

Level 3 national report on quality of statistics underlying the MIP indicators

Statistical domain: Housing Price statistics

Country: Croatia

Institution: Croatian Bureau of Statistics

Reference year: 2024

Date of update: 03/2025

National report providing information on quality, sources and methods, together with information on the statistical processes used for the compilation of the statistics underlying the MIP indicators (including concrete specifications for housing price statistics) – 2025 update

Reporting institution: Croatian Bureau of Statistics

Selected principles					Some specific examples for indicators and related questions (Response options, unless indicated otherwise: not implemented; partially implemented; fully implemented)	Statistical domain specifications	Country response
European Code of Practice principles	Public Commitment on European Statistics by the ESCB	Selected elements					
<i>Institutional Environment</i>	<i>Institutional Environment</i>	<i>CoP/PC</i>	<i>IMF DQAF</i>	<i>SIMS</i>	<i>Question(s)</i>	<i>Housing price statistics</i>	Housing price statistics
CoP1 Professional Independence	PC1 Professional Independence	1.1/1.1	1.1.1 1.1.2		<p>The independence of [name of reporting institution], from political and other external interference in developing, producing and disseminating official statistics is guaranteed by law.</p> <p><i>Legal basis: Please confirm the independence by referring to the relevant national and EU legal</i></p>	<p><i>1.1.1 Legal basis:</i> Please, specify the statutory basis for ensuring independent professional authority in all statistical decision making and activities at the institutional level. This legal authority provides the ground to exercise professional integrity to the fullest extent and is conducive to embedding a professional culture in the statistical office.</p>	<p>The activities of the official statistics of the Republic of Croatia are carried out by the Croatian Bureau of Statistics (CBS) and other bodies (producers of the official statistics) authorised to carry out these activities pursuant to the Official Statistics Act and the Programme of Statistical Activities. The CBS is a state administration organization that is autonomous in performing its activities in line with</p>

				<p><i>act(s) and the formulation used in the legal act.</i></p>	<p><i>1.1.2 Statistics work programme:</i> Please confirm the existence of a statistics work programme covering housing price statistics and specify where to find it, if available.</p>	<p>the provisions of the Official Statistics Act (Official Gazette, Nos 25/20 and 155/23) and the main producer, disseminator and coordinator of the official statistics system in the Republic of Croatia as well as the main representative of the national statistical system in front of European and international bodies competent for statistical affairs.</p> <p>The CBS develop statistics, produce unbiased statistical data as well as disseminate in conformity with the fundamental principles of official statistics and criteria for quality of official statistics stem from the European Statistics Code of Practice principles.</p>
		1.4/1.5		<p>The [name of reporting institution] has an annual statistical work programme which is made public.</p> <p><i>Statistics work programme: Please confirm the existence of a statistics work programme and specify where to find it (or similar document), if available.</i></p>		<p>The CBS regular statistical surveys are based on the Programme of Statistical Activities of the Republic of Croatia 2021 - 2027 (the Official Gazette No. 29/22) and the Annual Implementation Plan of Statistical Activities of the Republic of Croatia.</p> <p>The Annual Implementation Plan is</p>

