



# TECHNICAL ASSISTANCE REPORT

## VIETNAM

**REPORT ON RESIDENTIAL PROPERTY PRICE  
INDEX MISSION (APRIL 22–26, 2024)**

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## Acronyms

CIPI	Construction Input Price Index
COPI	Construction Output Price Index
GDT	General Department of Taxation
GSO	Government Statistics Office
MOC	Ministry of Construction
RPPI	Residential Property Price Index

## Summary of Mission Outcomes and Priority Recommendations

- 1. At the request of the Government Statistics Office (GSO), a technical assistance mission was conducted between April 22–26, 2024 to assist with the ongoing development of a Residential Property Price Index (RPPI).** This was the fourth mission to assist the GSO with developing an RPPI and continues the progress made during a virtual mission held in 2021.
- 2. In the absence of suitable administrative data on property transactions, the GSO has assessed the potential for using both a survey of property and sellers and online property listings to underpin the compilation of an RPPI.** The survey, although expensive to conduct, was found to be too small to allow for the compilation of robust indices and discontinued in 2021 after its legislative basis expired. While the web-scraped data showed good potential, the GSO discontinued this work in 2020 after their web scrapers were blocked.
- 3. Recent taxation developments might increase the potential for using administrative data on property transactions.** While previously, these taxation data on property transactions were in paper format and suffered from widespread under-reporting of transaction prices, electronic reporting of property transactions is gradually being extended to national coverage and legal changes might reduce the incidence of under-reporting of prices.
- 4. The GSO should therefore, work with General Department of Taxation (GDT) to secure ongoing timely access to data on property transactions.** Once data have been secured, the GSO should assess the quality of these data with respect to completeness – the extent to which individual records contain data for all required fields. Staff should also consider if the valuation banding (according to levels 1–4) at the level of micro-location can be added to the dataset. This could facilitate checking for potential evidence of clustering of reported prices around minimum permitted valuations, perhaps in collaboration with the GDT. Staff can then compile prototype indices for the main cities for which electronic data are available. There may also be potential to compare online asking prices against reported transaction prices for a historic period (for example 2022–2023) if records can be matched at the level of individual properties.
- 5. If there are concerns around the quality of data reported since 2022, the GSO, together with key stakeholders, should consider if data are likely to improve in the medium to longer term.** In the absence of alternative data, there may be value to compiling and disseminating indices based on a sound methodology but suboptimal data, perhaps accompanied by a disclaimer that reported prices may suffer from some weaknesses with respect to accuracy. Supplementary analysis on the volume and value of transactions, and average reported prices, could also help to increase transparency.
- 6. While a Construction Input Price Index (CIPI) can be used in the deflation of intermediate output, a Construction Output Price Index (COPI) is needed to deflate final consumption and should be targeted.** The GSO should discuss with key stakeholders, including the Ministry of Construction, how best a COPI could be compiled—in respect of estimating weights for different construction activities, coverage (business and/or government consumption) and a pricing mechanism that allows for the inclusion of contractor margins.
- 7. To support progress in the above work areas, the GSO agreed to implement the following priority recommendations).**

**TABLE 1.** Priority Recommendations

Target Date	Priority Recommendation	Responsible Institutions
December 2024	Secure access to electronic records of property transactions.	GSO, GDT
June 2025	Assess data quality with respect to completeness.	GSO
April 2026	Compare online asking prices against reported prices if a sample of online listings can be secured.	GSO
December 2024	Finalize the broad design of the index of construction prices.	GSO

## Section I. Detailed Technical Assessment and Recommendations

**TABLE 2.** RPPI Workplan

Priority	Action/Milestone	Target Completion Date
<b>Outcome:</b>	New RPPI is published.	
H	Ensure GSO has ongoing access to data.	Dec-24
H	Assess the quality of data.	June-25
H	Compile prototype indices for the major cities for which data are available.	Apr-26
H	If access to listings data can be secured, compare asking prices to reported transaction prices at aggregate and individual property levels.	Apr-26
<b>Outcome:</b>	New price index for construction activity is published.	
H	Repurpose the construction material index as a CIPI.	Dec-24
H	Target compilation of a COPI.	Dec-25
H	Consult with key stakeholders on the broad methodological approach.	Dec-25

Priority	Action/Milestone	Target Completion Date
H	Identify weights for the various types of activities and identify the main purchasers for each.	Jun-25

## A. INTRODUCTION

**8. At the request of the Government Statistics Office (GSO) of Vietnam, a technical assistance mission was conducted between April 22–26, 2024 to assist with developing a Residential Property Price Index (RPPI).** Compilation of a reliable and timely property RPPI remains a key priority for the GSO and is essential to national and international banking authorities to assess the developments and risks in the Vietnam property market.

