



The Drivers of Overseas Investments in the Australian Residential Property Market

A thesis submitted in fulfilment of the requirements for the degree of

Ph.D. (Built Environment)

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July 2016

Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and, ethics procedures and guidelines have been followed.

Peng Yew Wong

16th September 2016

ACKNOWLEDGEMENT

First and foremost I wish to thank my supervisor, Associate Professor David Higgins for his invaluable guidance, advice and assistance for my entire doctoral study. The moral support provided by him was instrumental in overcoming hurdles and challenges during the research. Dr. Higgins' industry connections were a significant contributing factor in speedy research data collection. His insistence in pushing research boundaries, combined with his motivational supervision had made this research journey most interesting.

It goes without saying that I owe a special gratitude to my co-supervisor, Professor Ron Wakefield, for his "out-of-the-box" thinking and insightful comments and support throughout the research. Special tribute is hereby made to his wisdom in providing different "lines of attack" to resolve my research headwinds.

I am grateful to RMIT University and the Australian government for the sponsorships and technical support that made this doctoral study possible. I thank Professor Kerry London for her meaningful introduction to the world of research philosophy and support throughout my research candidature. I appreciate the guidance of my review panel member Associate Professor Guillermo Aranda for his advice on life within and outside the research journey. I would like to acknowledge the kind assistance of Dr. Judith Callanan, Dr. Wejendra Reddy and Ms. Jane Simpson for sharing their knowledge and assistance on my research and teaching works in the University. I also appreciate the support provided by the staff and fellow Ph.D. colleagues at RMIT University's School of Property, Construction and Project Management.

The nature of research entails wide coverage of industrial perspectives that require support from industry personnel. These are significant contributors to the success of the research outcomes. I thank Mr. Tony Crabb (Savills) and Ms. Petra Sprekos (REIV) for assisting with industry networking and data collection. I would also like to acknowledge the support of the many Australian and Chinese real estate leading professionals who contributed insightful standpoints and perspectives in the semi-structured interview research phase. Their expert advice and recommendations were valuable in shaping this research and were significant in result validation.

Lastly, I sincerely appreciate the support, patience and understanding of all my family and friends tolerating all the inconveniences during my Ph.D. candidature. My gratitude goes towards my beloved wife Poh Lay and my two daughters Chloe and Ryann. This thesis would not have been possible without their unwavering support, love, encouragement and tolerance. Poh Lay's contribution in proof reading my thesis and presentation materials always came in handy when I

needed it the most. All three of them were the targets of crazy ideas or tough issues, for which I can't express enough gratitude.

To all, I thank you for your support, guidance and encouragement. It has been a journey and it is greatly appreciated.

Peng Yew Wong

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ABBREVIATIONS AND ACRONYMS

ACGBs	Australian Commonwealth Government Bonds
AUD	Australian Dollar
BOP	Balance of Payment
DM	Developed Market
DV	Dependant Variable
EM	Emerging Markets
EMEA	Europe Middle East Africa
ERP	Estimated Resident Population
FDI	Foreign Direct Investment
FIRB	Foreign Investment Review Board
FREI	Foreign Real Estate Investment
FPI	Foreign Portfolio Investment
GFC 2008	Global Financial Crisis 2008
HNWI	High Net Worth Individual
IMF	International Monetary Fund
IV	Independent Variable
LTVA	Long Term Visitor Arrival
PPP	Purchasing Power Parity
QE	Quantitative Easing
RMBS	Residential Mortgage Backed Securities
RT	Residential Tourism
RTs	Residential Tourists
STVA	Short Term Visitor Arrival
STVAV	Short Term Visitor Arrival Victoria State

SWF	Sovereign Wealth Fund
VFR	Visiting Friends and Relatives
USA	United States of America
USD	United States Dollar

Abstract

Active participation by foreign investors in the Australian residential property market has been most evident since the Global Financial Crisis 2008 (GFC 2008). According to National Australia Bank, 16% of the total sales in Australian new housing markets were transacted into the hands of foreign buyers in 2015 with Foreign buyers' involvement reached 21% in NSW and Victoria (NAB, 2015). Furthermore, Janda (2014) predicted that Chinese investors and newly arrived migrants would be investing approximately AUD44 billion into Australian residential real estate market over the next seven years. Empirical studies only shed limited information on new overseas private wealth's investment characteristics and strategies. These relatively distinct and unique investment behaviours are set to impact on the Australian residential property market significantly based on an entirely new perspective of global cross border private wealth investment strategies.

According to Savills (2014) estimates, direct-owned residential property contributes 83% of the total value of property in the world of USD180 trillion. As a comparison, Australia's residential property market is valued at AUD5.93 trillion (based on 0.745 USD:AUD exchange rate as at 30th June 2015) with a housing mortgage market of AUS1.47 trillion (CoreLogic, 2015). Since the GFC 2008 house prices in both Sydney and Melbourne have continued to escalate with Australia receiving strong endorsement from the international investment community, being the seventh and ninth most popular Foreign Direct Investment (FDI) destinations in the world in 2012 and 2013 respectively; attracting USD57 billion in 2012 and USD50 billion in 2013 (UNCTAD 2013, UNCTAD 2014).

This research focuses on the emerging overseas investor determinants for the Australian residential property market subsequent to the GFC 2008. The aim of this study is to determine whether there is historical evidence and whether there are emerging trends to support the existence of a significant relationship between overseas investors and residential housing markets' performance. This research will first examine the established residential property market performance in metropolitan Melbourne and two Melbourne suburbs which have attracted substantial overseas investment interest. The foreign investment elements in Melbourne's housing market will be assessed through a case study on Chinese investors. This reflects the significance of recent FDI funds emanating from China. The result of this research aims to provide a better understanding of the relationships between the performance of the Australian residential housing market and its market determinants in terms of both existing and emerging factors. The study yields empirical evidence that can potentially assist policy makers in making informed decisions to promote Foreign Real Estate Investment (FREI).

Research was undertaken using a mixed method (quantitative and qualitative) approach. A “sequential explanatory” mixed methods research design was used to provide a better understanding of the multifaceted Australian housing market. Quantitative research constituted the first phase of secondary data analysis upon which the theory was built for the second phase qualitative analysis. The qualitative analysis involved semi-structured interviews with real estate professionals in Australia and China. The qualitative phase helped to support and validate the new determinants discovered in the quantitative study. The entire research was guided by adopting the three-market model depicted by (Archer and Ling, 1997), reinforced by Higgins (2010) as the research platform to facilitate a structural approach on the research coverage in this study. As Australia has become increasingly relevant in the era of globalisation, an attribute labelled “Overseas Government Policies” was added to the model. It constituted the “Push & Pull” model established in this study to encompass the “push factor” from overseas exerting a new investment dimension and its weight onto the local property market.

This quantitative research fell into the classification of “predictive” design. House prices in the selected suburbs were predicted using the models established in this study and they were compared with the latest residential property price trends as part of the validation measure on the models established. Three statistical analyses were applied, namely Pearson Correlation Coefficient Matrix, Multiple Linear Stepwise Regression and Descriptive Analysis. The qualitative research was conducted in both onshore and offshore locations to solicit validations and in-sights on the new investment trends and determinants. A series of semi-structured interviews were conducted with eight senior ranking real estate professionals in Melbourne and seven senior ranking real estate professionals in China. Results of this phase assisted in justifying, or otherwise, the findings that overseas conditions and new drivers played a part in the Australian residential property market performance.

Past empirical evidence revealed that traditional investment portfolios which comprised a mixture of equity and bonds were either too volatile or provided an unacceptably low return (Ley, 2001). Global real estate had gained significant attention from the world investment community due to the relatively low volatility and relatively high returns. Real estate had emerged as an investment option among both the large institutions and private investors seeking diversification on a global stage. In the midst of extensive internationalisation and deregulation, Australia’s residential property sector was identified as one of the major contenders for global investors seeking improvement to their investment portfolio due to its relatively stable economic and political conditions.

Regression analysis on secondary data was performed on Melbourne Metropolitan, Clayton and Doncaster house prices. Based on the correlation matrix and the three regressions equations, factors associated with offshore investments had primarily shaped the models and emerged as a relevant metric at least as significant as other traditional economic indicators. For example, 10-year Government Bond Yields, Foreign Currency and Net Overseas Migration were significantly correlated and formed the crucial components of the regression equations and correlation matrix. These components were found to have higher significance than other more traditional residential market determinants such as rent growth, GDP per capita and net saving rates in Australia.

In this study, atypical investing characteristics by new global private investors in Australia were discovered. These global private investors looked beyond the traditional purpose of portfolio diversification in their decision making on Australian residential property investment. They placed great emphasis on “emotional” value factors such as clean air, recreation parkland and the secured Australian living environment. They sought residential properties for leisure, for their offspring and some ultimately aiming for attaining Australian permanent residency. It is believed that as long as Australia maintains its favourable liveability standards, foreign investors from all over the world, not just China will continue to invest in the Australian residential property market owing to its strong brand presence.

Residential Tourism (RT) was identified as an emerging determinant of the Australian residential property market. Residential Tourists (RTs) carry both the characteristics of being tourists and migrants. In this study, RTs have been categorised into High Net Worth Individuals (HNWIs) and Middle Class individuals. Note that both categories “live” life here in a similar style to an Australian resident and they spend money in Australia much like tourists. While enjoying leisure activities much like tourists, the extensive duration of their stay in Australia resembles the profile of a migrant to Australia.

Education was validated repeatedly empirically as a major component of the Australian service industry and offer, potentially overtaking iron ore as one of the largest foreign exchange income sources (Loussikian, 2015). Contrary to common perceptions that international students were mostly confined to tertiary degree courses, exploration in this study revealed an emerging trend of international student enrolments in Australia’s primary and secondary schools. As a result, international students have been residing in Australia for a much longer period of time compared to the 1980s or 1990s. This emerging trend further incentivised overseas-based parents to invest in the residential property market in Australia for their children’s accommodation purposes. This study revealed that decision making by these international students was mainly focused on the relative

reputation and cost of Australian tertiary institutions compared to alternative universities in the United States and United Kingdom. They would decide to have their education in Australia in their earlier years as a “pathway” to be eventually admitted to a reputable university.

This thesis is the first to take the research “cross-border” whereby interviews were conducted with the senior real estate professionals in both Australia and China. This research identified the latest investment decision making process undertaken by both the Chinese HNWIs and the expanding Middle Class. Important insights on major investment determinants such as China’s “1 + 1 = 2” phenomenon, China’s “going-out” policy and “Capital Deflator” effect were uncovered and discussed. These findings established empirical validations of offshore investments in Australia’s residential property market with an increased understanding.

Through merging both the new overseas inward investment patterns and the domestic conventional determinants of the Australian residential property market, a new trend in the Australian residential property market was identified. The emergence of this group of global property investors who have looked beyond the traditional valuation methods had lifted the Australian residential property market to a new prospective. Empirical evidence established in this thesis can provide appropriate assessment and analysis platform for the Australian residential property market which has become increasingly complex due to the uprising influences of various offshore variables. These factors must not be overlooked and should be added to the traditional valuation method so as to enhance the relevance of research outcomes.

