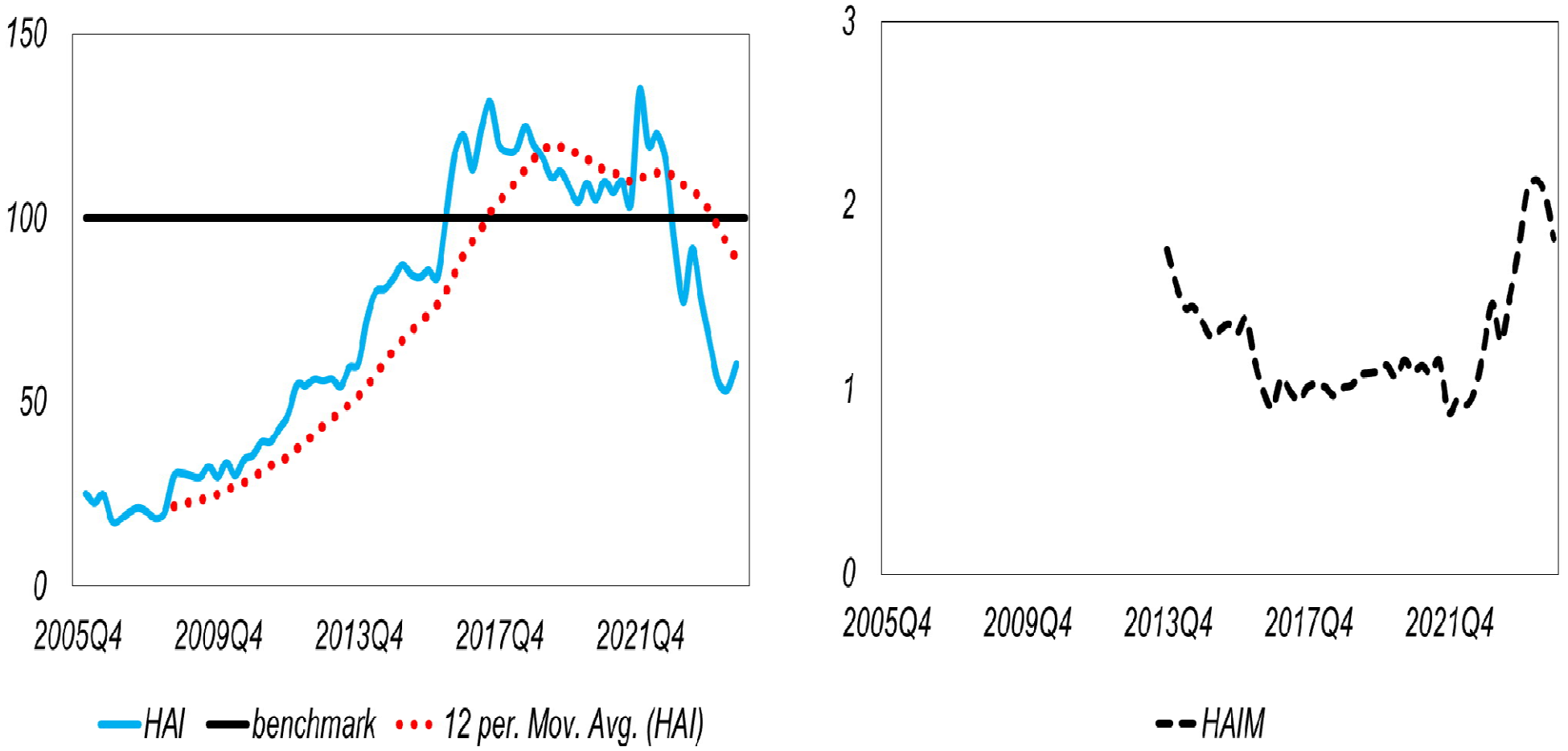
The data…

This study uses quarterly data over the period 2005 Q4 – 2024 Q4, or 77 observation, in which:

- House Price (HP) – average price per meter square in Tirana in domestic currency, which are generated as follows:
  - 2005 Q4 – 2016 Q1 - are taken from Gazeta Celësi Website.
  - 2017 Q1 – 2022 Q4 - are quarterly taken from Department of Research (BoA) HP survey.
  - 2023 Q1 – 2024 Q4 - are taken from Department of Financial Stability (BoA) HP survey.
- Households' (family) Income (*MEDINC*) – the average monthly wage per employee (in ALL) in public sector (or private).
- Loan-to-Value (LTV) – total amount of outstanding households' mortgage loan as a ratio of total guarantees (off-balance sheet) taken by banking sector.
- Interest rate (IR) - Interest rates on new loans to individuals + non-profit institutions serving individuals, by purpose of use and currency.

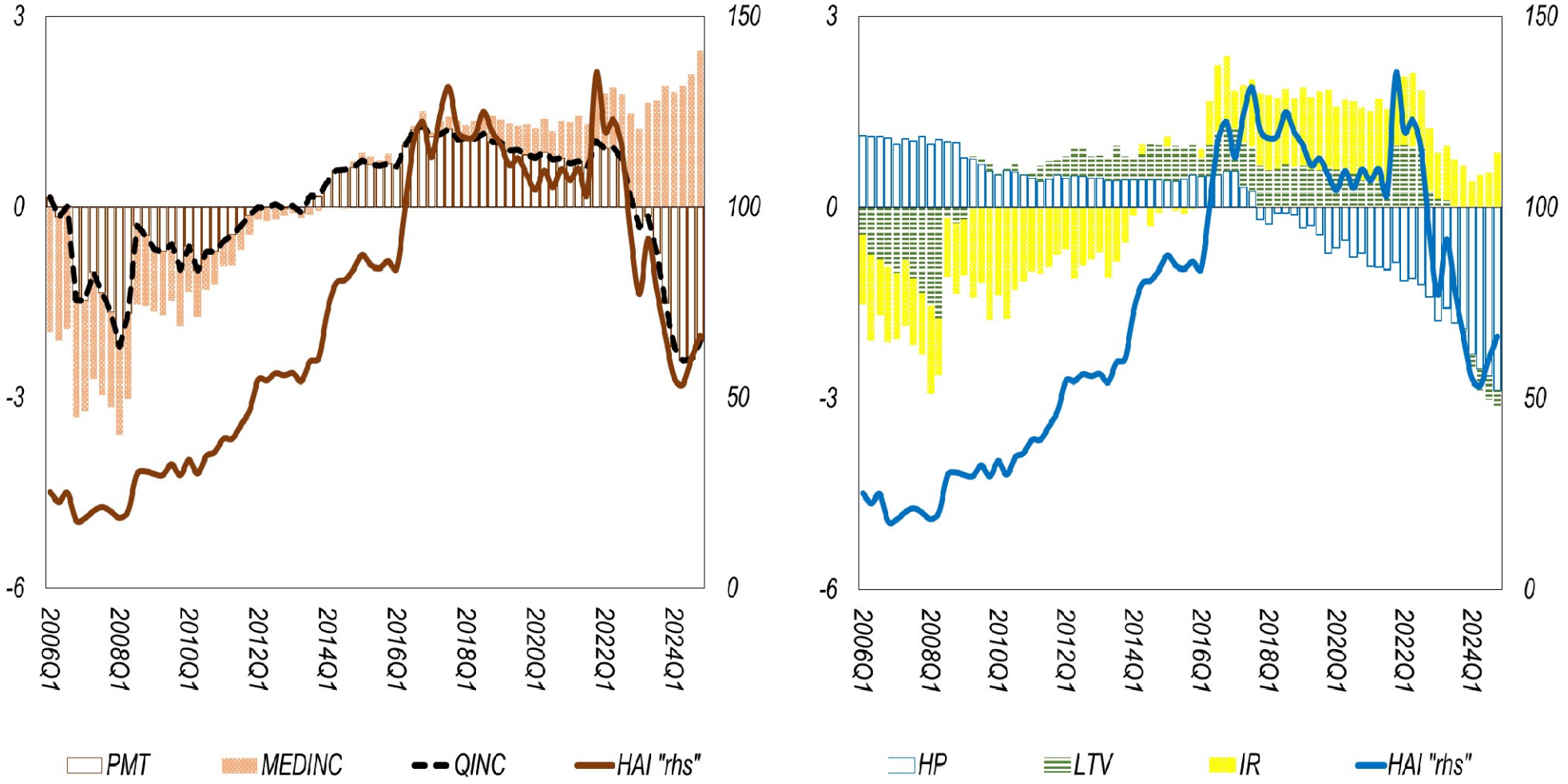
Data on *WAGE (INCOME)* are taken from Albanian Institute of Statistics (INSTAT). The rest of the data are taken from Bank of Albania.

