

## **The Interaction Between Foreign Real Estate Investment and Tourism: The Iranian Case in Dubai**

<sup>1</sup>Hassan Gholipour Fereidouni, <sup>2</sup>Tajul Ariffin Masron,

<sup>3</sup>Anahita Malekmohammadi and <sup>4</sup>Ai-Yee Ooi

<sup>1</sup>Hassan Gholipour Fereidouni, PhD Student in Finance, School of Management,  
Universiti Sains Malaysia (USM), 11800 Penang, Malaysia

<sup>2</sup>Tajul Ariffin Masron, Senior Lecturer, School of Management,  
Universiti Sains Malaysia (USM), 11800 Penang, Malaysia

<sup>3</sup>Anahita Malekmohammadi, PhD Student in Tourism Development, School of Housing,  
Building and Planning, Universiti Sains Malaysia (USM), 11800 Penang, Malaysia

<sup>4</sup>Ai-Yee Ooi, PhD Student in Finance, School of Management,  
Universiti Sains Malaysia (USM), 11800 Penang, Malaysia

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**Abstract:** The empirical relationship between the evolution of tourism and foreign real estate investment is established in the literature; however the direction of causality between these two variables is less clear. The purpose of this study is to empirically investigate the pattern of causality between foreign real estate investment and tourism, within the context of Iranian investment in Dubai real estate sector (IIDRE) and Iranian tourism in Dubai. By applying multivariate cointegration approach, the findings indicate that in the long-run the causation runs from tourism to IIDRE. It means that accumulation of Iranian knowledge about attractiveness of Dubai as a holiday destiny is an important factor explaining IIDRE. The results also suggest that there is a bidirectional short-run causal relationship between these variables. The results have some important implications for Iranian and Dubai policymakers.

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**Key words:** Real estate % Tourism % Iranian % Dubai % Multivariate cointegration

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### **INTRODUCTION**

Previous studies established that foreign real estate investment is affected by the tourism. What is much less clear is the direction of causality between these two variables, given that, causal relationships running from tourism to foreign real estate investment and vice versa is both plausible.

Accumulation of knowledge (by foreign tourists) about the attractiveness of the destination as a holiday destiny can directly drive the demand for housing services up, because tourism is considered as the first step before acquiring a property [1]. The increased foreign real estate investment, on the other hand, will raise the tourism because tourism is the following step after acquiring a property in a foreign country, which makes tourism be influenced by previous investment in real estate [1].

The purpose of this study is to empirically investigate the pattern of causality between foreign real estate investment and tourism, within the context of Iranian investment in Dubai real estate sector (IIDRE, hereafter) and Iranian tourism in Dubai (Dubai is an emirate of the United Arab Emirates (UAE). UAE lies in the heart of the Middle East and is one of the world's fastest growing economies. By 2008, the UAE's second largest constituent emirate, Dubai, was drawing over 97 per cent of its GDP from non-oil sectors, including a real estate industry, a world class luxury tourism industry, an international financial centre and a range of re-exporting and other commercial activities based out of international 'free zones'. Dubai has historically enjoyed fairly warm relations with Iran, given that many of its immigrant merchants are of Persian origin. Iran has also long been the emirate's principal regional trading partner and Dubai chose to remain neutral in the Iran-Iraq War) [2].

Given a rapid increase in the number of Iranian tourists in Dubai which went hand-in-hand with a continuous increase in IIDRE, this led some observers to suggest that the growth in IIDRE was spurred by the increased amount of Iranian tourists' knowledge about Dubai [3]. On the other side, some argue that the tendency of Iranians (upper-middle and upper classes in particular) to visit Dubai (to some extent) is related to their investment in Dubai real estate such as villas, residential houses and apartments.

This interaction is of particular relevance for Iranian and Dubai policymakers. Identifying the factors affecting the involvement of Iranian real estate investors in Dubai is important for Iranian policymakers seeking to make effective policies to control Iranian capital outflows to Dubai. Further, several observers suggest that one of the main requirements of Dubai real estate recovery (after financial crisis) is tourism recovery [4]. Therefore, Dubai policymakers may be interested to know whether increased number of (Iranian) tourists could lead to higher investment in Dubai real estate. This is of particular interest, given that Iranians are among the major visitors of Dubai in recent years (around 10 %).