Chapter One: Introduction

1.1 Background

One after another Quantitative Easing (QE) policies introduced into many of the world's leading economies subsequent to the shock of the GFC 2008 exacerbated volatility in equity markets and encouraged low yields in the bond markets. Over the past 10 years international investors have by and large been disappointed with the investment returns from their traditional portfolios which typically comprise largely of a mixture of equity and bonds (Azelby, 2012). Global investors have intensified their efforts in seeking alternative investments as replacement for or hedge against their existing portfolios (McDermott, 2013). According to Palin (2014), the traditional investment portfolios of a mixture of equity and fixed interest securities are either too volatile or provide a low return with a weighting towards bonds. As a result, global real estate markets have gained significant attention from the world's investment community due to their relatively stable risk profile and returns. Furthermore, many governments in developed countries have new regulations to attract offshore capital. This has increased the participation from both institutions and private entities adding momentum to global investment activities by investing in global real estate markets seeking better returns. Azelby (2012) predicted a structural shift toward higher real asset allocations in the next decade. Real assets will move from an alternative to a mainstream asset class and portfolio allocations could rise from 5%–10% to as much as 25% (Azelby, 2012).

According to Savills (2014), two emerging trends will dominate and shape future world real estate markets in the midst of increased cross border real estate investment activities:

- i) Overtaking the rest of the world, funds emanating from Asia will emerge as the largest cross border source of real estate investment
- ii) Private Wealth has emerged as a serious contender in the global cross border real estate market transitionally precluded mainly to the large institutions

Source: Savills, 2014

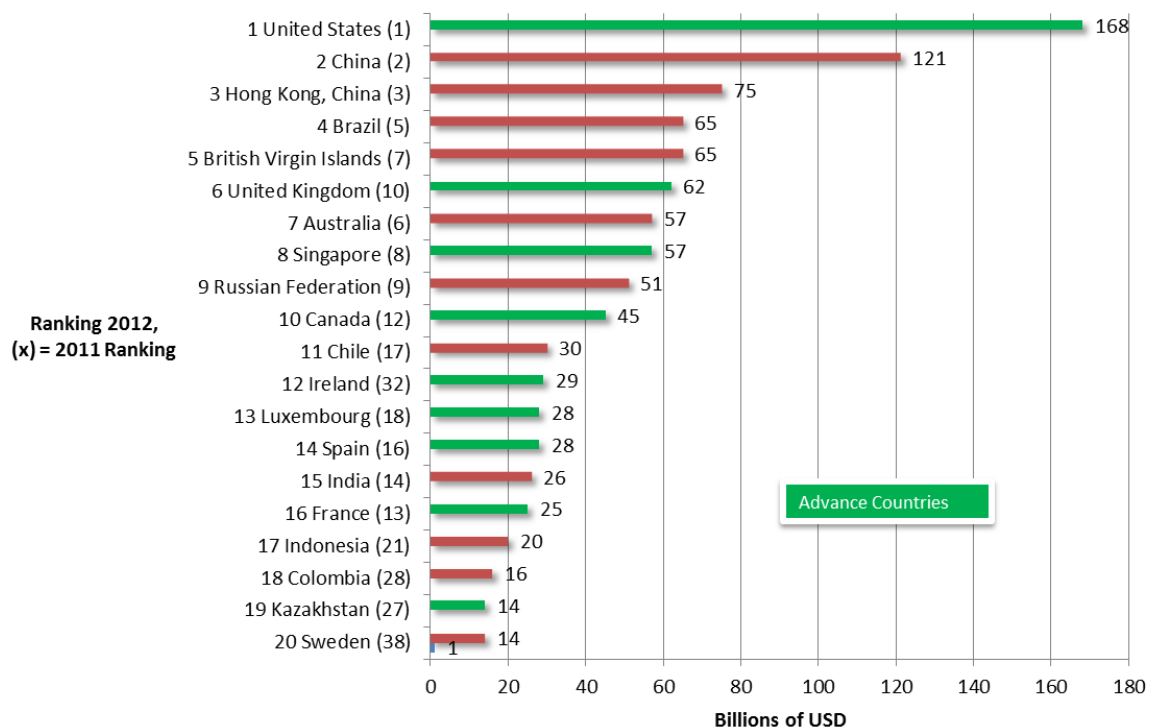
Asia is already one of the largest sources of cross border real estate investment funds. The combined value of capital from mainland China and Hong Kong constitutes the second largest source of cross-border investment in the world after the USA and is expected to surpass the USA in the next few years. For the year to October 2013, USD23.7 billion in outward real estate investment has flowed from China, most of this being invested in residential property (Savills, 2014).

In 2012 the reported AUD1.6 billion in commercial real estate transactions with Chinese capital represented approximately 14% of total Foreign Direct Investment (FDI) into Australia (KPMG, 2014). According to KPMG (2014) this represents from a low base, an increase of approximately 8.1% compared to the previous year. The Chinese will invest approximately AUD44 billion into Australia's residential real estate market over the next seven years (Janda, 2014). The significance of Chinese investors on global cross border real estate markets has led this research to focus on the drivers of overseas investment on the Australian residential property market with a case study based on Chinese investment activities on specific Melbourne residential property markets.

1.1.1 Global Wealth and Foreign Direct Investment (FDI)

Whilst the GFC 2008 had initially slowed FDI, growth of FDI remained at a healthy level, with an estimated global FDI of USD1.35 trillion in 2012. Investment in finance and real estate was a key foreign direct investment component (UNCTAD, 2009). Figure 1.1 shows the top 20 host economies to attract FDI in 2012:

Figure 1.1: Top 20 Host Economies for Foreign Direct (Inward) Investment in 2012

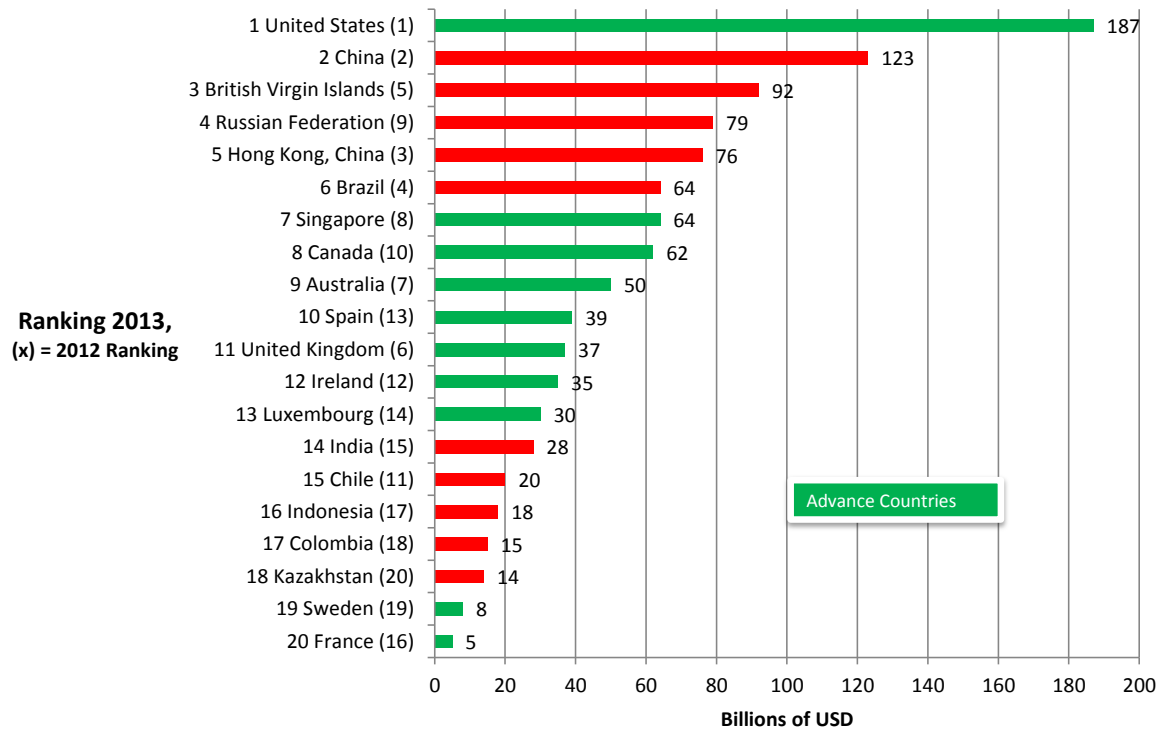


Source: UNCTAD 2013

Figure 1.1 shows that Australia in 2012 was ranked seventh in the top host countries, attracting USD57 billion of FDI into the country. United States is the top host economy attracting USD168 billion of FDI, followed by China with USD121 billion. The distribution of FDI is distorted as the small

nations of Hong Kong and British Virgins Island were ranked third and fifth respectively with combined FDI of USD140 billion. This reflects the financial orientation of FDI with key global locations providing investment hubs and offering competitive tax structures (UNCTAD, 2013). Figure 1.2 compares the 2013 global FDI ranking with the 2012 ranking:

Figure 1.2: Top 20 Host Economies for Foreign Direct (Inward) Investment in 2013



Source: UNCTAD 2014

Whilst the United States and China remained the top two destinations for FDI and Singapore, Canada and Spain had improved their rankings from 2012, the same couldn't be said for the rest of the developed nations. Australia ranked ninth in 2013 compared to seventh position in 2012 and ranked below other developed nations such as Canada and Singapore. Other developed nations including United Kingdom, Sweden and France descended in their rankings. The distribution of FDI continues to be distorted in the small nations of Hong Kong and British Virgin Islands. The Russian Federation, Brazil and India emerged as developing nations that successfully attracted more inwards FDI in 2013.

In the midst of world trade and economic globalisation and liberalisation, many governments offered Quantitative Easing (QE) policies after the shock of the GFC 2008 were thought to have exacerbated the volatility in equity markets and low yield in bonds investments. Traditional investment portfolios typically hold a mixture of equity and bonds and for various reasons both

markets had disappointed international investors since GFC 2008. Global investors are seeking alternative investments as a replacement or hedge against their existing portfolios in equity and bond markets (McDermott, 2013).

FDI activities seeking alternative investment options had increased substantially during this time by diversifying into various classes of recognised assets including real estate. Among the asset classes attracting FDI, significant attention has been diverted to the real estate sector with increasing level of liquidity, superior returns and offering improved opportunities for diversification with the traditional investment portfolios holding only a mixture of equities and bonds (D'Arcy, 2009, Topintzi et al., 2008).

UNCTAD (2011) reported that FDI in real estate markets had experienced significant growth in many countries. This increasing trend was particularly evident in China. In 2010, FDI in real estate accounted for more than 20% of total inflows into China. In 2012, the same inflows into the real estate market went up to almost 50% of the total. A similar growth trend was observed in other countries. FDI in the real estate market represents nearly 40% of total FDI inflows in Spain and ranked second only to India's computer software industry in 2007. (Economist, 2008, Rodríguez and Bustillo, 2010). Evidently, cross border foreign real estate investment was on a rise in this global liberalization era (D'Arcy, 2009, UNCTAD, 2009, UNCTAD, 2013, Topintzi et al., 2008).

