The Effects of Economic and Location Factors in Australian Property Market

Abstract

It is generally accepted that the factors affecting the values of properties are the economic, location, and property factors. This paper explores how the Australian office, retail, and industrial property markets have performed from 1985 to 2013 in response to the economic and location factors. The IPD Australia Quarterly Index was used to assess the performances of Australian commercial property markets in terms of the economic and location factors. It is assumed that the capital returns of Australian commercial property markets may show the effects of economic factors. This paper investigates the effect of economic factors upon the Australian commercial property market (office, retail, and industrial markets), and the location factors in the Australian office markets.

Keywords: Property market, Economic factor, Location factor, Capital return

Introduction

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Factors that Influence the Values of Properties

Factors that have major effects upon values of the existing stock of properties are identified as the economic factors, the location factors, and the property factors. The economic factors refer to the economic conditions as a wide range of aspects at the national level, while the location factors refer to location aspects at the regional level. Finally, the property factors describe the characteristics of property itself such as the buildings and the land belonging to it.

As the Figure 1 shows, the economic factors embrace the location factors; and the location factors embrace the property factors. The classification of these factors is mainly based on the coverage of the areas. The economic conditions are concerned with macro-economic matters such as the state of the national economy, the state of the financial market, and the changes of taxation. The location aspects are concerned with micro-economic matters such as the local demand and supply, the planning and development policies of the region, and changes in charges and fees. The characteristics of property itself are the functional aspects of the property, the aesthetic aspects of the buildings, and the physical aspects of the land and buildings.

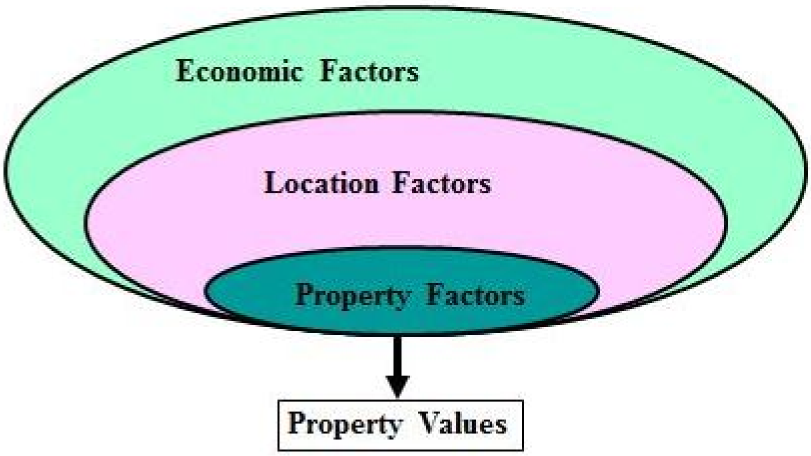

Figure 1: Conceptual Framework of Property Values

These three types of factors arise out of the basic nature of properties such as longevity, immobility, and heterogeneity. A property does not comprise only the brick, soil, columns, and physical features, but is defined as a bundle of privileges or benefits accruing to the owner for the period of the ownership. Because the stream of benefits produced from a property depends as much on factors external to the locus of the property itself, the value of a property depends to a considerable degree on the state of the economic base and the quality and type of location. Therefore, property investment appraisal should focus on the economic and location factors rather than the property factor. This paper only focuses on the economic and location factors.

Economic Factors in the Property Market

The property market is directly influenced by the general economic activity and economic situation of the country as a whole (Boykin and Ring, 1993: 68). The important indices of the economic conditions include Gross Domestic Product (GDP), per capita income and real wage levels, unemployment, personal savings and investments, and building and construction activities. Barrett and Blair (1989: 41-46) divide the economic factors on basis of their impact (or origin) into the demand and supply sides of the economy. The demand side of the economy includes population, total community income and distribution, and sources of employment. The supply side of the economy includes existing and planned supply of properties and competitive environment.

Barrett and Blair (1988: 243-244) describe the property market as being greatly affected by inflation. Property tends to increase in price because of the well-established re-sale market and the slow rates of depreciation compared to other assets. The prices of properties have generally increased more than the general price level (inflation). Expectation of future inflation is just as important as inflation, and many investors have been willing to accept fairly low rates of return in order to purchase a property with the expectation of future inflation with rental growth and capital appreciation.