Figure 2. The HAI and HAIM patterns over the period 2005 – 2024
(HS-85m²; HI – Public sector; MA – 360)



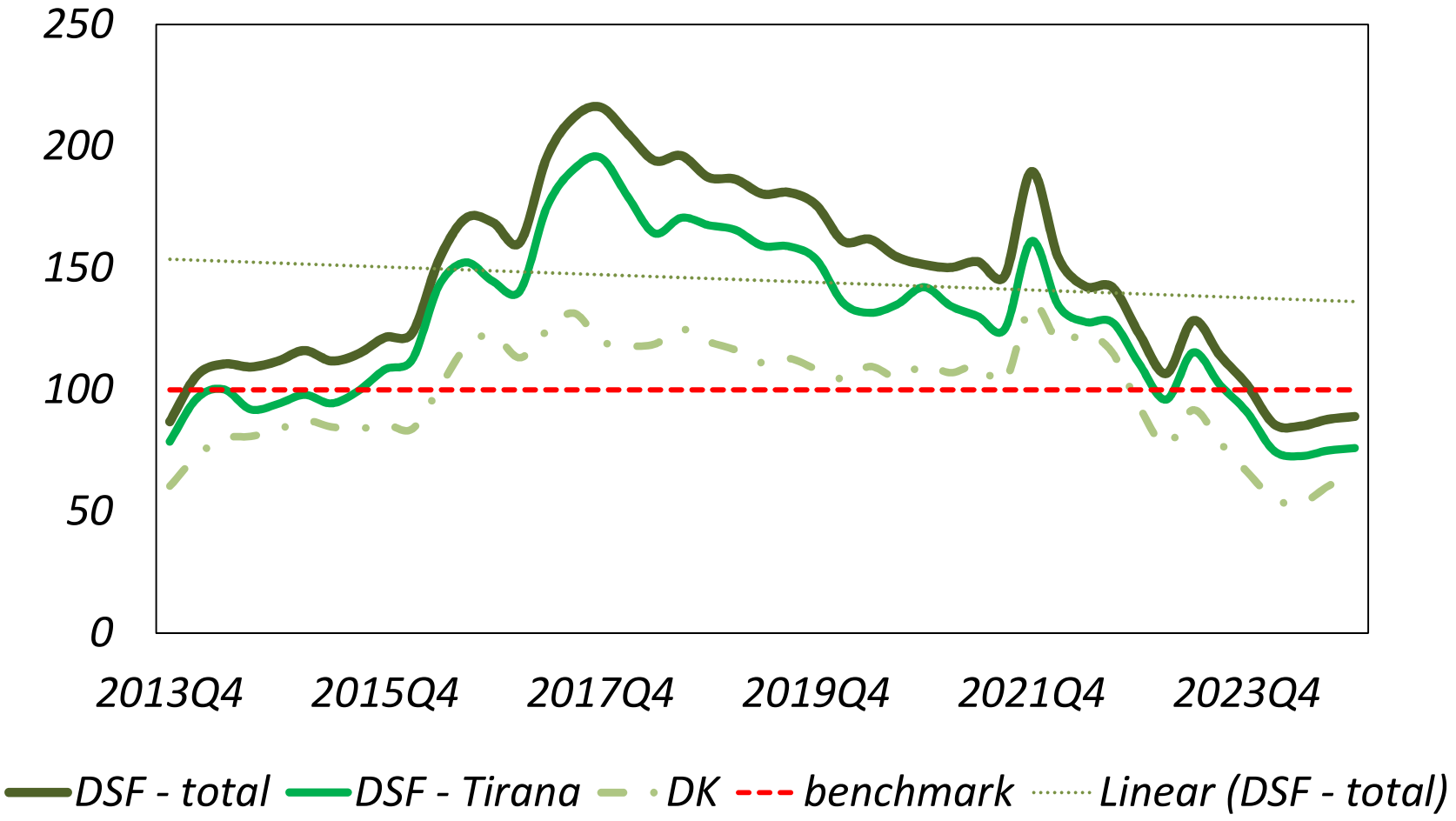
Source: Author's calculations.