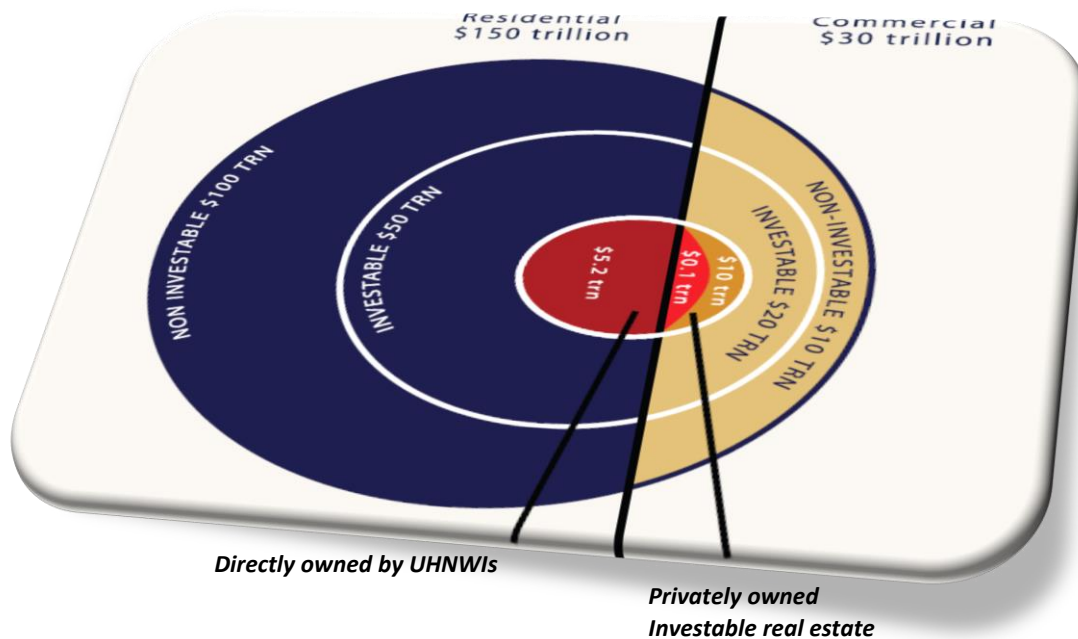
UNCTAD (2013) reported a similar surge in alternative investments by Sovereign Wealth Funds (SWFs). In addition to the traditional investment classes such as utility companies (electricity, gas and water), SWFs had increased their exposure to stable alternative asset classes including real estate. Combined, the cumulative SWFs cross border investments leapt by 44% between 2011 and 2012. In the current global investment environment this demonstrates the growing importance of alternative asset classes as a key investment market.

Real estate assets can offer an investment category to investors with opportunities for diversification. Concurrent with the growth of global portfolios investment in real estate, opportunities to invest in real estate were made available to investors including listed real estate securities. These are listed vehicles which can be traded and have real estate as the underlying asset. In gaining momentum and coupled with the fact that cross border foreign real estate investments activities were well supported by easily accessible information attributed to the advancement in information technologies, there has been increased Foreign Real Estate Investment (FREI) activities in many countries recently.

In recent years, private investment has led to a noticeable increase in FDI across many world economies (Savills, 2014). Contrary to the general perception of the world real estate market

dominated by commercial properties, Savills (2014) estimated that directly owned residential properties contribute approximately 83% of the total USD180 trillion world property universe. Only approximately 17% related to commercial property. For the total USD20 trillion investable commercial properties, half was owned by private individuals either directly or indirectly. Figure 1.3 shows the composition of total world real estate value in 2014 as estimated by Savills:

Figure 1.3: **World Real Estate Value**



Source: Savills 2014

Figure 1.3 illustrates that out of the total estimated world real estate value of USD180 trillion, residential properties portion was approximately USD150 trillion, whilst commercial properties only contribute approximately USD30 trillion. Amongst the USD150 trillion in residential properties, the majority of these residential properties (approximately USD100 trillion) were made up of non-investable assets and USD50 trillion were investable assets.

The reverse scenario was observed in commercial properties. Amongst the total USD30 trillion in commercial real estate, investable properties contributed approximately USD20 trillion versus the non-investable of USD10 trillion. In terms of investable real estate, residential properties valued at USD50 trillion was approximately 2.5 times more than the commercial properties of USD20 trillion. Within these estimated values, the real estate holdings of High Net Worth Individuals (HNWIs) total over USD5 trillion, or around 3% of entire world's real estate value. Figure 1.4 depicts the Australian residential housing market value in 2014 as compared to the world real estate market:

Figure 1.4: Australian Residential Property Value



Source: ABS 2015, ASX 2015, CoreLogic 2015

As per Figure 1.4, Australian residential properties market was valued at AUD5.93 trillion with the housing mortgage market stood at AUD1.47 trillion. In 2014, the issuance of RMBS hit AUD32 billion, its highest level since GFC 2008 (ABS, 2015, CoreLogic, 2015).

Recent market commentaries and reports provided crucial information with regard to the globalization impacts on the world economies subsequent to the GFC 2008 (for example AOFM, 2015, Azelby, 2012, Canstar, 2014). Whilst the FDI continues its importance as the aid to the world economy's growth and reform, the emerging trend of diminishing preference to traditional investment portfolios comprising solely of a mixture of equity and bonds appeared to dominate sentiment due in part to QE policies employed in economies around the world. As international investment communities were demanding alternative investment options, real estate assets emerged as a strong contender providing an apparent option for portfolio diversification due to its increasing level of liquidity and superior return. Among the entire available real estate portfolios, the residential property market's significance was undeniable being the largest asset class as per Savills (2014)'s finding.

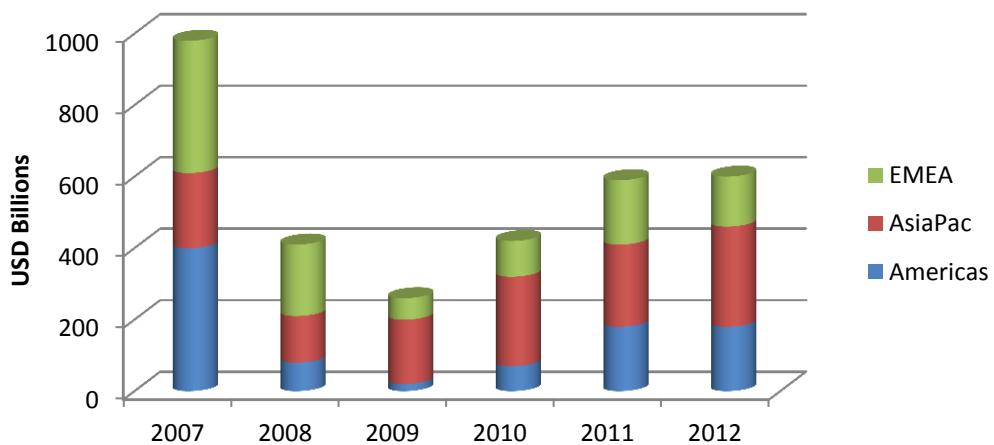
1.1.2. Sources of Funds and Residential Property Market

RBC Wealth Management Capgemini (2015a) specifically defines HNWI as:

“High Net Worth Individuals (HNWIs) are individuals having investable assets of USD1 million or more, excluding primary residence, collectibles, consumables, and consumer durables.”

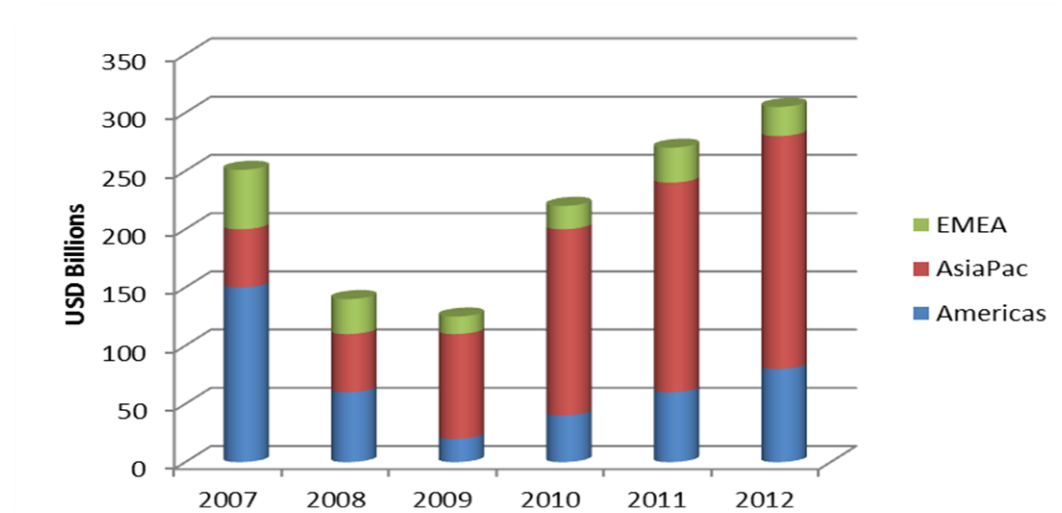
As depicted in section 1.1, Capgemini (2015b) and Savills (2014) identified two emerging trends in FREI that will have a significant impact on the world real estate market. The Private Wealth or the HNWI from the Asia Pacific region are set to overtake western countries’ HNWI as the biggest investor in global property market investments. The corporate and institutional ownership and acquisition of real estate globally that once dominated property markets suffered a setback in GFC 2008. During GFC 2008, the cross border activities in the world real estate market dropped significantly as credit markets contracted and the availability of debt funding for property deals diminished. A new trend seems to have emerged after the GFC 2008. SWFs, wealth management companies, private bankers and wealthy families have stepped into the property market arena that corporate bankers have deserted. Figures 1.5 and 1.6 compare the trends and compositions between corporate investment and private investment in in global real estate for the period of 2007 to 2012.