The property market is one of the first markets to be affected by rising interest rates (Barrett and Blair, 1988). Property market activities such as occupation, investment, and development, are affected by changes in interest rate. Since a tight monetary policy - that is, high interest rates - normally slows down the economic growth and reduces demand, interest rates not only influence the demand for occupation, but also the supply of properties. Along with material and labour costs, high interest rates increase the costs of development because most developers borrow to build. Consequently, interest rates affect both the occupation and development property markets. The investment property market emphasises the capital values and the current yield rate as the key variables. The capital value of a property can be formulated with either yield rate or discount rate, which is closely related to interest rates. Interest rates then affect investment property market as well. Thus, interest rates affect the occupation, investment, and development markets in the property market.

Wofford (1983: 275) explains that property taxes have a tremendous impact on individuals and their decisions to own and improve property, and on the types and timing of development. If the property taxes have been substantially increased, the values of properties will probably fall. This adjustment will occur because the increased carrying costs associated with owning properties reduce the profits, which investors could expect from selling them in the future. When investors take the change in property taxes into account in deciding how much they can pay, they are said to capitalise those taxes into the values of properties. The changes in taxation therefore influence the values of properties. The economic factors therefore affect generally the performances of property markets.

Location Factors in the Property Market

Because of characteristics of longevity and immobility in the nature of the property, the value of a property is linked closely to the economic situation of the region in which it is located. The capital value of a property is estimated as the present worth of the expected future stream of incomes received from ownership of the property. As the expected future growth of a region declines, the value of the property may fall even if there is no change in the current economic situation at the national level. Certainly the development activities for new properties in the region will be affected. Indeed, differences in development activities among urban areas are so critical that it is almost always inappropriate to rely solely upon national trends to analyse current and future property prospects for a specific city. Consequently a property market analysis must consider location aspects. (Barrett and Blair, 1988: 183)

Barrett and Blair (1988: 41-46) explain the location aspects as the indirect economic factors. The indirect economic factors include zoning, ground conditions and topography, utilities, transportation linkage and traffic, parking, environmental impact, impact on government services, and prevailing attitudes. These indirect economic factors (location factors) are major constraints to be overcome in the development market. The location factors are therefore the critical factors in the development market and the essential factors in the investment and occupation markets.

Effect of the Economic Factors in Australian Commercial Property Markets

This section analyses the relative effects of economic factors on the values of Australian commercial property markets. First, this section analyses correlations between the capital returns of the Australian composite property, office, retail, and industrial property markets and the economic factors in the Australian commercial property market. The economic factors include the following variables; the inflation (Consumer Price Index - CPI), the demand side of the economy (Gross Domestic Products - CDP, new capital expenditure on total industry, the short-term interest rate), and the supply side of the economy (the Australian non-residential building approvals and commencements). These variables (between 1984 and 2013, quarterly) are abbreviated in the Table 1 as follows:

Table 1: Description of Economic Variables

Variable	Description
CPI	Consumer Price Index in the weighted average of 8 capitals cities in Australia (source; ABS)
GDP	Gross Domestic Product in Australia for quarterly (seasonally adjusted) (source; ABS)
NCE	New Capital Expenditure on Total Industry in Australia for quarterly (seasonally adjusted) (source; ABS) 1989-2013
INT	Short-term interest rate as 90 days bank accepted bills (source; RBA)
APV	Values of the total non-residential building approvals in Australia for quarterly (source; ABS)
CMC	Values of the total non-residential building commencements in Australia for quarterly (source; ABS)

Table 2: Correlations between Capital Return Index of Australian Commercial Property and Economic Variables: 1989-2013

Variable	CPI	GDP	NCE	INT	APV	CMC
AUS Composite Property	0.73*	0.73*	0.77*	0.06	0.82*	0.79*
AUS Office Property	0.30*	0.29*	0.42*	0.52*	0.49*	0.54*
AUS Retail Property	0.96*	0.96*	0.90*	-0.45*	0.92*	0.81*
AUS Industrial Property	0.71*	0.74*	0.67*	0.03	0.78*	0.76*