Figure 3. The HAI patterns and its main contributors.



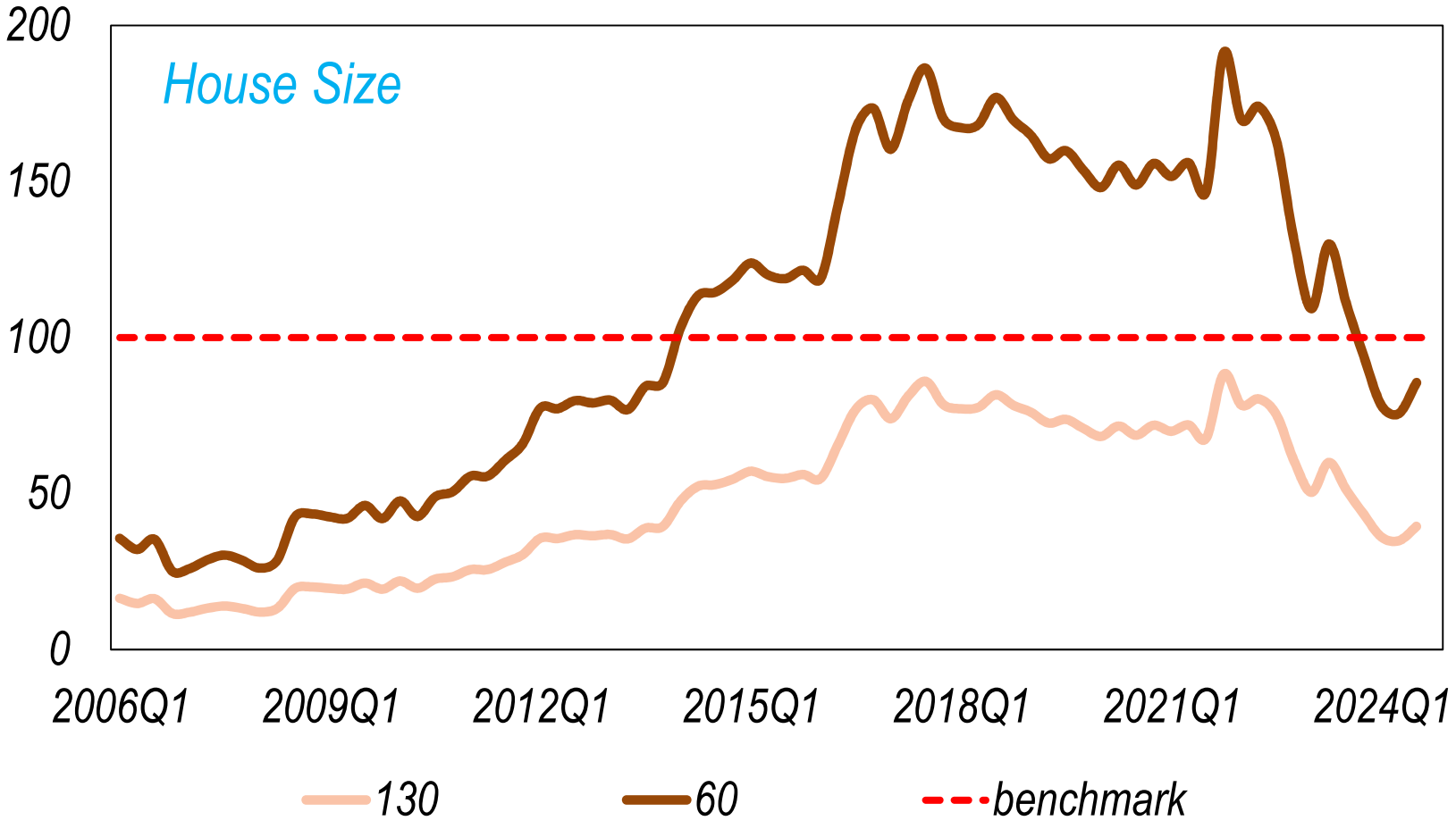
Source: Author's calculations.

