Dynamic price dependence of Canadian and international art markets: an empirical analysis

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Abstract Although the market for Canadian paintings is now of substantial magnitude, with several works having recently been sold for well over a million dollars, it remains true that with very few exceptions, the works of Canadian painters are bought and sold only in Canada and seem to be held only by Canadian collectors. This market can thus be viewed as largely local, and it is therefore not clear whether there should be any linkage between price movements for Canadian art and those for the mainstream international market in old master, impressionist, and modern art. This article investigates the presence and nature of such time series dependence econometrically, both in terms of long-term trends as reflected in the co-integrating relationship between Canadian and the international market, and in terms of short-run co-movements as represented in correlations. The possibility that the local market “follows” the international one is also considered through an analysis of Granger causality. For Canadian art prices, we use a new hedonic index that has been computed using an updated version of the dataset of Hodgson and Vörink (Can J Econ 37:629–655, 2004), while for the international prices, we use an index provided by Mei and Moses (Am Econ Rev 92:1656–1668, 2002).

Keywords Alternative investments · Economics of art markets · Market for paintings · Time series analysis · CAPM

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1 Introduction

It is common among those interested in the prices of art works to speak of “the” art market, as if there were one aggregate market for the many different categories of art. However, owing to the existence of different artistic media, national schools, historical periods, and individual artists, it is reasonable to suppose that art markets may be more or less segmented, with each segment following its own internal price dynamics, based on criteria related to the investors in the segment under consideration (whether it be due to particularities in the evolution of their economic fortunes or, indeed, of their tastes).

For an art collector who views his or her collection as being, at least in part, a significant financial investment, the design of an optimal art collection (or “portfolio”) should take into account the overall risk and return combination of the collection, which may include several genres, categories, and artists from different countries. For such a collector, it is important to understand the degree to which the changes in prices of the different components of the collection are likely to depend upon one another: the presence of art works from largely independent segments of the art market offers the possibility of risk diversification of an art market portfolio. There are a number of studies that examine the returns to investing in the works of painters from particular countries. See, for example, Arvin and Scigliano (2004), Hodgson and Vorkink (2004) and Hodgson (2011) for returns to Canadian painters’ works; Higgs and Worthington (2005) for Australian painters’ works; Agnello and Pierce (1996) on genre effects on American art investments; Edwards (2004) on Latin American paintings; Mok et al. (1993) on the returns to modern Chinese paintings; and Seckin and Atukeren (2006) on the returns to Turkish paintings.

It is thus of interest to have a measure of the degree of interdependence of price dynamics of different segments of the art market, and till now, there has only been a small portion of the literature that investigates various aspects of this question. Ginsburgh and Jeanfils (1995) find that price indices, based on auction sales of major old master, impressionist, and modern European and American paintings sold in New York, London, and Paris, are co-integrated, and thus have shared long-term price evolution, whether considered across artistic category or across cities and auction houses, with significant short-term interdependence also being present in returns. Worthington and Higgs (2003) analyze eight categories of major international art and find the presence of seven cointegrating relationships, and thus one sole common stochastic trend that drives the entire art market, indicating a very high degree of long-run uniformity in the market. They also find substantial short-run dependence to be present. These studies focus on segments of—we will refer to them in the present article as—the mainstream international art market, and find these segments to be highly interdependent, so that at this level, it is not inappropriate to speak of “the” art market.

The above findings suggest that the degree of diversification possible within a single collection of art works, viewed from a financial perspective, is limited. They also suggest that there is a commonality in the characteristics of collectors in the different segments of the mainstream market, whether it be due to personal economic circumstances or to tastes, which has a similar impact on prices in all the segments. It is of interest, both from the standpoint of portfolio diversification possibilities, as well as