Figure 1.5: Corporate Investment in Global Real Estate



Source: Savills 2014

Figure 1.6: Private Wealth Investment in Global Real Estate



Source: Savills 2014

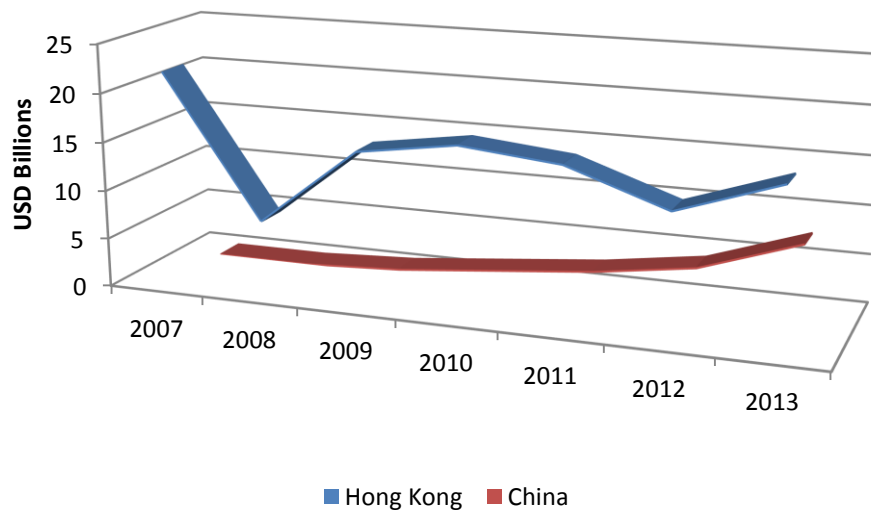
Comparing Figure 1.5 and 1.6 reveals that both Corporate Investment and Private Wealth Investment in global real estate had recovered from the low levels of 2009. A clear difference was that Corporate Investment in global real estate in year 2012, was close to USD600 billion, being still far below the 2007 level (above USD900 billion). In contrast, from a low base, Private Wealth investment in global real estate had surpassed the highest level in 2007 level and is coming close to USD300 billion in 2012.

A conclusion derived from both Figure 1.5 and Figure 1.6 is that Asia's investment in global real estate has increased substantially since 2008. More significantly, Asia Pacific investors have emerged as the most active player in cross-border real estate transactions, replacing the USA to become the major investor in the global real estate market in both the corporate and private segment.

JLL (2015) reported that among Asian investors, Mainland China led cross-border real estate transactions. China overtook Japan to lead Asia Pacific's commercial real estate investment volumes in the second quarter of 2015 as demand for office and retail space in world major cities rose. Cross border transactions accounted for 52% of total real estate transactions by volume in Australia to reach USD4.4 billion. Although the transaction volume was down 44% year on year basis, it represented an increase of 74% compared with the first quarter 2015.

For the year to October 2013, USD23.7 billion had been allocated from investors in China and Hong Kong to cross-border real estate investment. Chinese direct investment was up almost 165% in 2012. Figure 1.7 illustrates cross-border capital originating from China and Hong Kong for the period between 2007 until October 2013.

Figure 1.7: **Cross-Border Capital Originating From China and Hong Kong**



Source: Savills 2014

Figure 1.7 shows Hong Kong cross-border capital outflow dropped drastically during GFC 2008 to a level below USD10 billion. It recovered and reached above USD15 billion in 2010 before dropping to approximately USD12 billion in 2012. However, cross-border capital from Hong Kong did not recover to its pre-crisis level. During the same period, cross-border capital flowing out from Mainland China increased significantly over the period of 2008 to 2013. In 2008, only minimal cross-border capital flow from Mainland China was noted. The figure increased substantially to more than USD7 billion 2013. The combined cross-border capital outflow from Mainland China and Hong Kong was USD23.7 billion from January to October 2013 (Savills, 2014).

Among all these cross-border transactions, private capital played a major role with observed Chinese buyers seeking property for their offspring (often bases for student /children study), or to achieve permanent residency. These Chinese private investors seem to be more willing to undertake debt financing in their real estate investments. Some of them were comfortable with higher-risk property development positions. As a result, cross-border real estate transactions were concluded in hands of these private wealth funds that were precluded from them previously (Schlesinger, 2014, Savills, 2014).

Whilst overall transaction numbers in the corporate sector were still below 2007 levels subsequent to GFC 2008, private real estate deals were nearly a third higher in 2012. Private wealth, specifically Chinese private wealth had increased significantly to a level that will create sizable impacts on current and future cross border real estate transaction activity. According to Palin (2014), since 2011 Chinese private wealth have had a more mature attitude toward investing. They prefer to undertake

lower-risk investments while continuing to be active in diverse wealth management activities. This private wealth, specifically HNWIs has historically been investing in alternative assets that include real estates. The creation of wealth can be demonstrated with higher concentration of HNWIs in Asia than in the Americas or Europe. Figure 1.7 revealed that Chinese cross-border investment into global real estate markets had risen rapidly since the GFC 2008. It is perceived that this significant growth of private wealth in Asia and the resultant fund flows investing into cross-border real estate transactions will result in a revolutionary change the nature of world real estate investment (KPMG, 2014).

The credit crisis and limited debt funding during the GFC 2008 were believed to be the main reasons that gave rise to two new trends in the world real estate markets:

- i) Significant reduction in corporate cross-border activities in the world real estate market.
- ii) A new trend that SWFs, wealth management companies, private bankers and family offices have stepped into the property deals that corporate bankers have absconded. These private wealth funds seem to be more willing to take the place of debt financing or to tolerate higher-risk development positions.

Source: Savills 2014

Savills (2014) projected that sources of funds provided by private wealth will continue to grow and play a significant role in world cross-border real estate deals. The unique investment behaviour of these private wealth funds which favours residential property for their children or to achieve permanent residency (Chinese in particular) will shape the world's largest property segment, i.e. the residential property market.

Furthermore, the International Monetary Fund (IMF) reported that China had overtaken the US as the world's biggest economy in 2014. The Chinese Gross Domestic Product (GDP) in 2014, based on Purchasing Power Parity (PPP), was USD17.6 trillion compared to the US being USD17.4 trillion (Ma, 2014). Without adjusting for PPP, the IMF estimated China's raw GDP to be closer to USD10 trillion. Since the GFC 2008, Asia has replaced the Americas and emerged as the biggest player in the world real estate market. Asian investors are set to be the major source of funds among all cross-border real estate transactions (JLL, 2015, Knight Frank, 2014, KPMG, 2014, Savills, 2014). This study intends to investigate the drivers that brought about overseas investments in the Australian residential property market subsequent to GFC 2008. Specifically this research will look at the Chinese private wealth investment in the Australian residential property market.

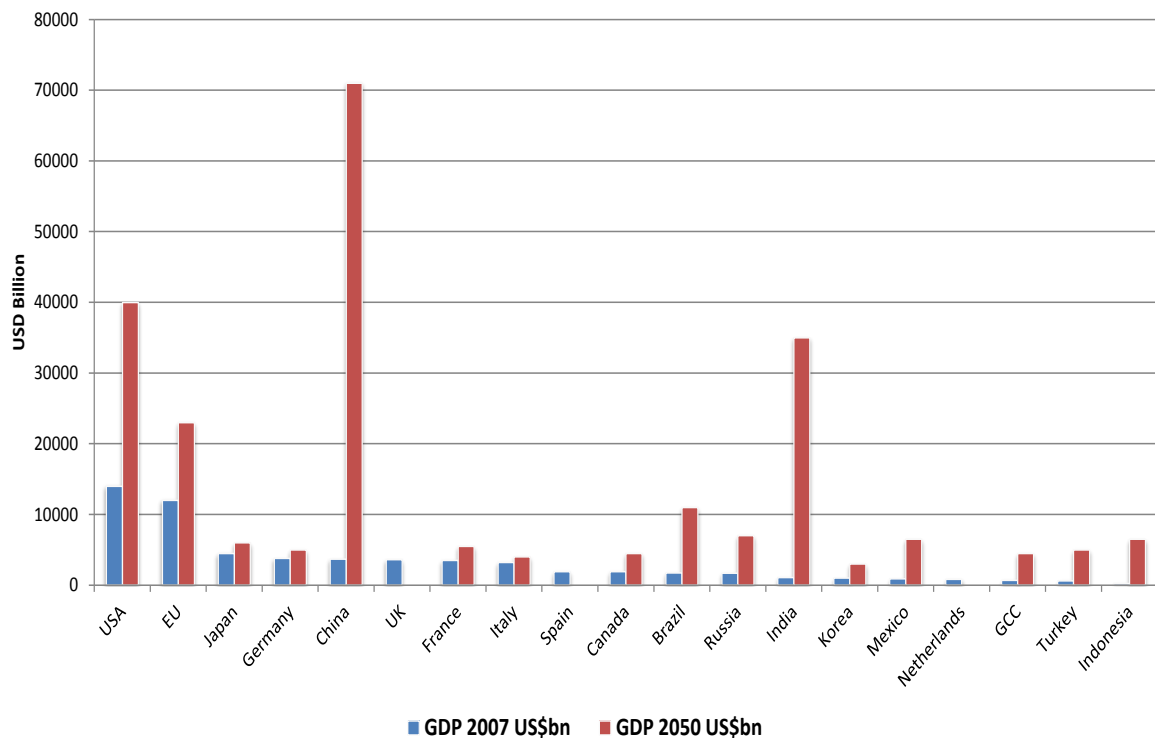
In a similar manner, but perhaps on a different scale and magnitude, the emergence of the global emerging middle class income earners is set to result in a shift in the world economy's dynamic and consumption pattern. Wilson (2008) projected that:

- i) The world spending power is shifting towards the middle-income economies. Goldman Sachs noted that the rise of the middle-class income earner shall give rise to a shift in the global consumption pattern, moving away from the rich or developed countries to the middle-income economies (As of 1 July 2015, The World Bank defined middle-income economies as those with a Gross National Income (GNI) per capita, calculated using the World Bank Atlas method, more than USD1,045 but less than USD12,736). The scale and magnitude of this shift are significant enough to give rise to global spending to be dominated by the middle-income economies alongside with the largest population countries entering the middle-income group. The rise of the BRICs (Brazil, Russia, India and China) and N11 economies (Bangladesh, Egypt, Indonesia, Iran, South Korea, Mexico, Nigeria, Pakistan, the Philippines, Turkey and Vietnam) are at the centre of this situation. By 2050, this middle-income bulge will include six of the N11 (Egypt, Philippines, Indonesia, Iran, Mexico, Vietnam) and three of the BRICs (China, India, Brazil), and will be responsible for close to 60% of the world's GDP.
- ii) There will be a major shift in spending power towards middle income people in an unprecedented magnitude. The pace of the world middle class expansion is likely to pick up further and reach its peak by 2020. As a result, two billion people or around 30% of the world's population could join the global middle class by 2030.