Figure 4. The HAI patterns based on Different HPI.



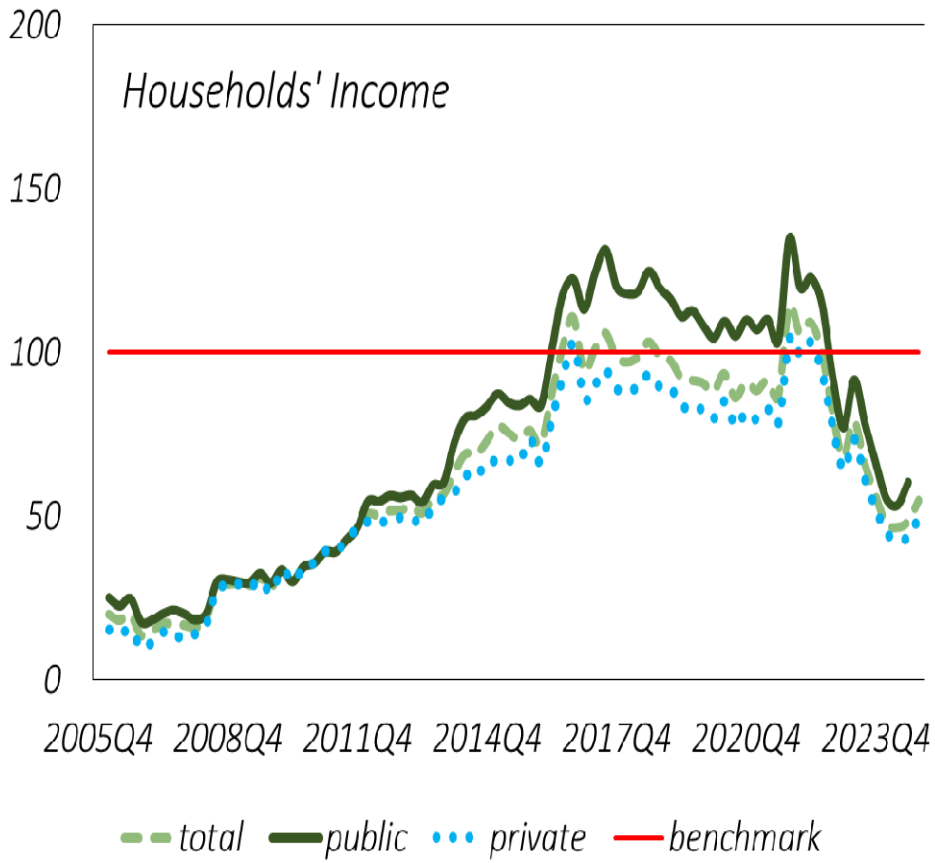
Source: Author's calculations.