* Correlation is significant at the 1% level

Table 2 shows correlation coefficients between variables in the economic factors and the capital return indices[1] of Australian composite, office, retail, and industrial property markets. The capital return indices of the Australian commercial property markets (Aus Composite, Retail, and Industrial Property) have significant positive correlations with the inflation (CPI), the demand side of the economy (GDP and NCE), and the supply side of the economy (APV and CMC), while they have mixed results with the interest rates (INT). However, the capital return indices of the Australian office market do not have strong correlations with the economic variables compare with other retail and industrial property markets. The Australian retail property market is most closely associated with the economic variables during the study period. It is concluded that the capital values of the Australian commercial property market are associated with the changes of the economic factors in the market.

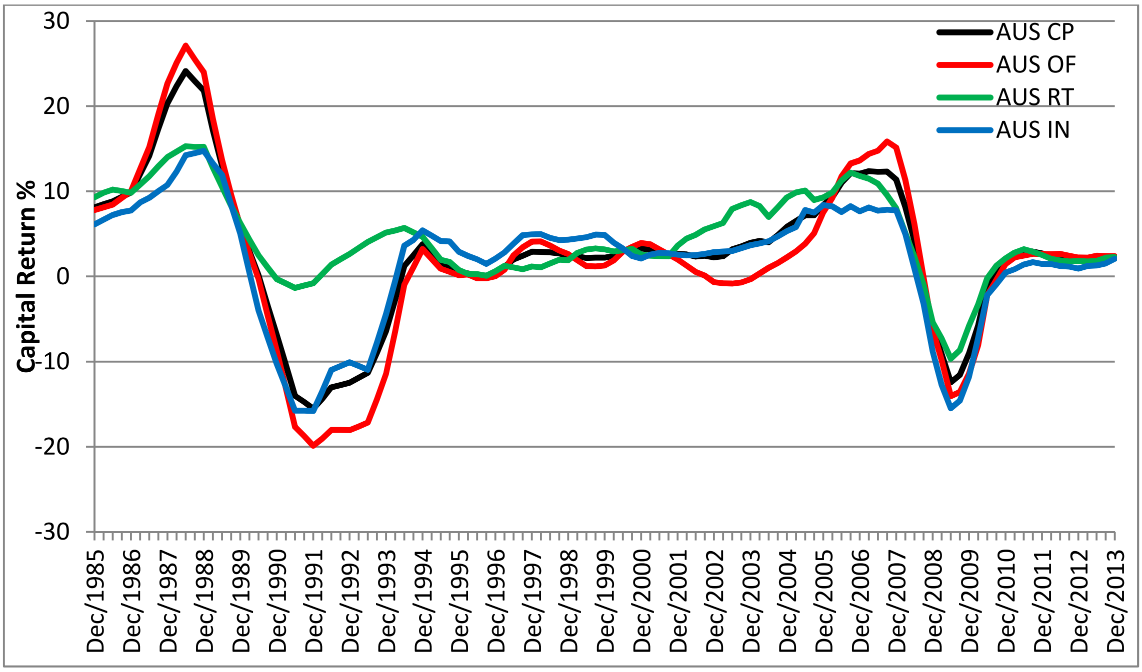

Figure 2: Capital Returns (%) of Australian Composite Property and Australian Office, Retail, and Industrial Property; 1984 – 2013 (Source: IPD)

[1] Source: Australia Quarterly Digest by the IPD.

The values of Australian commercial property market are affected by the economic factors of the Australian property market. Figure 2 shows the capital returns of Australian composite property, office, retail, and industrial property markets from 1985 to 2013. The Australian commercial property markets have achieved positive capital returns during the study period except from 1990 to 1993 and from 2008 to 2010. It means that the Australian commercial property markets are affected by positive economic factors during the study period except from 1990 to 1994 and from 2008 to 2010. The values of Australian office, retail, and industrial property market are affected by the economic factors of the office, retail, and industrial property market respectively.