Source: Goldman Sachs 2008

As a result of these two trends, the middle income group is set to dominate a much larger share of the world's income in the midst of rising consumption power of this expanding middle class. The massive scale of global middle-class growth will potentially change the world and shape new spending patterns, resource use, environmental and political pressures on a scale not seen since the formation of the developed countries' middle classes in the second half of the 19th century. Figure 1.8 illustrates the GDP for the world economies comparing 2007 and the forecasted 2050:

Figure 1.8 World Economies' GDP in 2007 and 2050

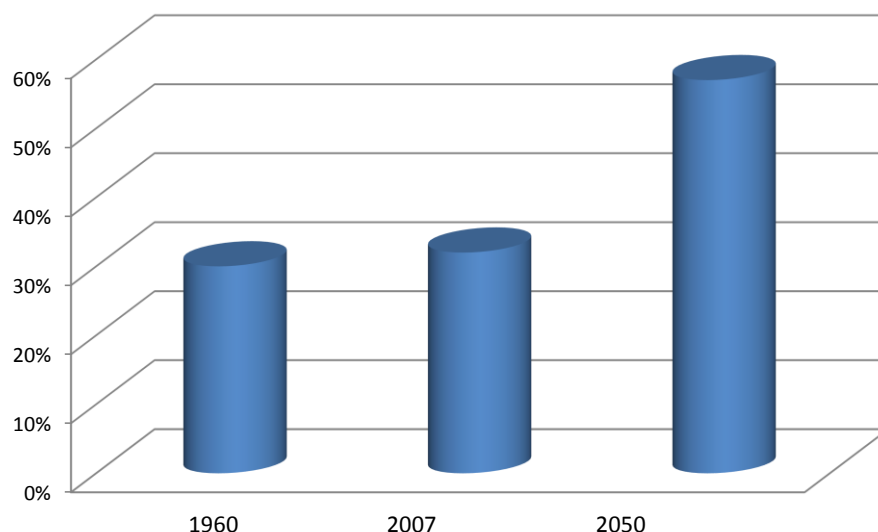


Source: Goldman Sachs 2008

Goldman Sachs projects the rise of China and India and the Emerging Economies will overtake the rest of the world's GDP by 2050. Out of the richest countries in 2007, seven developed countries will fall out of the top 20 largest GDP economies alongside with the rise of BRICs and N11 in terms of GDP. Reversing the dominance of economies such as the USA and some EU countries, China and India will emerge as the two largest economies alongside other emerging economies such as Brazil, Russia, Mexico and Indonesia.

As a result of these shifts, the purchasing power of middle income countries is set to overtake the existing rich countries. Figure 1.9 illustrates the portion of world GDP attributable to the middle income earner comparing 1960, 2007 and 2050:

Figure 1.9 Share of Global GDP by Middle Class



Source: Goldman Sachs 2008

By 2050 the middle class could be responsible for 57% of global GDP in PPP terms, up from 31% in 2007. In USD terms, this represents an increase from 15% to 43%. The fact remains that the spending power had already been shifted away from the richest countries towards a growing emerging middle-income economies. In 1980, the seven largest economies in the world in USD terms were all developed economies. China has since emerged as the second largest economy after the USA and by 2025 some of the countries in BRICs would emerge as leading world economies. The distribution of global incomes could narrow even further as other middle income countries continue similar to China and India. The middle income group, which is dominated by a subset of the BRICs and N11 will impact global spending patterns in a significant manner (Wilson, 2008). Table 1.1 illustrates the surge in the global middle class:

Table 1.1: The Growth of Global Middle Class

<i>(Millions of People)</i>						
	2009		2020		2030	
North America	338	18%	333	10%	322	7%
Europe	664	36%	703	22%	680	14%
Central & South America	181	10%	251	8%	313	6%
Asia Pacific	525	28%	1740	54%	3228	66%
Sub-Saharan Africa	32	2%	57	2%	107	2%
Middle East & North Africa	105	6%	165	5%	234	5%
World	1845	100%	3249	100%	4884	100%

Source: The World Bank 2010

Ernst & Young (2013) projected that two thirds of the global middle class will be residents of the Asia Pacific region, up from 28% in 2009. Although the middle class populations in North America and Europe remain consistent, their respective shares of the world population are substantially reduced in the forecast. A significant proportion of the new Asian middle class is also expected to be at the upper end of the income bracket and possess significant spending power.

It is important to note that the emerging Asian middle class as the largest spenders in the world market coincides with the findings from Capgemini (2014), Savills (2014) and Knight Frank (2014) that Asia Pacific is the home to the fastest growing HNWI markets and is expected to surpass North America in the near future. As the spending power begins to shift from the West to Asia Pacific, understanding the behaviours and attitude of investors in Asia Pacific towards investments in overseas real estate will provide a meaningful and insightful footing for future studies on offshore real estate investment.

1.1.3 Foreign Investment in Australian Residential Real Estate

According to Janda (2014), Chinese investors and newly arrived Chinese migrants will invest approximately AUD44 billion into the Australian residential real estate market from 2014 to 2021. Allen (2015) reported that most of the foreign investment in Australian residential property was concentrated in Australia's two largest cities, Sydney and Melbourne. An estimated 18% of new dwellings in Sydney and 14% in Melbourne were purchased by foreigners. A NAB (2014) survey of residential real estate agents detailed the profiles of purchasers. The research showed that foreign investors continued to keep the pressure up on capital city house prices.

In the first half of 2014, house prices in both Sydney and Melbourne were at record high levels. Prices were reported by media to have moved beyond the reach of the majority local buyers especially in the desirable locations (for example AFR, 2014, Birrell, 2013, Economics, 2014). According to these reports, many considered this a trend due mainly to the offshore investors, especially Chinese investors. Leading Australian banks warned that the increased interest from foreigner will further heighten Australia's already inflated property prices. Table 1.2 shows the Australian Bureau of Statistics (ABS) Australian housing index for the last quarter of 2013 and 2014.

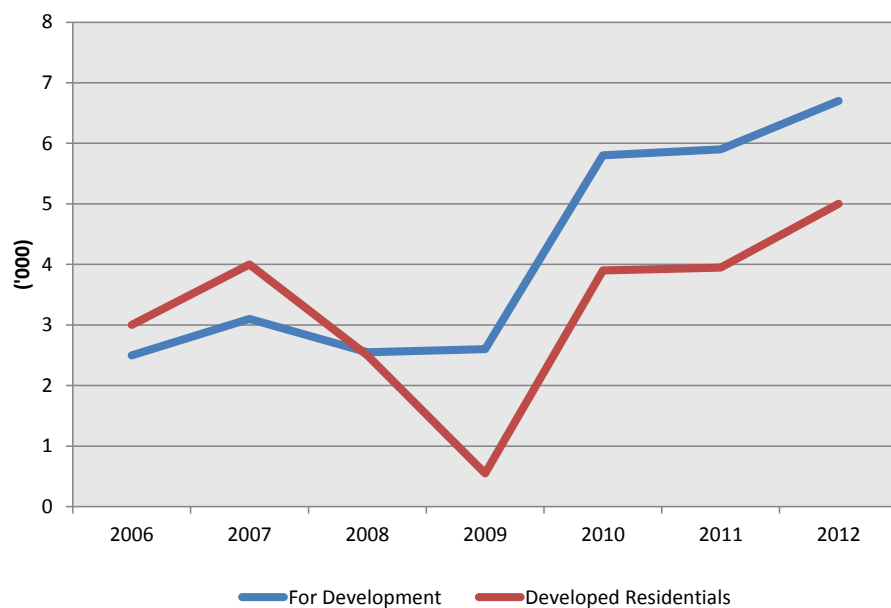
Table 1.2: Australia Housing Price Index Q4 2012 and Q4 2014

	Dec Qtr 12 to Dec Qtr 13	Dec Qtr 13 to Dec Qtr 14
RESIDENTIAL PROPERTY PRICES	% change	% change
Weighted average of eight capital cities	9.3	6.8
Sydney	13.8	12.2
Melbourne	7.9	4.5
Brisbane	5.7	5.3
Adelaide	3.4	2.5
Perth	8.7	1.2
Hobart	4.9	2.2
Darwin	5	0.8
Canberra	-0.3	1.7

Source: ABS 2015

Table 1.2 shows that between the 4th Quarter of 2012 and the 4th Quarter of 2013, residential property prices as measured by the Australian Bureau of Statistics rose unevenly across Australia. Growth was primarily in Sydney (+13.8%), Perth (+8.7%) and Melbourne (+7.9%). A similar trend was observed between the 4th Quarter of 2013 and 4th Quarter of 2014, when Sydney residential property prices had the highest increase (12.2%), followed by Brisbane (5.3%) and Melbourne (4.5%). Figure 1.10 shows the number of approved offshore purchases on both developed residential properties and properties for development in Australia:

Figure 1.10: Residential Real Estate Approvals for Foreign Investors



Source: FIRB 2013

Figure 1.10 highlights the significant lift in foreign investor interest in the Australian residential property market. The 11,700 approvals in 2012 being more than double those in 2009. “For Development” refers to approval obtained by foreign persons (both temporary residents and non-residents) from FIRB to purchase an established dwelling for redevelopment (that is demolishing the dwelling and constructing new residential dwellings in its place). These applications are normally approved on condition that at least two dwellings are built for the one demolished. “Developed Residential” refers to FIRB approval for foreign persons who are temporary residents need a place to live during their time in Australia, temporary residents can apply to purchase one established dwelling to use as a residence while they live in Australia. The purchase of an established dwelling in these circumstances would normally be conditional on the foreign person selling the property when they leave Australia (FIRB, 2013).

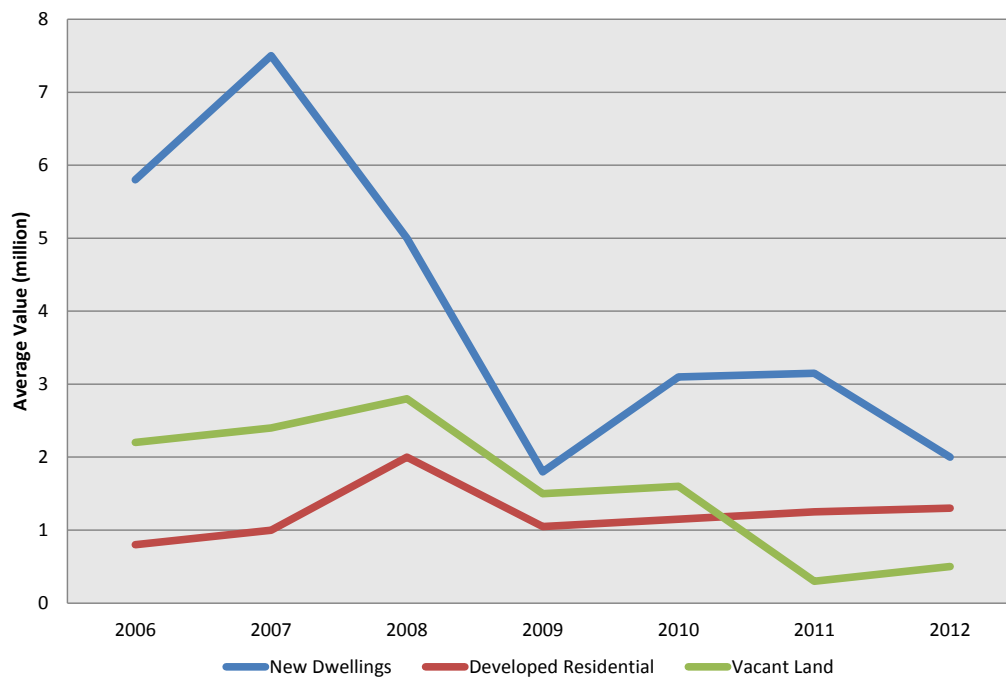
Concern at the increasing offshore investment had led to a formal request in Parliament by the then Australian Federal Treasurer, the Hon Joe Hockey MP, to the Australian Foreign Investment Review Board (FIRB) in 2014. The FIRB was to inquire into and report on the particular application of Australia’s foreign investment policy relative to the Australian residential real estate market. In March 2015, Mr. Hockey announced the first forced divestment since 2007 when he ordered the sale of a AUD39 million Point Piper mansion that had been illegally purchased by China’s 15th richest man. FIRB chairman Brian Wilson explained that although it was the government’s intention to control illegal buying of Australian residential properties, the ability to uncover and prosecute illegal buying by foreigners was limited. There were approximately 11 million residential dwellings in Australia and about 600,000 property transfers every year. Some of those properties were exchanged contrary to the law, but the ability of the Regulator to discover these cases was significantly limited without an automated central data repository of to aid detection. It was mooted that the Australian Taxation Office could be given the responsibility of managing the registration of foreign residential property purchases (Rose, 2015).

