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Writing Sample

(Three Essays on Spatial Econometrics and Finance)

In this writing sample, I have inducted the summary of the three essays that are part of my PhD thesis. The thesis incorporates three self-contained chapters to address a spatial interaction between economies and test the theory of market efficiency. They are on the way to publications. The first chapter, Spatial Analysis of Linkages on Stock Market Co-movement, employs the dynamic spatial Durbin with the interactive fixed-effects (IFE) model recently proposed by Shi and Lee (2017) to analyze the extent to which countries' economic and geographical relations affect their stock market co-movements. Also, a variant of the model without the IFE and the static spatial fixed-effects model has been considered. Among the seven measures of distance, the exchange rate volatility and bilateral trade prove to be best suited to capture co-variations in returns. With the time-series from January 2000 - October 2018 for 15 African equity markets, for all distance measures, the dynamic model with IFE (three-factor) exhibits a higher estimated spatial dependence against the dynamic model without the IFE and the static fixed-effects model. Further, except for the exchange rate, I find significant spillover effects that stem from the movement of the explanatory variables towards the stock return of itself and as well to neighboring countries. Also, with some exceptions, the short-term direct effect appears to be smaller than the long-term direct effects under the dynamic with the IFE setting. In a nutshell, even though the Quasi-maximum likelihood (QML) estimators of the dynamic (with & without

IFE) models are consistent only with both N and T large, the $\sqrt{N}$ -consistent QML estimator for the static FE model also confirms the results.

The second chapter, Spatial Analysis of Sovereign Risks: The Case of Frontier Markets, considers spatial linkages of bilateral trade, financial correlation, and bilateral distance to study the macroeconomic determinants of sovereign risk for frontier markets. Furthermore, to evaluate the extent to which countries' economic and geographical relations affect their credit default swaps (CDS) market. It employs not only the recent model of the dynamic spatial Durbin with the interactive fixed-effects (IFE) model proposed by Shi and Lee (2017) but also considers a variant of the model without the IFE and the static spatial fixed-effects model. I use 14 active frontier economies for this purpose and monthly data for January 2000 - December 2018. The dynamic with IFE, the dynamic, and the static estimation produces a consistent result and confirms the existence of spillover effects that stems from the movement of the explanatory variables towards the CDS premium of itself and neighboring countries. This effect also holds true both in the short run and long run. The coefficient estimates for the immediate effects (β) and direct effects are strongly significant and consistent with the literature for all macroeconomic variables except for international reserves. The study also shows a strong positive spatial dependence between the frontier markets, and the important linkages are physical distance and bilateral trade. The study also confirms there is a stronger spatial dependence during the global recession.

The third and last chapter, Persistence and Domiciled Mutual Fund Managers Performance: Evidence for South Africa, presents an overview of the South African domiciled mutual fund industry and study mutual fund performance using a survivorship bias-free sample of 2,843 share class of funds. Carhart (1997) 4-factor asset-pricing model is used to measure performance, and an additional two factors from the recent Fama and French (2015) framework have been considered. This study is able to provide further evidence on the performance of open-end mutual fund managers in a noticeable emerging market, South Africa. This paper investigates whether mutual fund managers' inability in developed markets to beat the market, which has been widely proved, also holds in less developed markets. Furthermore, I examine if South African fund managers exhibit persistence in performance. The negative net alpha for South African domiciled mutual fund managers shows that they under-perform their respective market benchmark and are not able to add value. At last, consistent with results in developed markets, for all portfolios, with different magnitude, the paper reveals that there exists a persistence in performance; however, the effect attributes to "icy-hands" rather than "hot-hands."

References

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