



WP/16/213

IMF Working Paper

How to better measure hedonic residential
property price indexes

by Mick Silver

***IMF Working Papers* describe research in progress by the author(s) and are published to elicit comments and to encourage debate.** The views expressed in IMF Working Papers are those of the author(s) and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

I N T E R N A T I O N A L M O N E T A R Y F U N D

IMF Working Paper

Statistics Department

How to better measure hedonic residential property price indexes**Prepared by Mick Silver¹**

Authorized for distribution by Claudia Dziobek

November 2016

IMF Working Papers describe research in progress by the author(s) and are published to elicit comments and to encourage debate. The views expressed in IMF Working Papers are those of the author(s) and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

Abstract

Hedonic regressions are used for property price index measurement to control for changes in the quality-mix of properties transacted. The paper consolidates the hedonic time dummy approach, characteristics approach, and imputation approaches. A practical hedonic methodology is proposed that (i) is weighted at a basic level; (ii) has a new (quasi-) superlative form and thus mitigates substitution bias; (iii) is suitable for sparse data in thin markets; and (iv) only requires the periodic estimation of hedonic regressions for reference periods and is not subject to the vagrancies of misspecification and estimation issues.

JEL Classification Numbers: C43, E30, E31, R31.

Keywords: Hedonic Regressions; Residential Property Price Index; Commercial Property Price Index; House Price Index; Superlative Index Number; Thin Property Markets.

Author's E-Mail Address: 01micksilver@gmail.org

¹ The author acknowledges comments by Gabriela Maciel (IMF, Research Department) and participants at the 2016 Conference of the Society of Economic Measurement, Thessaloniki, Greece, July 2016.