							<p>based on the Development Strategy of Official Statistics of the Republic of Croatia for 2021 – 2027 and it is a document which shall be passed by the Croatian Parliament (Sabor) and published in the Official Gazette for each year to which the Programme of statistical activities of the Republic of Croatia (hereinafter: Programme) refers, with the aim of executing the Programme. In order to achieve the strategic goals of the official statistics system, the Programme is adopted for a period identical to the period determined by the European Statistical Programme. Also, the CBS's Annual Work Plan is fully compliant with the activities identified in the Annual Implementing Plan of Statistical Activities of the Republic of Croatia and includes the production of House Price Index. The Croatian on-line version of Annual Implementing Plan of Statistical Activities of the Republic of Croatia and Annual Work Plan are available on https://dzs.gov.hr/.</p>
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CoP2 Mandate for data collection	PC2 Mandate for data collection	2.1/2.1	0.1.1	S 7.1	<p>The mandate(s) of the [name of the institution(s)] to collect information for the development, production and dissemination of European Statistics is specified in law.</p> <p><i>Allocation of responsibilities: Please explain the allocation of responsibilities in producing the relevant statistics.</i></p> <p><i>Legal basis: Please confirm the mandate by referring to the relevant legal act(s) and any other kind of formal agreements.</i></p>	<p><i>1.2.1 Allocation of responsibilities:</i> Please explain the allocation of responsibilities for the production of housing price statistics.</p> <p><i>1.2.2 Legal basis:</i> Please confirm the mandate for the production of housing price statistics by referring to the relevant legal act(s) and/or any other kind of formal agreements.</p>	<p>The CBS has full responsibility for the production and dissemination of national house price statistics in Croatia. There is no specific legislation in Croatia for the production of house price indices per se.</p> <p>The basic act for the compilation of the House price index (HPI) is the European Parliament and Council Regulation (EU) 2016/792 of 11 May 2016 on harmonised indices of consumer prices and the house price index, and repealing Council Regulation (EC) No 2494/95.</p> <p>The relevant implementing act is the Commission Implementing Regulation (EU) 2023/1470 of 17 July 2023 laying down the methodological and technical specifications in accordance with Regulation (EU) 2016/792 of the European Parliament and of the Council as regards the house price index and the owner-occupied housing price index, and amending</p>
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							Commission Regulation (EU) 2020/1148 .
CoP6 Impartiality and objectivity	PC6 Impartiality and objectivity	6.6/6.6	1.2.4	S9.1 + S9.2 S.20.1	<p>Advance notice is given on release calendars and on major revisions or changes in methodologies, source data and techniques.</p> <p><i>Advance release calendar: Please confirm the existence of an advance release calendar and provide a link to it.</i></p> <p><i>Revision policy: Please explain succinctly the revision policy and provide a link to material on the revision policy, if existent.</i></p>	<p><i>1.3.1 Advance release calendar:</i> Please confirm the existence of an advance release calendar for housing price statistics and provide a link to it.</p> <p><i>1.3.2 Revision policy:</i> Please explain succinctly the revision policy for housing price statistics and provide a link to material on the revision policy, if existent.</p>	<p>In October of each year, the CBS publishes the Calendar of Statistical Data Issues giving the exact dates of releases for the coming year. It is available in both Croatian and English on the CBS website. Since January 2016, HPI is included in the Calendars of Statistical Data Issues and released quarterly.</p> <p>According to revision policy of the CBS, HPI data are published as final and the published data may be revised for mistakes, new or improved information, and changes in the system of harmonised rules.</p>
Statistical Processes	Statistical Processes	CoP/PC	IMF DQAF	SIMS	Question(s)	Housing price statistics	
CoP7 Sound methodology	PC7 Sound methodology	7.1/7.1	2.1 2.2 2.3	S4.3 S4.4	<p>Please specify the relevant statistical standards to which the statistics abide.</p> <p><i>Links/references to existing comprehensive methodological documentation on specific aspects</i></p>	<p><i>2.1.1 General remarks:</i> Specify if housing price statistics follow the methodological recommendations in the Technical Manual and the RPPI Handbook.</p>	<p>The HPI compilation follows methodological standards set out in the Technical Manual on OOH and in the RPPI handbook.</p>

			2.4	S4.5 S4.6 S 6 S12.1	<i>of the national sources and methods can also be provided</i>		<p>HPI measures the changes in the dwellings transaction prices that households acquire on the market. The HPI covers all transactions of dwellings made by households independently of their previous owners and independently of their final use and covers the entire area of the country.</p> <p>The HPI metadata is available on the Eurostat's website.</p> <p>Also, the short description of the methodology is published in every issue of the <i>First release: House Price Indices</i> on the CBS website.</p>
					<p>Please specify adherence or deviations from concepts and rules according to international standards and highlight coverage gaps that are of material relevance for the statistics.</p> <p>Please indicate whether actions to address the deviations and coverage gaps are envisaged.</p>	<p>Deviations from concepts, rules, and coverage gaps specific to housing prices statistics with material impact should be identified. .</p>	<p>The HPI covers all available data on dwelling transactions in the Republic of Croatia that are delivered by the Tax Administration of the Ministry of Finance according to pre-defined deadlines.</p>
CoP8 Appropriate	PC8 Appropriate	8.2/8.2	3.1	S12.1	Please provide a succinct assessment of the robustness of the	<i>Main features: For housing price statistics, this description should</i>	Administrative data are collected through the use of an electronic