Effect of the Location Factors in Australian Office Markets

Since the values of office buildings are affected by the economic and location factors in the office market, the capital return of the Australian office market is thus a function of the economic factors. The capital returns of the office markets in Australian cities are a function of economic and location factors. This can be illustrated as follows:

$$CROa = CRAO + LFa \qquad (1)$$

where $CROa$ = capital return of office market in area a
$CRAO$ = capital return of Australian office market
LFa = location factors in area a

The effect of location factors upon the capital return of office market can be calculated. From the above equation (1), the equation for the location factors can be rearranged as follows:

$$LFa = CROa - CRAO \qquad (2)$$

Using this equation (2), the location factors in Sydney, Melbourne, Brisbane, Adelaide, and Perth office markets are analysed in the following sections. The difference between the capital return of the office market in a particular capital city and the capital return of Australian office market is due to location factors.

Figure 3 shows the capital returns of Australian Office, Sydney, Melbourne, Brisbane, Adelaide, and Perth CBD office markets from 1985 to 2013. The capital return of the Australian Office market shows the effect of the economic factors in the Australian office market.

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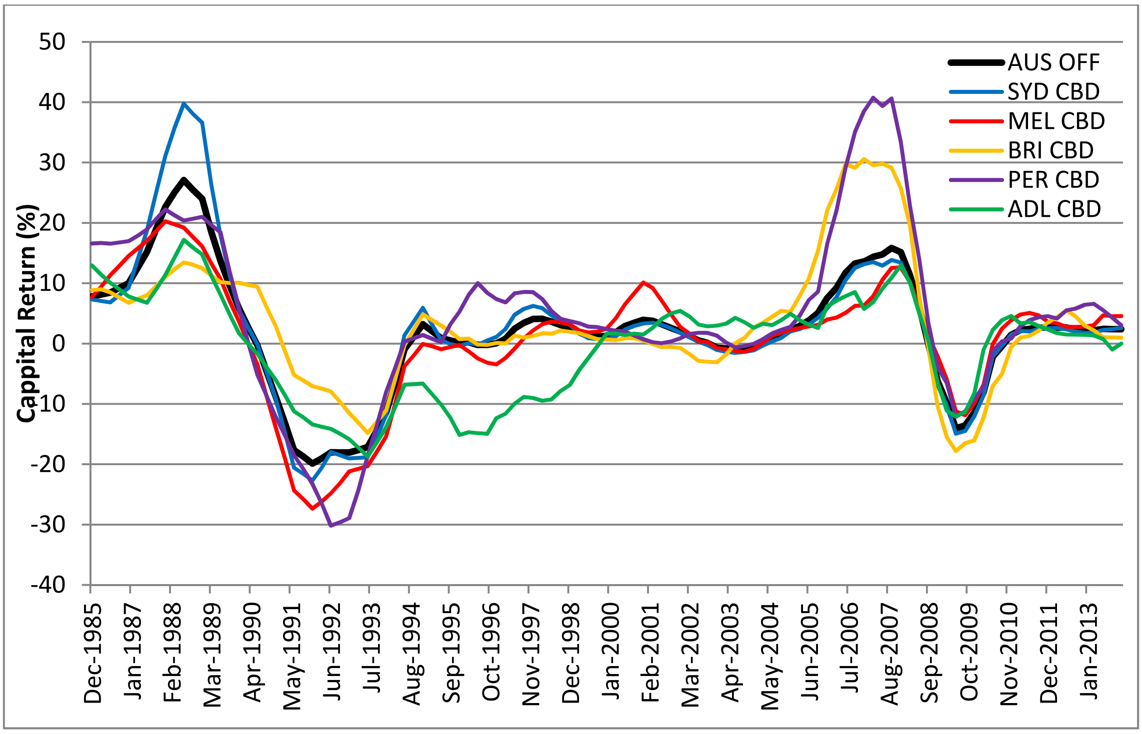

Figure 3: Capital Returns (quarterly) of Australian Office Markets; 1985 – 2013 (Source: IPD)