The remainder of this paper is organized as follows: as a precursor to the empirical analysis, Section two provides some facts for the Iranian investments and tourists in Dubai. In section three, the factors that will be relevant for the econometric investigation (drawing from the empirical literature) are identified. Section four is the main part of the paper where the empirical methodology is presented and the results are reported. Finally, section five provides some concluding remarks.

## IRANIAN INVESTMENTS AND TOURISTS IN DUBAI

This section presents some facts for Iranian investments and tourists in Dubai. The last decade has witnessed a strong growth in Iranian investment in Dubai. More than 400,000 Iranians (around 25 percent of Dubai's population) are estimated to have moved up to \$200 billion of capital into Dubai [5], [6].

The data provided by Dubai Statistics Center (2007) [7] indicates that Iranian direct investments ranked as the top seven among all foreign direct investments in Dubai in 2005 and 2006 (It should be noted that one-third of Iranian investors in Dubai have returned to Iran due to the economic crisis and the housing recession in the United Arab Emirates) [8]. Iranian investment in Dubai is classified into several sectors, ranging from banking and finance to oil and real estate. One of the main and remarkable categories of their investment in Dubai is investment in different types of real estate such as houses, villas, apartments, office buildings and industrial properties [5], [9]. To prove this fact, some evidences and statistics are provided as follows: some 10 to 30 percent of real estate transactions are conducted by Iranians and even the tallest skyscrapers in Dubai belong to Iranians [5], [9]. According to Fattah (2005) [10] Iranians are estimated to control as much as 30 percent of Dubai's real estate development. Iranians rank only behind the British and the Americans in terms of most important buyers of pre-constructions products in Dubai [11]. Iranians are among the biggest purchasers of Dubai property besides Indians, British and Pakistani nationals [9]. Similarly, figures released by REIDIN (2010) [12] clearly show that Iranians are among the most active real estate buyers or sellers in Dubai (Table 1).

In recent years, thousand of Iranians visit Dubai each year (Table 2). There are about 40 weekly flights to Dubai from Tehran and other major Iranian cities such as Mashad, Tabriz, Kerman, Isfahan and Shiraz [13]. Since this city offer more personal freedom and entertainments such as visiting nightclubs,

Table 1: Value of Property Transaction by Nationality in Dubai (UAE Dirham)

| Country        | Value          |
|----------------|----------------|
| India          | 26,641,501,938 |
| United Kingdom | 21,984,187,891 |
| Pakistan       | 13,231,861,494 |
| Iran           | 11,442,418,609 |
| Saudi Arabia   | 8,756,137,438  |

Source: Dubai Focus by REIDIN

Table 2: Total Iranian Visitors to Dubai

| 2000    | 2001    | 2002    | 2003    | 2004    | 2005    | 2006    | 2007    | 2008    |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 192,230 | 212,161 | 284,675 | 342,571 | 358,954 | 348,125 | 341,876 | 413,721 | 476,124 |

Source: Dubai Department of Tourism and Commerce Marketing

musical concerts [13] to Iranian citizens in compare to Iran, most of the Iranian upper-middle and upper classes have acquired a taste for spending their holiday in Dubai (It should be noted that establishment of nightclub business has been illegal in Iran since Islamic revolution in 1979). As a result of repeat visit and information agglomeration about Dubai, they were encouraged to have a house or resort rather than staying in hotels.

### **FACTORS AFFECTING THE IRANIAN INVESTMENT IN DUBAI REAL ESTATE SECTOR**

In this section, besides the tourism factor, the other variables that are considered for the empirical analysis are set out. The choice will be guided by two considerations: the relevance of the variables in question from empirical perspective and the availability of data.