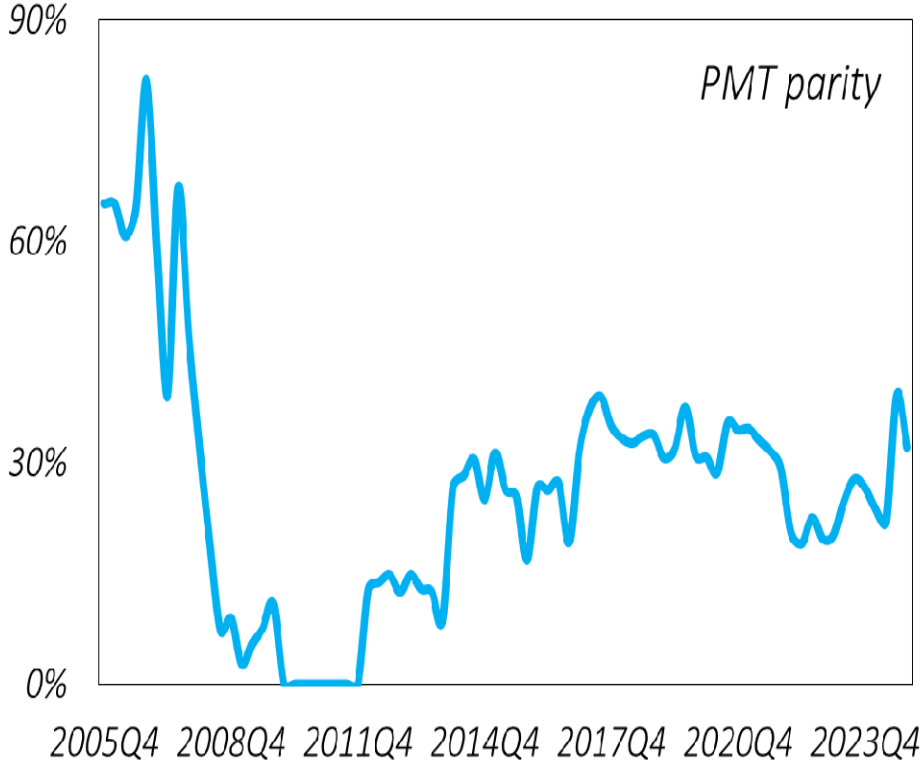
Figure 5. The HAI patterns with different Household Size.



Source: Author's calculations.

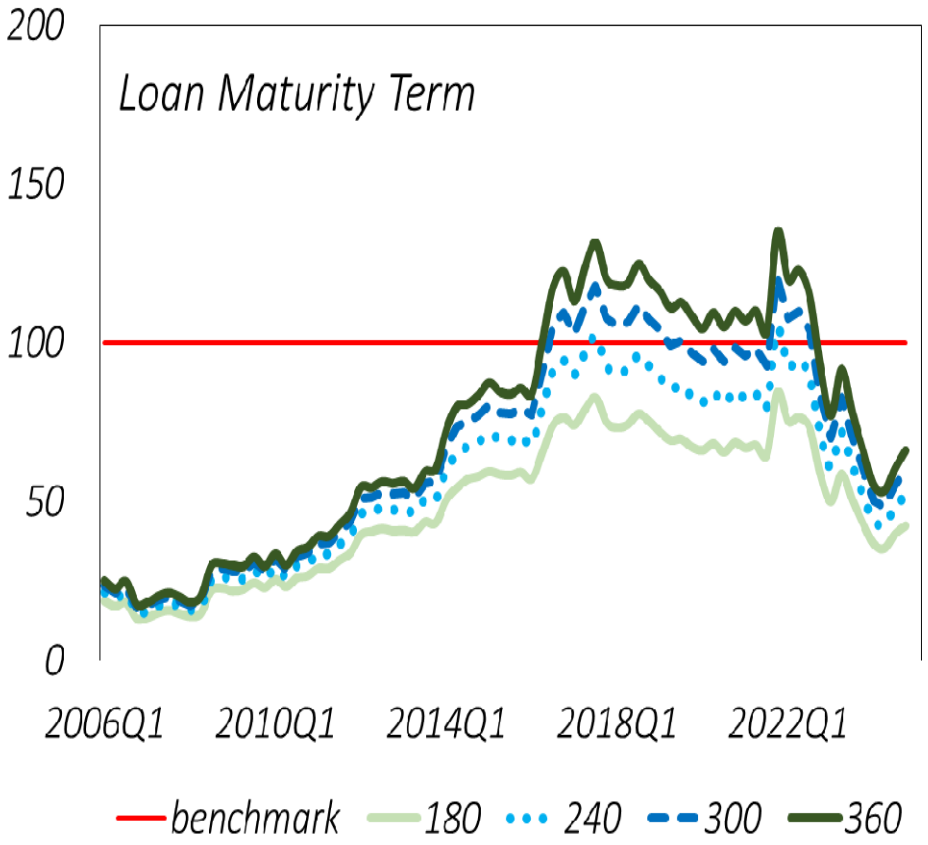
Figure 6. The HAI patterns with different Household Income.

