**UNIVERSITY OF WAIKATO**

**Hamilton New Zealand**

**Exuberance, Bubbles or Froth?**

**Some Historical Results using Long Run House Price Data**

**for Amsterdam, Norway and Paris**

Yang Hu and Les Oxley

**Department of Economics**

**Working Paper in Economics 16/08**

August 2016

|  |  |
| --- | --- |
| *Corresponding Author***Les Oxley**Economics DepartmentWaikato Management SchoolUniversity of WaikatoPrivate Bag 3105HamiltonNEW ZEALAND, 3216Phone: +64 (0)7 838 4076Email: loxley@waikato.ac.nz | **Yang Hu**Economics DepartmentWaikato Management SchoolUniversity of WaikatoPrivate Bag 3105HamiltonNEW ZEALAND, 3216 |

**Abstract**

It has been argued that house prices may exhibit a period of bubbles and that they may also be either a cause or an effect of, for example, the Global Financial Crisis (GFC). In this paper, we test econometrically whether house price bubbles have historical precedents and also whether contagion from other financial crises are mirrored in these housing markets. We apply the generalized sup ADF (GSADF) test based procedure of Phillips, Shi, and Yu (2015a) to test for the evidence of exuberance or bubbles in historical housing price indices for the Herengracht index of Amsterdam (1649-2010), Norway (1819-2014) and Paris (1650-2012) based upon the right-tailed unit root null hypothesis with or without an intercept. We find, firstly, there is little evidence of exuberance in the real Herengracht index or of bubbles in the house price-rent ratio for Amsterdam. Secondly, our empirical results provide evidence of exuberance in Norwegian house prices where our identified episodes coincide with the major financial crisis in Norwegian history. Thirdly, no significant evidence of exuberance is found in the historical house price series of Paris under most model specifications.

**Keywords**

bubbles

generalized sup ADF test

exuberance

house prices

herengracht index

Amsterdam

Norway

Paris

**JEL Classifications**

G01, N20*,* N90, R30

**Acknowledgements**

We wish to thank seminar participants at the University of York, the New Zealand Econometric Study Group (NZESG) and the Symposium on Econometric Theory and Applications (SETA 2016) conferences for helpful comments provided. We particularly thank Peter Phillips for his suggestions and reconciliation of the role of the intercept in his new set of tests based upon right-tailed unit root null hypotheses.

.