One of the important determinants that are likely to have an impact on IIDRE is the amount of bilateral trade between Iran and Dubai. This factor is chosen because Dubai is the key trading partner of Iran in terms of exports and re-exports [14]. Habibi (2008) [15] argues that the geographic proximity of the two countries and the presence of a large expatriate Iranian community in Dubai have led to a significant increase in bilateral trade. Given the increasing trend of trade between two countries, many of Iranian businessmen have decided to have their own residential house, warehouse and office to operate their businesses in Dubai. Therefore, it is expected that trade activities between Iran and her main trading partner (Dubai) contribute to the increase of IIDRE. This argument is consistent with previous studies which showed that there is a positive relationship between trade and foreign direct investment [16]. Similarly, Moshirian and Pham (2000) [17] found that U.S. bilateral trade contributes positively to the expansion of U.S. foreign direct investment in real estate abroad.

Further, the return from the Iran's stock market is selected as an important determinant of IIDRE. The reason is that Iranian investors may look to stock market as one of several indicators of society's overall confidence in future business conditions. Therefore, falling returns from the Iran's stock market may create more incentives for Iranian investors to invest in Dubai real estate sector (as an alternative investment). In other words, falling stock prices may imply a lack of confidence in the

business future which in turn may motivate Iranian investors to invest in Dubai stock market or real estate sector. Previous studies also are in agreement with our argument. For example, Moshirian and Pham (2000) [17] found that U.S. foreign direct investment in real estate abroad is negatively correlated to returns from the U.S. stock market. Therefore, it is expected that IIDRE is negatively related to returns from the Iran's stock market.

Given the aim of the empirical analysis, an obvious variable to include is tourism. As outlined in the "Introduction" section, tourism can positively affect IIDRE through accumulation of knowledge about the attractiveness of Dubai as a holiday destiny, while the increased amount of real estate investment by Iranian in Dubai can lead to increased number of Iranian tourists in Dubai.

**Empirical Analysis:** Based on the discussion presented in the previous section, we arrive at the following choice of variables for the econometric investigation: Iranian investment in Dubai real estate sector (IIDRE), Iran's stock market returns (SR), bilateral trade between Iran and Dubai (TR) and number of Iranian tourists in Dubai (TS). All variables, except SR, are expressed in logs. Further, information regarding the series used, including their sources, is provided in the Appendix A. The data are monthly and cover the period from 2005:M1 to 2009:M4. The relatively small size of our sample is due to the limited availability of the IIDRE series.

The econometric approach involves estimating a Vector Error Correction Model (VECM). This model has the attractive property that it allows the modeling of the long-run and short-run relationships in a unified empirical framework [18]. As a first step, standard unit root tests (Augmented Dickey-Fuller tests (ADF) and Phillips-Perron test (PP)) are performed to determine the order of integration of the series (not shown). The results suggest that all variables are integrated of order one. Then, we proceed to determine the existence of cointegration relationships, using the multivariate Johansen-Juselius (JJ) cointegration test. The Akaike's Information Criterion (AIC) statistic suggests that one month is the optimal lag length in this VECM. The results of likelihood ratio tests for cointegration are summarized in Table 3. Both trace and maximum eigen-value tests result reject the null hypothesis of no cointegration at the 1 percent significant level. Thus, it is concluded that there is at least one cointegration relationship among the variables.

Table 3: The result of Johansen co-integration test

| Multivariate cointegration test |         |               |           |
|---------------------------------|---------|---------------|-----------|
| Hypotheses                      |         |               |           |
| H0                              | H1      | LR Statistics | 5 percent |
| $LR(\mathcal{B}_{trace})$       |         |               |           |
| $r = 0$                         | $r = 1$ | 86.174***     | 54.079    |
| $r = 1$                         | $r = 2$ | 26.018        | 35.193    |
| $r = 2$                         | $r = 3$ | 10.769        | 20.262    |
| $r = 3$                         | $r = 4$ | 3.567         | 9.165     |
| $LR(\mathcal{B}_{max})$         |         |               |           |
| $r = 0$                         | $r = 1$ | 60.156***     | 28.588    |
| $r = 1$                         | $r = 2$ | 15.249        | 22.299    |
| $r = 2$                         | $r = 3$ | 7.202         | 15.892    |
| $r = 3$                         | $r = 4$ | 3.567         | 9.165     |

Table 4: Estimation results

| Cointegration coefficients (long-run) |                    |                    |                 |           |
|---------------------------------------|--------------------|--------------------|-----------------|-----------|
| ln IIDRE                              | ln TS <sub>t</sub> | ln TR <sub>t</sub> | SR <sub>t</sub> | Intercept |
| 1                                     | 15.193             | -0.658             | 0.732           | 59.186    |
| s.e.                                  | (1.396)            | (1.342)            | (2.223)         | (5.054)   |