Statistical procedures	Statistical procedures		3.3 3.4	S21.1 S21.3 S 21.5- 6	<p>statistics by elaborating briefly on the relevant sources of information, statistical methods and procedures used across the various frequencies.</p> <p><i>Please provide links/references to existing comprehensive methodological documentation on specific aspects of the national statistical procedures. The objective should be to get an overview on how much the statistical output are anchored in actual collected data rather than on estimation methods or similar judgemental inputs.</i></p>	<p>start by assessing the soundness of sources of information, procedures and methods used in data compilation of the most relevant frequency (quarterly), e.g. price concept, index formula, weights, and adjustments.</p> <p><i>Country specific aspects:</i> Present succinctly information on the collection methods of specific material relevance for house price data. A link could be provided to the national provisions in this respect, if existent.</p>	<p>protocol established between the CBS and the Tax Administration on a quarterly basis. Transaction prices are fixed in the buying contract and date of contract must be in the quarter for which the index is calculated. Transaction prices include value of land.</p> <p>Data validation is performed by checking for internal consistency in terms of eliminating errors in the database and records with unrealistically high or low values – outlier detection.</p> <p>The main data source for calculating the weights used in the HPI is value of dwelling transactions (source: Tax Administration database) from the previous year. Weights are recalculated on the basis of changes in the prices of dwellings in the last quarter of the previous year.</p> <p>The index calculation starts with a pre-defined hedonic regression models according to available attributes, variables of which are defined on the basis of available</p>
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<i>Statistical Output</i>	<i>Statistical Output</i>	<i>CoP/PC</i>	<i>IMF DQAF</i>	<i>SIMS</i>	<i>Question(s)</i>	<i>Housing price statistics</i>	
CoP11 Relevance	PC11 Relevance	11.1-11.3	0.3	S.14	<p>Please specify briefly why the statistics are relevant by referring to the multiple purposes for which the statistics are used at (i) international, (ii) EU and (iii) national level.</p> <p>References to the statistical legislation and other formal or informal commitments could be sufficient.</p> <p>In addition, if applicable, the outcome of user consultation processes could also be given.</p>	<p>A variety of potential uses of HPIs are provided for consideration:</p> <ul style="list-style-type: none"> - to assess housing affordability over time - a measure of specific price trends - for inflation targeting - to monitor economic imbalances and financial stability - an input for national accounts purposes - an input to economic forecasting and analysis - an input for decision making in respect to the housing market 	<p>Housing price statistics is of key importance in terms of monitoring macro and microeconomic decision making and performance.</p> <p>At national level, HPI has a wide range of user groups: government policy makers, financial sector, construction sector, households, researchers etc.</p> <p>Except for releasing the HPI for newly built and existing dwellings, in order to respond to user needs, the CBS produces and publishes also HPI for three additional defined geographic areas – the City of Zagreb (capital city), the Adriatic coast and Other (the rest of Croatia).</p>

CoP12 Accuracy and reliability	PC12 Accuracy and reliability (including stability)	12.1/12.1	3.5	S 15.1 S 15.2 S15.3 S.18.2 S 20.2	<p>The analysis should be based on the following indicators (to be compiled by the ECB/Eurostat on a common data vintage) on the reliability of first releases for the relevant series (selected for their material impact and to avoid compensatory effects in the case of balancing items):</p> <ul style="list-style-type: none"> - Directional reliability indicators; - Revisions indicators (e.g. MAPE, MACE or RMSRE depending on the indicator). <p>and provide a succinct assessment of the accuracy and reliability of the statistics on the basis of the results, with an attempt to provide a relative objective measure, explaining also the main reasons for revisions.</p>	<p>The accuracy of housing price statistics can be monitored by assessing the methodological soundness of price and weight sources and adherence to the methodological recommendations. Please also provide a detailed description on the data sources for both weights and prices, and price collection methods.</p>	<p>The HPI is perceived to be accurate and to reflect well the overall behavior of the housing market following the Eurostat's methodological recommendations and the regulation. Administrative data obtained from Tax administration are monitored on regular basis regarding the accuracy and reliability.</p> <p>The CBS does not produce estimates on sampling errors as obtained administrative data cover the whole universe of dwelling transactions.</p>
					<p>Please provide a succinct assessment of the level of the statistical discrepancies ("<i>internal consistency</i>")</p>		<p>Internal consistency is ensured through the hierarchical estimations steps up to overall aggregate indices that are fully consistent with the component indices.</p>
CoP13 Timeliness	PC13 Timeliness	13.1	4.1	S.16	<p>Please specify the timeliness requirements for international and</p>	<p>3.3.1 National requirements: HPIs may be required at national level at</p>	<p>National requirements: the HPI is released according to dates</p>