The Government attention to foreign buying came as a result of numerous news articles and a public outcry regarding the recent substantial surge in house prices in major cities such as Sydney and Melbourne (Economics, 2014). The Government was concerned about the recent spike in house prices in major Australian cities. The Federal Government inquiry to FIRB in 2014 was a clear indication of the need to research cross-border investments and money flowing into the Australian residential property market.

Commonwealth Bank (2014) explained that foreign investors’ demand was only a marginal contributing factor to the hike in Sydney and Melbourne house prices. Analysis of the FIRB data on

residential real estate approvals for both new dwellings and established residential indicates that the average transacted value was at AUD1.5 million. This value implies that most residential property transactions were at the top-end prices and was unlikely to have influenced the affordability of residential properties in the typical range where the largest volume of property sits. Figure 1.11 shows the trend of the average value of residential properties purchased by foreign investors.

Figure 1.11 **Average Value of Residential Estate Approved**



Source: FIRB 2013

Figure 1.11 demonstrates the average value of three different types of residential properties, namely new dwellings, developed residential and vacant land, purchased by offshore investors from 2006 to 2012. Whilst the average value for both vacant land and developed residential properties rose since 2011, new dwellings descended since 2011. The average transacted values in 2012 for all the 3 categories of properties fell within the range of approximately AUD0.5 million to AUD2.5 million (FRIB, 2013).

Consistent with FRIB findings, Schlesinger (2015) reported that a new survey of 105 Chinese real estate agents conducted by off-the-plan marketing website “Investorist”, found that Chinese investors were not multimillionaires. The Chinese investors were a group of savvy buyers seeking

high yielding properties closer to USD500,000 than USD1million. The survey found that 54% of Chinese investors were looking to spend less than USD500,000 on an overseas investment property and 35% looking to spend between USD500,000 and USD700,000. The determinants cited for Chinese investors buying into the Australian residential property market were: better investment fundamentals; the opportunity to acquire freehold property; higher yields compared to China property market; more stable economic environment; and the ability to borrow in Australia. The two other main reported reasons to acquire Australian residential properties were education for their children studying in Australia and as part of their future plan to migrate to Australia due to better living conditions.

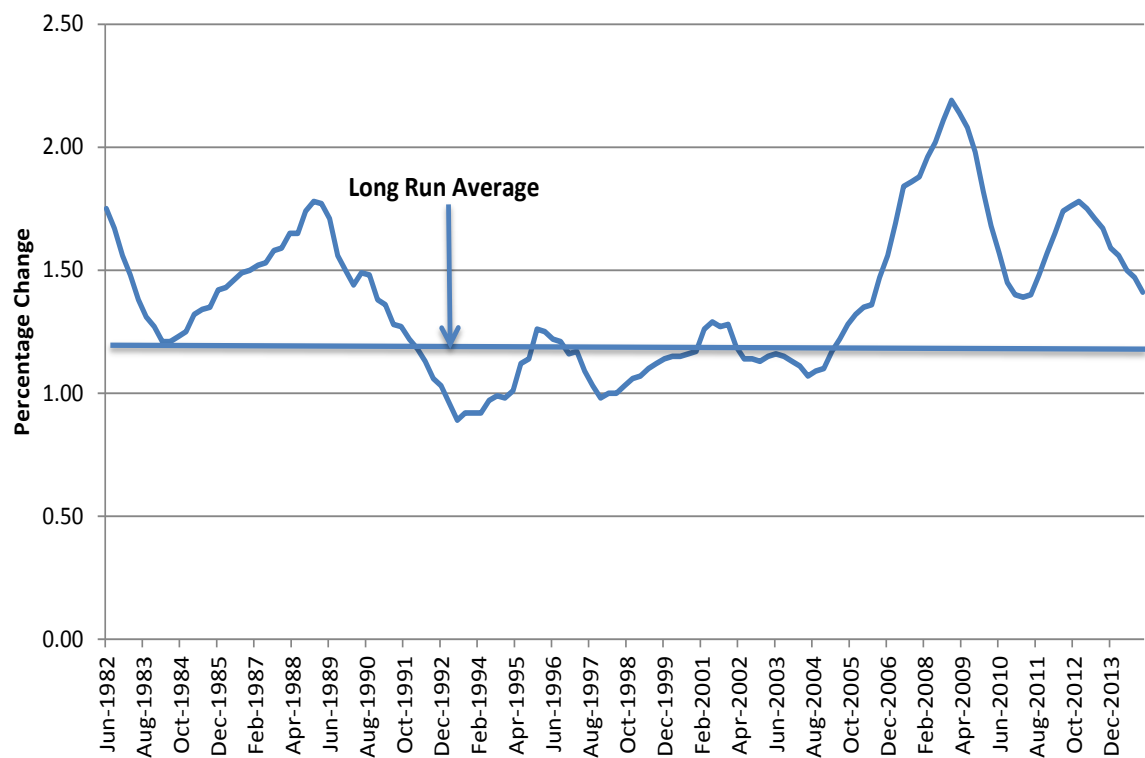
In addition, Commonwealth Bank (2014) tabulated various factors that drive the housing market demand in Australia, these being:

- i) Recent migrants typically have disposable wealth when they arrive and participate in the housing market sooner than many unskilled migrants.
- ii) Competition with mining and infrastructure for skilled labour and materials limited the supply of new dwellings.
- iii) Higher rate of education visas granted.
- iv) Real estate is proving attractive for self-managed super funds.

Source: Commonwealth Bank 2014

The population growth rate in Australia has been rising. Figure 1.12 demonstrates the percentage growth in Australia's population for the period 1982 to 2014:

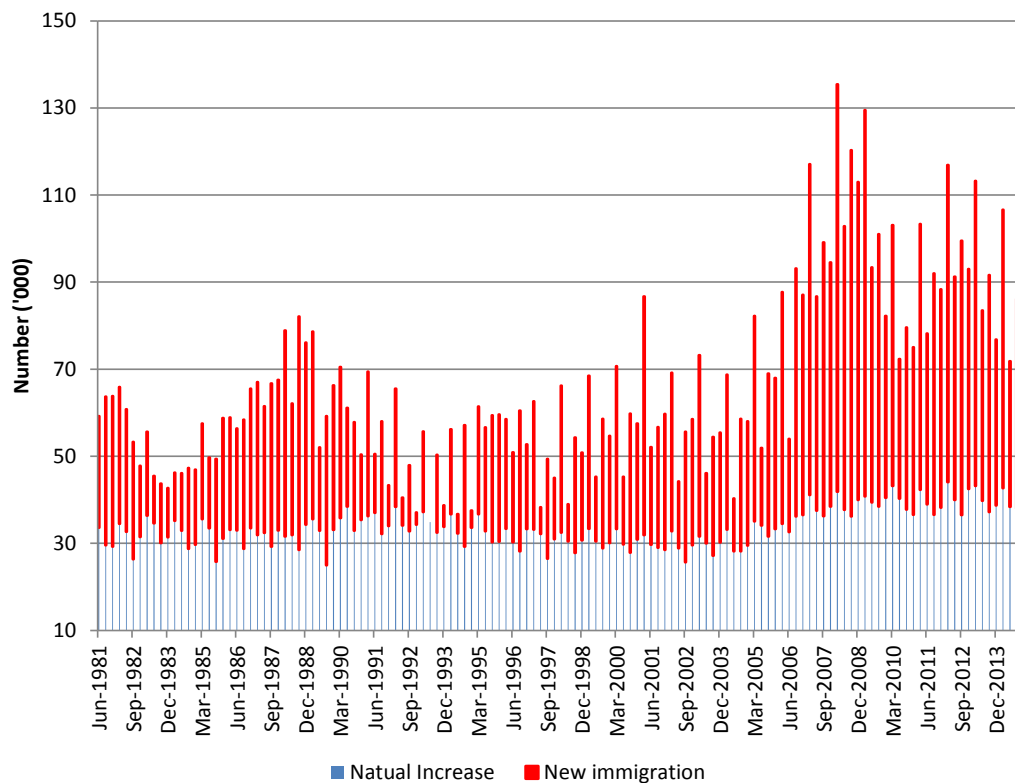
Figure 1.12: **Australia Population Growth (Annual % Change)**



Source: ABS 2015

Figure 1.12 shows Australian population growth in annual increments with the current rate of increase of 1.79% per annum. This is well above the 32 year average of 1.4% per annum. According to the Commonwealth Bank (2014), since 2006 the population growth in Australia has been mainly attributable to the increased level of skilled migrant intake. Figure 1.13 shows the comparison between the two major attributes, namely natural increase and net migration, towards the population growth for the period of 1981 to 2014.

Figure 1.13: Population Drivers in Australia



Source: ABS 2015

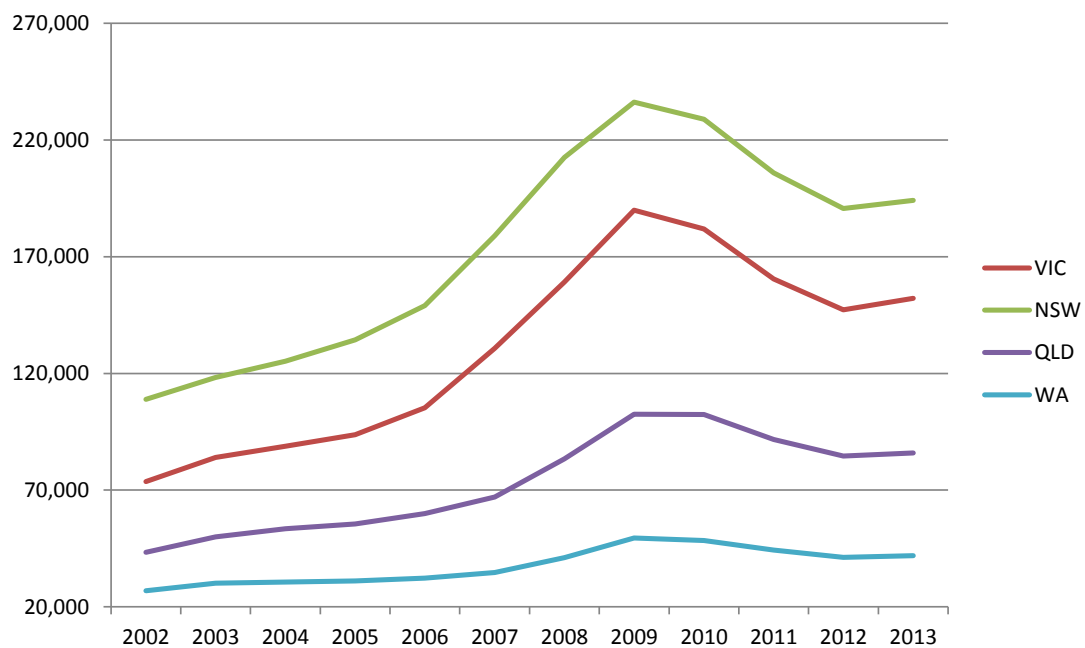
Figure 1.13 demonstrates that from 2006, net migration had taken over natural increase as the main contributor to Australian population growth. The population growth attributable to natural increase is hovering around 30,000 people per quarter whilst since 2006 net migration has continuously surpassed the 30,000 figure.