**9. This was the fourth mission to assist the GSO with developing a RPPI.** Previous missions focused on two potential data sources in the absence of suitable administrative data, a survey by GSO enumerators of buyers and sellers of properties identified on a register of real estate transfers, and data collated by web-scraping several major property portals active in Vietnam. The survey, although expensive to conduct, was found to be too small to allow for the compilation of robust indices and discontinued after its legislative basis expired. While the web-scraped data showed good potential and prototype indices were compiled, the GSO found the ongoing scraping of data to be technically challenging and the previous mission noted that the quality of the scraped data represented the principal risk to finalizing the RPPIs.

**10. The mission was asked to provide advice on the design of a new Construction Price Index for use in the deflation of construction output in the National Accounts.** Two design options were discussed and the process for estimating index weights as a first step in index compilation was outlined.

## B. RESIDENTIAL PROPERTY PRICE INDEX

**11. Administrative data on property transactions are the preferred data source for RPPIs.** They can provide a broad coverage of the national market, providing broad or complete coverage at little to no cost. Commonly used administrative sources include filings for taxation and registration of property transfer, and information collected by financial institutions at the time of mortgage application or drawdown.

**12. Until now, administrative data on the taxation and registration of property transactions have been deemed unsuited to RPPI compilation.** Data were collected and stored only on paper, and declared prices generally acknowledged to be under reported and in line with thresholds for minimum allowable valuation levels which were previously updated every five years. In addition, financial institutions are not required to report loan-level data collected as part of the mortgage process.

**13. In the absence of suitable administrative data, the GSO made significant, commendable, efforts to collect data from two alternative sources.** In line with the recommendations of a 2018 mission, the GSO expanded a small pilot survey of property buyers and sellers to six major cities. However, the survey, although expensive to conduct, suffered from poor response rates and provided too few observations to allow for the compilation of robust indices. It was discontinued in 2021 after its legislative basis expired.

**14. Previous missions also recommended continuation of ongoing work to web scrape property listings which typically offer far greater potential in respect of geographic coverage.**

Despite challenges to data quality, including multiple duplicate listings and missing variables including asking price, good progress was made in compiling prototype indices. This work also facilitated learning of data analysis and index compilation techniques and has resulted in increased staff capacity for index compilation. However, the GSO was forced to discontinue this work in 2020 after their web scrapers were blocked and attempts to secure direct access from website owners were unsuccessful.

**15. During the current mission, staff noted that three recent taxation developments might significantly increase the potential for using administrative data on property transactions.** First, a 2020 Decree increased enforcement and penalties for tax and invoice violations; second, electronic reporting of property transfers is being gradually extended to national coverage since 2022, and third; the 2024 Land Law requires that minimum valuations levels (price tables) published by the taxation authorities must now be updated annually rather than five-yearly to ensure better collection of tax.

**16. The electronic taxation records include relatively comprehensive information on transacted properties which should be sufficient to support the compilation of an index that sufficiently controls for the changes in properties transaction from period to period.** These include full address, depth, and width of alley where relevant, property type and size, age, and numbers of floors and basements.

**17. The GSO and the GDT have various data-sharing arrangements in place, covered by memorandums of understanding, and discussions on sharing of property transaction data are underway.** The two agencies should work together to ensure that the GSO secures ongoing access to data on a timely basis every month. As the electronic recording of records is expanded to cover the entire country, the GDT should expand data-sharing accordingly.

**18. Once an initial set of data has been secured the GSO should conduct an initial assessment of the completeness of these data.** Data from 2022 to around mid-2024 should provide a sufficient time series and number of records to support a relatively robust analysis of the extent to which all required variables are reported. Ideally, staff should also consider if the valuation banding (according to levels 1–4) at the level of micro-location can be added to the dataset. Although technically challenging, this could facilitate an assessment of potential evidence of clustering of reported prices around minimum permitted valuations, perhaps in collaboration with the GDT.

**19. After the data quality assessment has been completed, the GSO can compile prototype indices for the main cities for which electronic data are available.** Compilation should follow the rolling time dummy hedonic methodology developed during previous missions and staff should pay close attention to the number of transactions included in different market strata (accounting for different cities/provinces and property types) as well as regression diagnostics including the significance and stability of the coefficients for the property characteristics included in the underlying regression models.