and punctuality	(including punctuality)	13.4			EU purposes and the national target publication dates. Please specify punctuality defined as deviations in relation to the timeliness requirements and target dates specified above.	different frequencies and timeliness. <i>3.3.2 EU and other international requirements:</i> HPIs are released after 100 days from the end of the reference quarter. The release schedule has significantly improved and close to T+1Q at present, which is the target timeliness for this indicator	published in Calendar of Statistical Data Issues, which also follows the Eurostat's release schedule. <i>Eurostat requirements:</i> indices and weights are transmitted to Eurostat according to the Regulation (EU) 2016/792 of the European Parliament and of the Council of 11 May 2016 on harmonised indices of consumer prices and the house price index, and repealing Council Regulation (EC) No 2494/95 - quarterly transmission of HPI indices shall not exceed 85 days from the end of the quarter to which the indices relate and the annual weights shall be transmitted no later than 15 June of year following the year to which they relate.
CoP14 Coherence and comparability	PC14 Consistency and comparability	14.1/14.1	4.2.1 4.2.2 4.2.3	S17.2 S 18.1	Please provide a succinct assessment of the results of the consistency check of the statistics with other related domains or data sets with which the statistics must show coherence (“ <i>external consistency</i> ”). The results should provide a relative objective measure to facilitate cross-country	<i>3.4.1 Consistency with related statistics:</i> Housing price estimates may be confronted with other indicators available at the national level, e.g., price valuation by a national appraisal board.	CBS, in cooperation with the Croatian National Bank (CNB) developed HPI for Croatia. This index was first published in January 2016 on the CBS website when the CNB stopped construction and publishing of Hedonic Real Estate Price Index (HREPI) which

				<p>comparability, e.g. be presented as a ratio of the inconsistency between compared statistics, as a percentage of GDP, where appropriate.</p>		<p>represented the movement of dwelling prices in Croatia.</p> <p>For HREPI data were available from 1997 to second quarter 2015 while data for HPI are available from first quarter 2008. The new HPI and the old HREPI are very similar in terms of methodology - both are based on hedonic regression models as the methodology recommended by Eurostat for the development of such an index. Because of differences in the used data sources and stratification the comparability of the HPI and the HREPI are limited.</p> <p>There are no other sources of information for official data on house price indices at national level.</p>
				<p>Please provide a succinct assessment of the time series consistency, specifying (i) whether the time series presents breaks and if so explaining the reasons for the</p>	<p>3.4.2 "Time" and back data consistency: In the housing price statistics context, specify the following:</p>	<p>HPI data considered being comparable over time since first quarter 2008.</p>

					breaks; (ii) the length of the series for which back data are consistent; and (iii) whether the statistics are consistent across the various frequencies (monthly/quarterly/annual) where relevant.	- breaks in time series and reasons (whether they relate to methodological or other changes) - time periods for which data are consistent - availability of back data and back calculations performed.	
CoP15 Accessibility and Clarity	PC15 Accessibility and Clarity	15.1/15.1	5.1.1 5.2.1	S9.3 S 11 S12.1	Please provide a brief description of the dissemination policy and dissemination means, including links to the data and respective metadata.	Please provide a brief description of the dissemination policy and dissemination means, including links to the data and respective metadata.	Since January 2016 the HPI is released quarterly on the CBS website in the form of First release and within the Statistics in Line section under Prices (data tables in Excel form). Micro data are not disseminated. A release schedule for the coming year, specifying dates of release, is published each December as the <i>CBS Publication Program</i> . A review of scheduled editions with a precise release dates is available in the Calendar of Statistical Data Issues (Calendar) for a specific year, three months prior to the first release announced in the Calendar for the referent year (usually in October).