Australian migration activities are constantly evolving and increasingly complex in nature. As a result, factors contributing to the Australian migration activities were multifaceted. One complexity had been the addition of new sources of migration including troubled areas from countries such as the Horn of Africa, Afghanistan and Iraq. Another complexity had been the rapid expansion of Australia's international student population. This trend was in its infancy during the early 1990s, but by 2010, Australia had emerged as a leading exporter of education services. As at June 2014, Australia was host to over 500,000 international students, with a significant proportion of these students contemplating migration at the conclusion of their studies (AEI, 2015, DEAT, 2015). Some of them had come to Australia as students with the primary intention of attaining permanent residency. Students enrolled in programs ranging from a few weeks to several years contributed to

both short and longer term arrival statistics. It is envisaged that this emerging trend will develop into a vital element of Australia's relationship with emerging countries within the Asia-Pacific region and in particular with the populous nations of China and India, in the context of both education and tourism (Dwyer et al., 2010).

Education, as a major component of the Australian service industry, had overtaken iron ore as Australia's biggest foreign exchange income source for the 12 months period between March 2014 and March 2015 (Loussikian, 2015). Its role in the Australian economic environment has become even more important in the midst of Government efforts to dilute the heavy reliance on resources development (Creswell and Clark, 2007, Loussikian, 2015). Figure 1.14 illustrates foreign student arrivals in different states in Australia:

Figure 1.14: International Student Enrolments in Australia



Source: AEI 2015

Figure 1.14 shows that New South Wales (NSW) and Victoria attracted the largest number of international students. Pascoe (2015) expected the rise in foreign students will give rise to demand in Australian residential property especially in education hotspots like Sydney and Melbourne, mainly due to the recent changes of Government regulations on migration policies which made it easier for students to remain in Australia after graduating and eventually becoming permanent residents.

In summary, there were clearly some unknown and unusual factors contributing to the surge in housing demand in Australia in relation to foreign investors (Commonwealth Bank, 2014). The normal investment theory and law of demand and supply was perceived inadequate to confirm the reasons for offshore investors' preference in Australia residential properties over other parts of the world. Having established education could be one the factors driving foreign investment in the Australian residential property market, more extensive research into other emerging factors causing the surge of housing demand in Australia cities has become more desirable.

Furthermore, in an effort to fill the knowledge gap of these emerging factors contributing to the latest surge in housing demands in Australian cities, this thesis explores an existing European tourism migration trend that closely resembles a social development in Australia. According to O'Reilly (2007), it had always been difficult to disentangle migration and tourism in Europe. Closer observations seem to reveal that this social development in Europe possesses direct resemblance to Australia's current tourism migration patterns. The interaction between tourism and migration was defined as "Residential Tourism"(RT).

Residential tourists' definition specifically distinguishes them as an affluent group that enables them to turn tourism as a way of life and to construct fluid and leisure lifestyles between places. RTs are also being characterised as tourist who had ostensibly tried to settle, although they still remain in some ways outside or above the community they have moved to. O'Reilly (2007)'s observation appear to resemble closely the Savills (2014) report which states that among cross-border transactions, Chinese private capital seeking property for their offspring (often bases for student /children study), or to achieve permanent residency played a major roles.

As mentioned earlier, private wealth in general and HNWIs in particular are anticipated to be significant drivers of world cross border real estate transaction activity. Changes to living standards among all these HNWIs may influence both tourism and immigration in both the source country and the destination. Fluctuating relativities in living standards had been confirmed by earlier research as a driver of migration. For example, migration from continental Europe to Australia was greatly diminished once European living standard rose to comparable or higher levels than those prevailing in Australia (Dwyer, 2010). The rising living standards and the emergence of an affluent middle class in the newly industrialising countries of North East Asia has increased the numbers able to afford to visit Australia as tourists or take advantage of the skilled migration category for the purposes of immigration. In 2012, the Australian Business Innovation and Investment (Provisional) visa (subclass 188) was introduced. This immigration program allows overseas "significant investors" to apply for an Australia permanent visa if they have invested at least AUD5 million into complying investments

in Australia and want to maintain business and/or investment activity in Australia after the original investment has matured.

Garnaut (2015) reported that Australia is set to issue more than five million visas in 2015, something not seen since World War II. He attributed the significant jump in the visas issuance to surging numbers of international students, tourist and workers on short-term visas. According to Michael Pezzullo, Secretary of the Department of Immigration, as many as 1.9 million foreigners are likely to be in the country at any one time in 2015. In terms of the new migrants to Australia, the number of Chinese born Australians has escalated more than triple to almost 450,000 in the space of two decades. Those born in India has risen more than fourfold to almost 400,000. The findings coincide with the projection that countries from Asia Pacific, particularly China and India, will contribute significantly to the world middle class and numbers of HNWI.

Building on the literature, the focus of this study is to determine whether there is evidence of an emerging relationship between overseas investors and the residential housing markets performance subsequent to GFC 2008. Due to the recent significant funds flowing from China, the research will be utilising Chinese investors as a case study to uncover emerging overseas investment patterns in Australia. A detailed analysis of the recent Australian immigration policies will be essential to examine the impacts of these policies on Chinese investors and the resultant determinants of Australia residential housing performance. The study is expected to yield empirical evidence that will assist policy makers in making informed decisions to promote FDI in the real estate market yet maintain (or at least not worsen) the affordability of housing in Australia. The result of this study is believed to yield findings that can assist the property market operators and investors in the evaluation of the Australian residential housing market for informed investment decision makings.

1.2 The Statement of the Problem

Past literature suggested that diversification by location would more likely produce benefits in the residential markets that were not perfectly correlated, although there was a degree of variability depending upon the countries being examined (Wilson and Zurbruegg, 2003). In more recent research, real estate assets were added to a mixture of asset portfolios comprising shares and bonds. Improvements in the risk adjusted returns had resulted in real estate being incorporated as part of the asset classes in the investment portfolio (Hoesli et al., 2004).

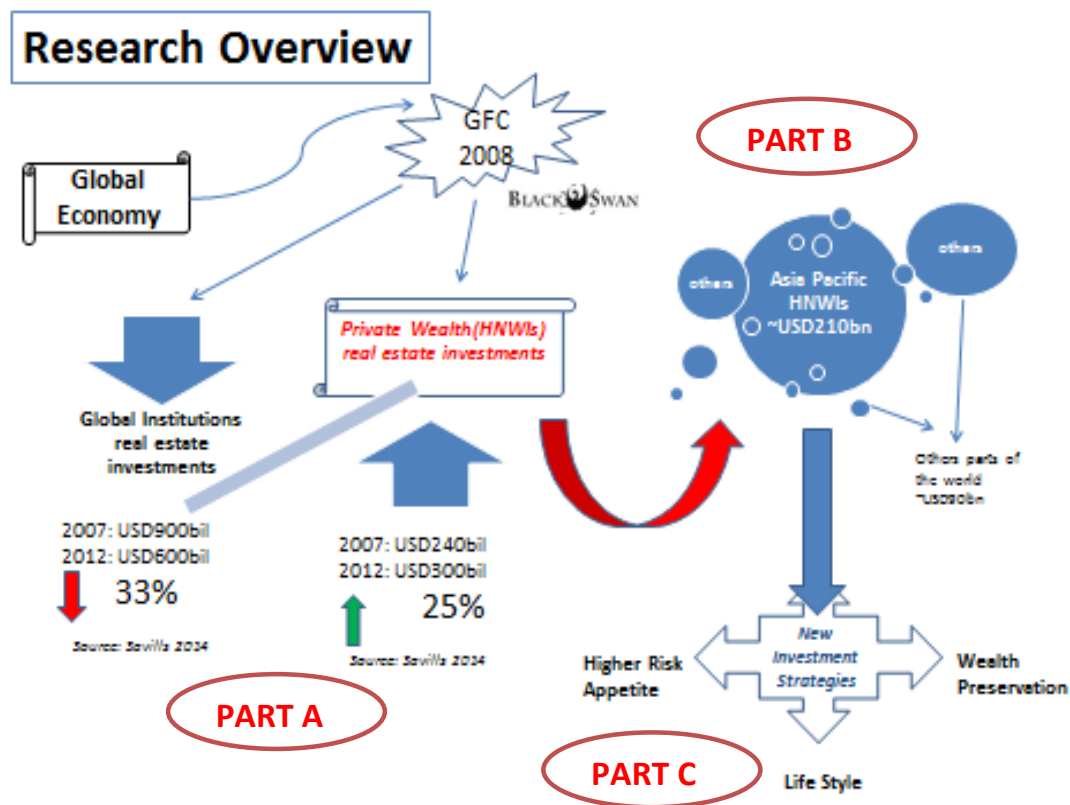
In reviewing relevant literature, the factors determining foreign investor choices were complex and should be explained by a combination of recognised theoretical models (Moshirian and Pham, 1999,

Sirmans and Worzala, 2003). This was in line with Rodríguez and Bustillo (2010) who concluded that portfolio theory is appropriate and can be applied in the study of FREI determinants with relevant factors included.

Although there had been numerous economic papers (see Bourassa and Hendershott, 1995, Ross, 2011) on the impact of offshore investors on the local real estate market, reviews to date show that there had not been tangible studies conducted on the factors that result in this emerging trend. Recent offshore investors' substantial investments focused on both Melbourne and Sydney residential housing markets certainly signal an imminent need to investigate the causes of these cross-border investments influxes. Limited and dated information was identified by Commonwealth Bank (2014) as a real concern. Currently, information seems limited with regards to the relationship between the overseas purchasers and the dynamics of the Australian housing market.

Reviews of market commentaries and empirical studies had shed limited information on some distinctly unique characteristics relating to investment choices and decision making strategies of private wealth investors. In fact, these emerging investment patterns from private wealth are set to create an entirely new perspective in world real estate investments. Rare and new investment strategies based on lifestyle and wealth preservation seems to play a much bigger role in these HNWIs real estate decision making processes than anticipated. There had been limited studies performed that assess the real estate investment decision models from the perspective of private wealth. This knowledge gap constitutes the main focus of this thesis. Figure 1.15 illustrates a conceptual model based on the studies for this thesis.