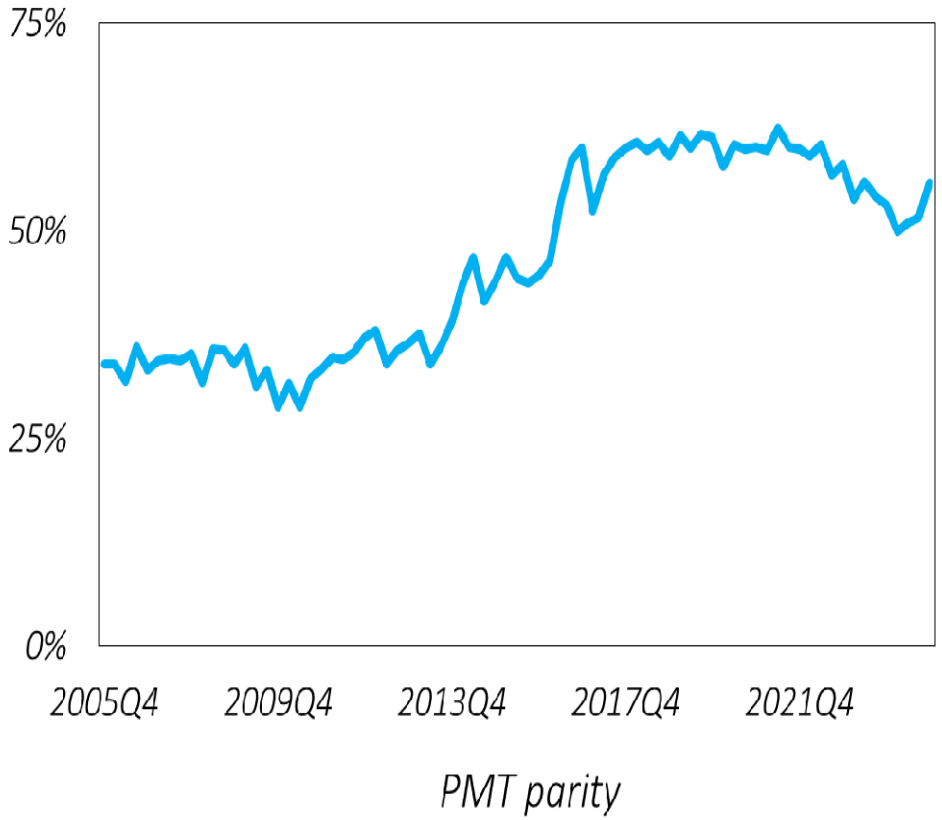




Source: Author's calculations.