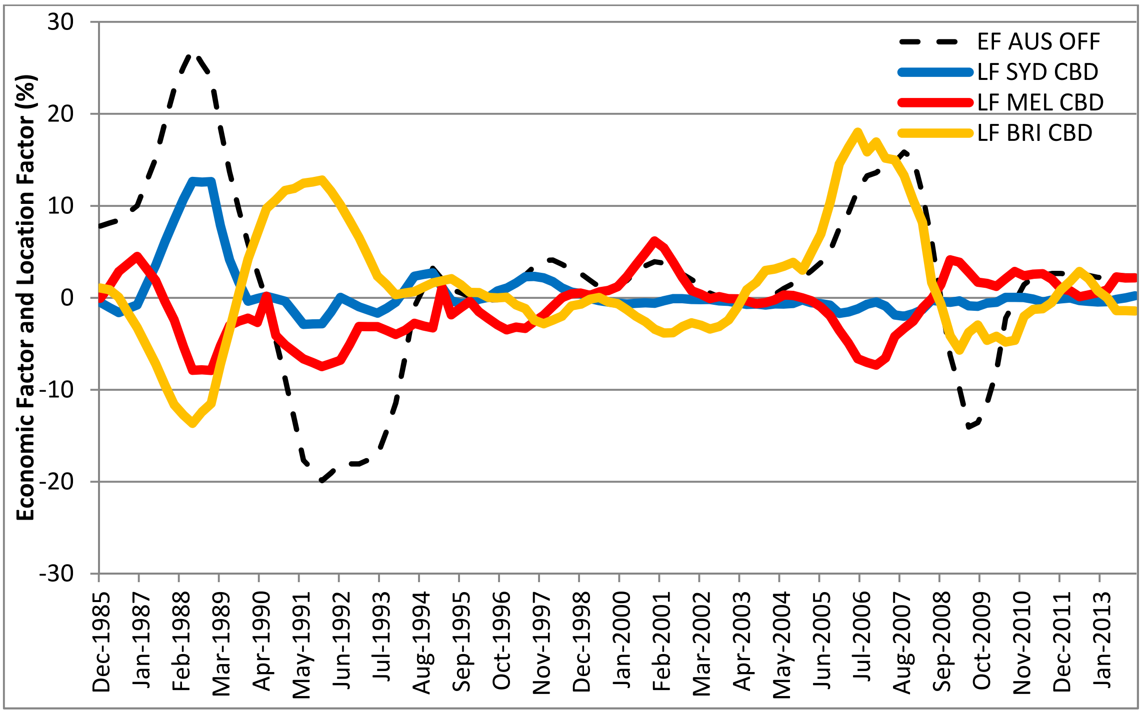

Figure 4: Effect of the Economic Factor and the Location Factors in Sydney CBD, Melbourne CBD, and Brisbane CBD Office Markets

The Figure 4 shows the effects of economic factor of the Australian office market and the location factors of Sydney CBD, Melbourne CBD, and Brisbane CBD office markets from 1985 to 2013. The capital return of the Australia office market is used for the effect of economic factor. The effect of the location factor of each capital city is calculated using the equation (2).

It shows that the economic factor of the Australia office market provides more impact than the location factors of Sydney, Melbourne, and Brisbane office markets. The Sydney CBD office market shows a strong positive location factor from 1987 to 1989. Since 1994, the Sydney CBD office market is dominated by the economic factor of the Australia office market. The Melbourne CBD office market shows more fluctuation of the location factor than the Sydney market. The Brisbane CBD office market shows most fluctuation of the location factors among the three capital city CBD office markets. The Brisbane CBD office market shows a strong positive location factors from 1990 to 1993 and from 2004 to 2007, while it show a negative location factor from 1986 to 1990.