Since the existence of one cointegration relationship among the variables is established, we proceed in estimating the VECM. The long-run coefficients results are reported in Table 4. The sign of coefficients of tourism is consistent with our prior expectation and significant at the 1 percent level. This result implies that the increase in the number of Iranian tourists (tourism agglomeration) is positively related to IIDRE. However, the long-term coefficients for bilateral trade and stock market return are statistically insignificant to the IIDRE.

To complete the examination of the interaction between tourism and foreign real estate investment we turn to the short-run analysis and estimate dynamic relationships for each of these variables. Short-run Granger causality results show that bilateral causality exists between IIDRE and number of Iranian tourists in Dubai (Table 5). The findings are consistent with our initial expectation that number of Iranian tourist (tourism agglomeration) plays an important role in boosting IIDRE. On the other side, results indicate that the tendency of Iranians to visit Dubai (to some extent) is related to their investment in Dubai real estate such as villas, residential houses and apartments.

Table 5: The results of Granger causality tests based on VECM

| Short Run Granger Causality |                         |                      |                      |                    |
|-----------------------------|-------------------------|----------------------|----------------------|--------------------|
| Dependent variable          | E) lnIIDRE <sub>t</sub> | E) lnTR <sub>t</sub> | E) lnTS <sub>t</sub> | E) SR <sub>t</sub> |
| ) ln IIDRE <sub>t</sub>     | -                       | 0.721 (0.697)        | 4.520* (0.094)       | 0.173 (0.916)      |
| ) lnTR <sub>t</sub>         | 3.6971 (0.157)          | -                    | 1.165 (0.558)        | 1.353 (0.580)      |
| ) lnTS <sub>t</sub>         | 20.368*** (0.000)       | 15.616* (0.000)      | -                    | 10.810* (0.004)    |
| ) SR <sub>t</sub>           | 2.8972 (0.234)          | 0.756 (0.685)        | 3.412 (0.181)        | -                  |

Note: \*\*\*, \*\* and \* denote the significant level at 1, 5 and 10 percent levels, respectively.

## CONCLUSION

The purpose of this paper is to empirically investigate the pattern of causality between foreign real estate investment and tourism, focusing on Iranian investment in Dubai real estate sector (IIDRE) and Iranian tourism in Dubai. In order to address this question empirically, multivariate cointegration technique is applied. The results indicate that in the long-run the causation runs from tourism to IIDRE. The results also suggest that there is a bidirectional short-run causal relationship between these two variables.

The findings have some implications for Iranian and Dubai policymakers. First, since the rising number of Iranian tourists has positive effects on IIDRE in the long-run, Dubai policymakers should

attempt to attract more Iranian tourists to recover their real estate market which was hit badly in recent financial crisis. Moreover, the results may give some insights to Iranian policymakers who have been looking for the determinants of Iranian capital outflow into Dubai. Since accumulation of knowledge (by Iranian tourists) about the attractiveness of the Dubai as a holiday destiny can directly drive their investment for real estate up (in other words, capital outflow), Iranian government should try reduce the number of Iranian tourists in Dubai by applying long-term strategies. For example, Iranian government can give more personal freedom to their people and provide more relaxing and leisure activities at home in order to keep Iranian capital to finance industrialization, facilitate employment

opportunities and increase productive capacity. In addition, Iranian government should encourage their people to visit thousand of historical, cultural and natural attractiveness of Iran.

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Appendix A: Data used for the empirical analysis

| Variable | Explanation                                    | Source   |
|----------|--|--|
| RE       | Iranian investment in Dubai real estate sector | Real Estate Investment and Development Information Network (REIDIN.com-DUBAIFocus) |
| TS       | Number of Iranian tourist in Dubai             | Dubai Department of Tourism and Commerce Marketing                                 |
| SR       | Iran stock market returns                      | Tehran Stock Exchange  |
| TR       | Bilateral trade between Dubai and Iran         | Datastream (Thomson Financial)   |