**20. There may be potential to compare online asking prices against reported transaction prices for a historic period (for example 2022–2023).** The mission and staff met with Batdongsan.com, the largest property listings portal in Vietnam, which noted it may be willing to share some historic data for analytical purposes on a voluntary basis. This could be done at an aggregate basis (for example, by property type in a city or district) and/or at individual property level if data matching across sources is



feasible. If access to sufficient data can be secured, they could also be used to compile shadow indices to compare against the prototype indices compiled using taxation data.

**21. There is a risk that widespread under-reporting of prices will persist and if there are concerns around the quality of data reported since 2022, the GSO together with key stakeholders, should consider whether data are likely to improve in the medium to longer term.** In the absence of alternative data, there may be value to compiling and disseminating indices based on a sound methodology but suboptimal data, perhaps accompanied by a disclaimer that reported prices may suffer from some weaknesses with respect to accuracy. Supplementary analysis on the volume and value of transactions, and average reported prices, could also help to increase transparency.

#### *Recommended Actions*

- Ensure GSO has ongoing access to data.
- Assess the quality of data in respect of completeness and potential clustering of prices around published minimum valuation levels if technically possible.
- Compile prototype indices for the major cities for which data are available.
- If access to listings data can be secured, compare asking prices to reported transaction prices at aggregate and individual property levels.

### **C. CONSTRUCTION PRICE INDEX**

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**22. The GSO is targeting compilation of a price index for construction activities by end of 2025.** This index can provide an important indicator of inflationary pressures and is also used in the deflation of the national accounts.

**23. While a CIPI can be used in the deflation of intermediate consumption (inputs), a COPI is also needed to deflate final output.** The GSO already compiles a quarterly index for prices of construction materials and this index can be repurposed as the CIPI, to be used to deflate intermediate consumption. However, the COPI is a more comprehensive measure as it includes contractor's profit margins and productivity. Since these two elements are commercially sensitive, they are typically measured implicitly by collecting only the final price of a specified construction job or project rather than individual prices for its different elements, such as materials, labor, and plant and equipment.

**24. The GSO should discuss with key stakeholders, including the Ministry of Construction (MOC), how best a COPI could be compiled.** Discussions should consider how weights can be estimated for different construction activities, appropriate coverage (business and/or government consumption), and a pricing mechanism that allows for the inclusion of contractor margins. These discussions will help the GSO to identify a broad methodological approach.

**25. Once a broad methodological approach is identified, staff will need to identify weights for the various types of construction activities, in collaboration with the MOC.** The ISIC Rev.4 Classification for "Section F Construction" can be used to inform and structure the classification of activities, for example between *Construction of buildings*, *Civil engineering*, and *Specialized construction activities*. Weights will be based on estimates for the value of construction activities within each of the divisions, and their respective groups and classes. Subclasses can also be developed with reference to the detail presented under each class in the main text of the ISIC Rev.4 classification document.

**26. Once the larger representative activities have been identified, staff will then need to identify the main purchasers (government, businesses, or households) of these activities.** This will

help to inform from where, and how, prices can be collected. For example, for civil engineering activities that are purchased by Government, it may be possible to compile indices using data supplied by the MOC. While it might not be possible to include prices for all main consumers of all activity types, the index should be broadly representative of the main consumption expenditures for construction activities as a whole.

#### *Recommended Actions*

- Repurpose the construction materials index as a CIPI.
- Target compilation of a COPI.
- Consult with key stakeholders on the broad methodological approach.
- Identify weights for the various types of activities and identify the main purchasers for each.

#### **D. OFFICIALS MET DURING THE MISSION**

<b>Name</b>	<b>Position</b>	<b>Organization</b>
<b>Ms. Do Thi Ngoc</b>	Deputy Director General	General Statistics Office
<b>Ms. Nguyen Thu Oanh</b>	Director	Price Statistics Department
<b>Ms. Ta Thi Thu Viet</b>	Deputy Director	Price Statistics Department
<b>Ms. Vu Thi Thanh Huyen</b>	Deputy Director	Price Statistics Department
<b>Ms. Nguyen Thi Van Anh</b>	Economist	IMF Office in Hanoi
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<b>Mr. Le Manh Quan</b>	Statistician	Price Statistics Department
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<b>Mr. Nguyen Cong Hoan</b>	Statistician	Institute of Statistical Science
<b>Ms. Tang Thanh Hoa</b>	Statistician	System of National Accounts Department

Name	Position	Organization
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<b>Ms. Nguyen Thi Kim Dung</b>	Senior Marketing Manager	Batdongsan.com.vn Company
<b>Mr. Le Bao Long</b>	Strategic Director	Batdongsan.com.vn Company
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