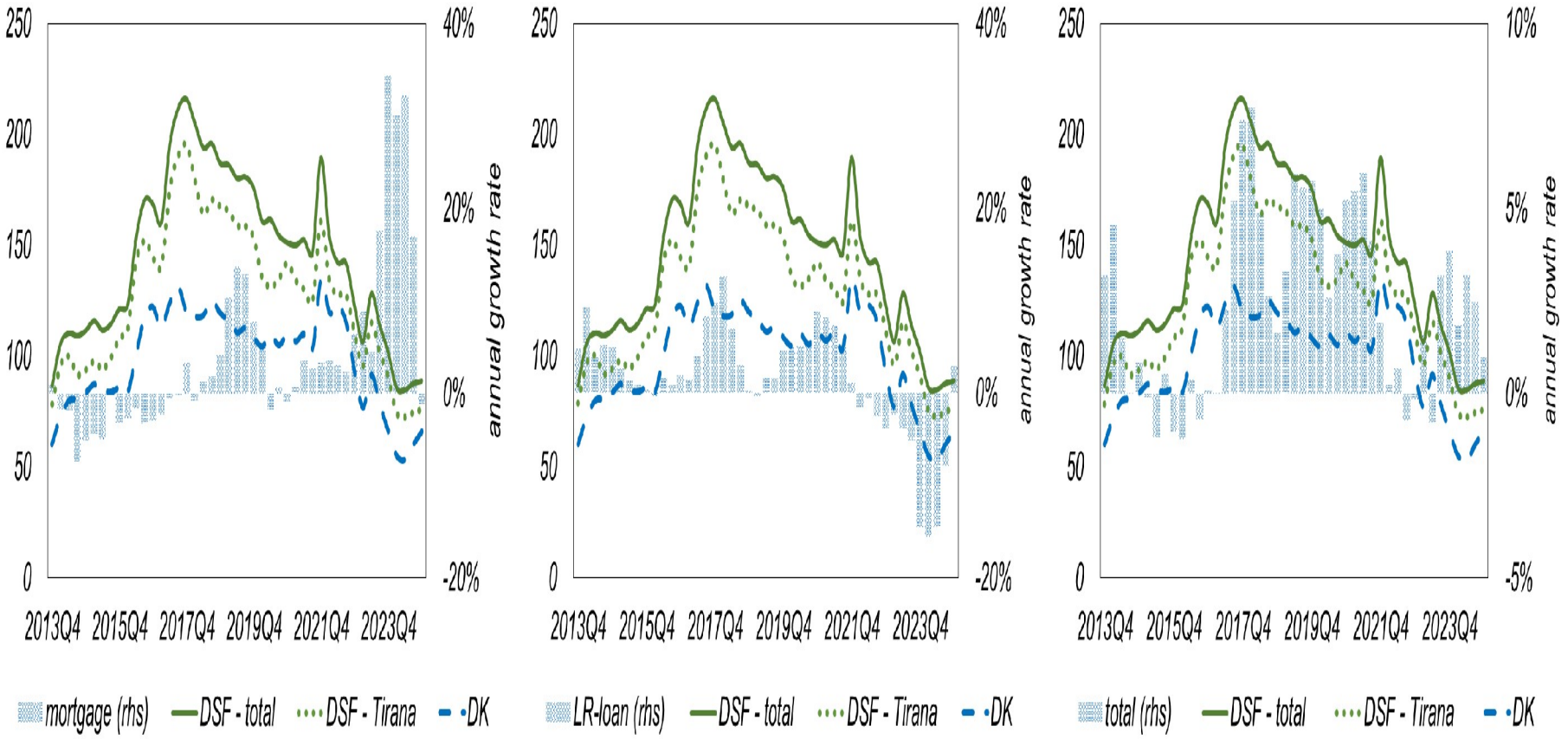
Figure 7. Sensitive analysis on different Loan-Term Maturity.





Source: Author's calculations.

Figure 8. The HAI patterns and Bank Lending to Households.



Source: Author's calculations.

Conclusions…

Housing affordability is a complex issue, BUT accurate metrics on the issue (at the aggregate level) is necessary to inform policy design.

This paper presents a first research work, expected to offer a new way to track over time Housing Affordability in a dynamic transition market e.g. Albania, taking into account key indicators, e.g. *income level*, *house price*, *loan interest rates*, *loan maturity*, etc.

Results show three dynamic changing moments (situations) over time, where the affordability of a typical family has been:

1. Below the benchmark level, but increasing (2005 – 2014), related mostly to PMT and household income;
2. Stable above the benchmark level (2015 – 2021);
3. Diminishing below the benchmark level, in particular after 2022, related mostly to HP;

Poly-crisis (e.g. GFC, Greek debt crisis, the pandemic) found to have no affect on Housing Affordability. **HAI is sensitive more to HS and less to income and loan-maturity**.

FUTURE RESEARCH: Analyse empirically how HAI is dictated by monetary policy stance and easing/tightening of banks' credit standards.

Thank you for attention!!!

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