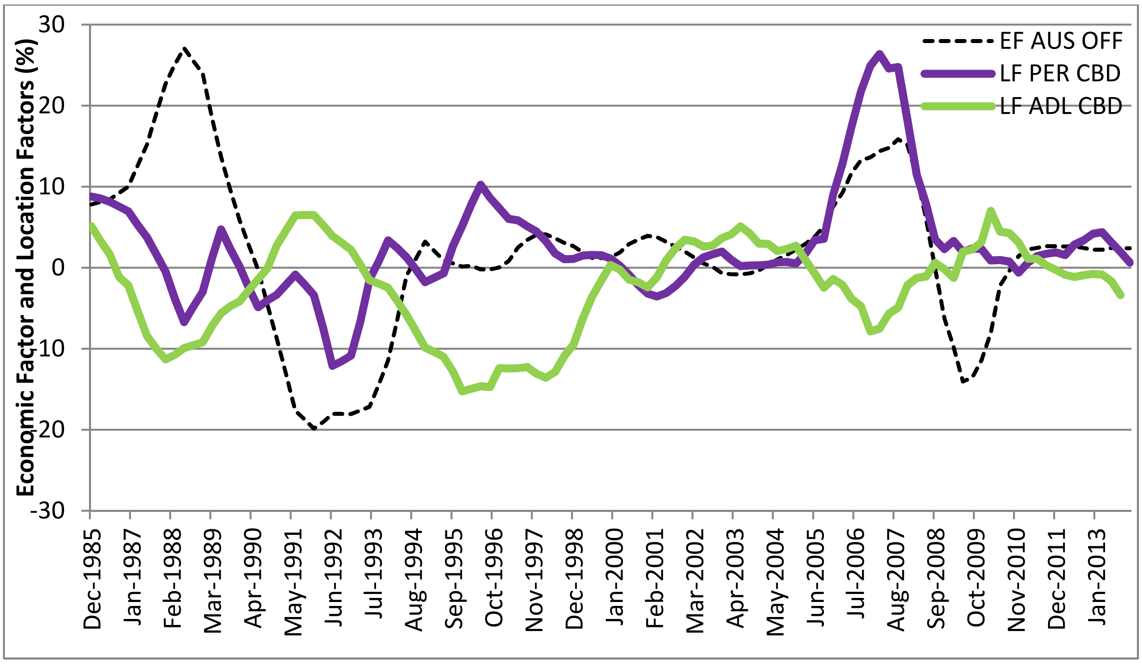

Figure 5: Effect of the Economic Factor and the Location Factors in Adelaide CBD and Perth CBD Office Markets

The Figure 5 shows the effects of economic factor of the Australian office market and the location factors of Adelaide CBD and Perth CBD office markets from 1985 to 2013. The Adelaide CBD and Perth CBD office markets show more fluctuation of the location factors than the Sydney CBD and Melbourne CBD office markets. The Perth CBD office market shows a strong positive location factor from 2006 to 2008. The Adelaide CBD office market shows a negative location factor from 1987 to 1989, from 1994 to 1998, and from 2006 to 2008.

Conclusion

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The capital returns of Australian commercial property market have significant correlations with the economic variables (positive correlations with demand and supply variables except the interest rates). The values of Australian commercial property market are affected by the economic factors of the property market. The capital returns of the Australian commercial property can be used to assess the effects of the economic factor in the property market. The Australian office, retail, and industrial property markets are dominant sectors of the Australian commercial property market. The Australian commercial market was affected by strong negative economic factors from 1990 to 1993 and from 2008 to 2010, while the Australian commercial property market shows strong positive economic factors from 1987 to 1989 and from 2005 to 2007.

The Sydney CBD office market shows a strong positive location factor from 1987 to 1989. The Melbourne CBD office market shows more fluctuation of the location factor than the Sydney market. The Brisbane CBD office market shows a strong positive location factors from 1990 to 1993 and from 2004 to 2007, while it show a negative location factor from 1986 to 1990. The Adelaide CBD office market shows a negative location factor from 1987 to 1989, from 1994 to 1998, and from 2006 to 2008. The Perth CBD office market shows a strong positive location factor from 2006 to 2008. The Brisbane CBD, Adelaide CBD, and Perth CBD office markets show more fluctuation of the location factors than the Sydney CBD and Melbourne CBD office markets. Since 1994, the Sydney CBD office market is dominated mainly by the economic factor of the Australia office market.

Note: This paper is an extended version of my previous paper: (2004) ‘The Dynamics of Australian Property Market’ Proceedings, Pacific Rim Real Estate Society (PRRES) 10th Annual Conference, 25-28 January 2004, Thammasaat University, Bangkok, Thailand.

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