Figure 1.15: Conceptual Mapping of Private Wealth Real Estate Investments



Source: Author

GFC 2008 had shifted the focus of investment communities into uncertainties that equity and bond markets were either too volatile or observed diminishing returns. Similar volatilities were observed in global cross-border real estate investments. Figure 1.15 sets out the conceptual framework of the research and aims to map the world cross-border investment activities with fundamentals evolving within the real estate investments pursuits:

- **Part A** of the research intends to examine the emergence of private wealth and HNWIs stepping into the world cross-border real estate transactions that were the domain of corporate institutions before GFC 2008.
- **Part B** of the study will look into the significance of the private wealth and HNWIs from Asia Pacific in the world cross border real estate transactions.
- **Part C** examines the relationship between the factors that drive overseas investors into the host economy and the residential market, in the Australian context. It forms the focus of this study based on the recent increase in demand for and activity in the residential housing market.

It is important to determine the strategic link and impacts derived from offshore investors to the Australian residential property market. The understanding of various drivers causing offshore investment in Australian residential property can result in the propositions that are expected to be beneficial for the Australian economy in a macro perspective, and the Australian residential housing market in a micro perspective. This is particularly evident, if Australia intends to continue to enjoy the capital flow from foreign direct investments into the country. Knowledge on residential property market dynamics for Australian policy makers needs to improve and evolve amidst the increasingly significant role the overseas investors have in the structure of specific residential property markets in major Australian cities. The findings of this study are believed to provide empirical validations of factors that are useful and relevant for decisions by both Australian policy makers and industry participants.

1.3 Aims and Objectives

The aim of this study is to examine various factors driving the growth of overseas private investments into the Australian residential property market subsequent to GFC 2008, particularly in major Australian cities like Melbourne. This study explores the performance characteristics of the residential market in Melbourne suburbs and their relationship with the economic and financial factors associated with Australian immigration policies, using Chinese private wealth and purchasers as the case study.

This research seeks to answer the following research questions:

- i) What are the determinants, both historical and emerging, that are impacting on the Australian residential property market?
- ii) What types of foreign investors are interested in Australian residential property and what are the key features of their investment strategies? Are they buying residential properties for owner occupation or are they foreign investors who buy to invest?
- iii) What are the reasons and fundamentals of overseas investment into the Australian residential property market and what government policies have influence over these investment decisions?
- iv) In the midst of global liberalization, is the Australian residential property market subjected to increasing foreign influences and how significant are these external influences?

- v) What are the key government economic, financial and immigration policies, both onshore and offshore, that may potentially drive private wealth to invest in Australian residential properties?

In summary, the aim of this study is to determine what are the emerging drivers and to what extent these factors have shaped and continue to shape the foreign private investment in the Australian residential housing market subsequent to GFC 2008. To enable a broader perspective and fuller coverage, it is proposed that this thesis covers a span over a 11 years period from 2002 to 2013. A major real estate cycle occurred within the period of assessment, namely the Global Financial Crisis (GFC) in 2008.

The objectives of this study are:

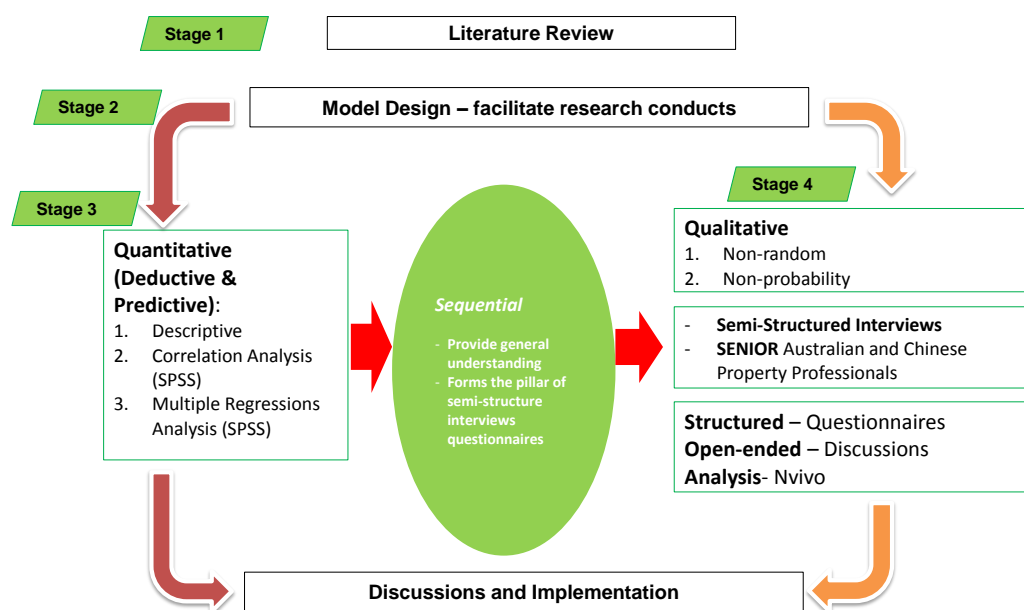
- i) **To identify the major determinants, both historical and emerging, in the Australian residential property market for the past decade (2002 to 2013).** How have offshore property investment patterns shaped the overall residential property market in Australia in the past and the present, making specific reference to Melbourne?
 - Addressing research question I and II
- ii) **To explore the fundamentals of foreign cross-border real estate investment and the related influential government policies onshore and offshore.** Who are these foreign investors? Are they mainly migrants into Australia who are buying properties for own residential occupancy purposes or are they foreign investors acquiring properties as part of their investment portfolio? What drove them to acquire properties overseas?
 - Addressing research question III
- iii) **To reveal the dynamics of Overseas Real Estate Investments in Australia and the significance of these offshore investments shaping the local housing market.** Assessing the past and present, what are the different characteristics between these offshore investors as against migrants when it comes to buying residential properties in Australia? Do they buy based on a single location or do they hold a portfolio of properties / instruments on a regional basis?
 - Addressing research question IV

- iv) **To reveal the key government policies, both onshore and offshore, that had driven foreign investors into Australian residential property market.** Literature revealed that Government policies of foreign nations were correspondingly instrumental in the decision making process of foreign investors. The study of foreign investments in the host country is more comprehensive for the research on key Government policies of the foreign nation that drove its citizens to expatriate money overseas is incorporated.
- Addressing research question V

1.4 Research Design

This is an explanatory study utilising both quantitative and qualitative research methodologies which constitutes a mixed methods research conduct (Amaratunga et al., 2002). The execution of the research conduct will be distinctly separated into two phases with quantitative followed by qualitative, thus classified as a sequential explanatory mixed method design (Creswell and Clark, 2007). The research design aims to utilise qualitative data to validate and explain the quantitative results and further provide in-depth perspective of the research. As per research objectives defined in section 1.3 of this chapter, this research shall be undertaken in five key stages. Figure 1.16 illustrates the research framework:

Figure 1.16: Research Framework



This research will be conducted in five stages:

- i. Literature Review – examine and review literature on foreign investment fundamentals, historical Australian immigration and residential property market determinants. The literature review will provide an overview of foreign investment strategies and historical factors attributable to the growth in the Australian residential property market. Furthermore, a literature review on global residential property market determinants will provide indicators and pointers into various emerging determinants in Australia. The theoretical background and empirical data from the literature review shall form the platform for the research modelling and quantitative analysis.
- ii. Model Design – while quantitative analysis can determine the relationship of individual economic variables to house prices, it tends to omit that most factors interact simultaneously with varying intensity and at different time periods to house prices (Higgins, 2000). The review of literature underlined the importance of combining these influences into a model to address the fundamental interactions and relationships between all the determinants. The Archer and Ling (1997) model was used to build an economic model, showing the best inter-relationship of separate economic variables to house prices. This study focuses on foreign investment strategy and determinants in the Australian residential property market. It is envisaged that a new research model incorporating foreign government policies influence will be developed to ensure research effectiveness.
- iii. Quantitative Research – the respective traditional leading economic indicators and non-traditional new determinants will be identified in this stage of the research. Utilising correlations and regression methodologies, significant correlated historical determinants and emerging new factors will be identified to form the basis and pillar for the subsequent qualitative research. Furthermore, this stage of research constitutes the “predictive” design phase (Teddlie and Tashakkori, 2009) which will provide three predictive models to forecast the future trend of house prices in Melbourne and two selected Victorian suburbs.
- iv. Qualitative Research – based on the sequential methodologies, this stage of research shall refine and explain those statistical results by exploring participants’ views in more depth (Creswell 2003, Rossman and Wilson, 1985, Tashakkori, 1998). Non-random and non-probability designed semi-structured interviews will be conducted with senior managers from both local and Chinese real estate professional firms to help explain and validate (or

otherwise) the statistical results from the quantitative phase. This research privileged the qualitative over the quantitative phase, not in the manner of the research conduct but in terms of the research results interpretation. The second qualitative phase builds on the first quantitative phase and the two phases are connected in the intermediate stage in the study (Ivankova et al., 2006).

- v. Discussion and Summary – to discuss various newly identified determinants with reference to the research objectives set in section 1.3. Besides tabulating the findings of this research, this last section of the thesis will provide industry insights on various emerging cross border real estate investment trends and determinants.

1.5 Significance and Scope

1.5.1 Significance

The corporate and institutional ownership and acquisition of real estate globally that once dominated property markets suffered a setback in GFC 2008 (Savills, 2014). A new trend seems to have emerged after the GFC 2008. SWFs, wealth management companies, private bankers and wealthy families stepped into the property arena that was dominated by institutions historically. This latest development is set to impact the world real estate markets.

Figure 1.17 demonstrates the importance of private wealth in world real estate markets for the period of 2007 to 2013.

Figure 1.17: **Private Wealth in World Real Estate Markets (by number of transactions)**



Source: Savills 2014

Since 2007, a clear trend emerged relating to the number of cross-border transactions for private wealth investment and real estate investments. Figure 1.17 shows that private wealth transactions contributed more than 50% of the world's real estate investments since 2011.

When it comes to investment choices, cross-border investors were paying close attention to global real estate markets. According to D'Arcy (2009), UNCTAD (2009) and Topintzi (2008) the real estate sector was attracting significant interest with improved internationalisation and deregulation. This international economic integration and liberalisation activities were steering global investors to seek improvement in their investment portfolios through overseas diversification. With readily accessible information attributed by advancement in communication technologies, further advances are expected in the momentum of these liberalisation activities. The world economies are getting 'closer' or becoming more transparent due to global liberalisation. This emerging trend is set to impact on the global cross-border investors' decision making processes.

In recent research, real estate assets were added to a mixed asset portfolio along with shares and bonds as part of the investment asset class (Hoesli et al., 2004). These studies revealed that the global investors' community was giving substantial attention to the real estate market, as an emerging asset class in the midst of share market volatility and dismal bonds market returns. This was substantiated by rapid growth in FREI along with the growth of portfolio investments in global listed real estate securities.

Asian investment in the global real estate had been increasing since 2008. More significantly, investors from Asia had emerged as the largest player in global cross-border real estate transactions, replacing the United States of America to become the biggest investors in the global real estate market in both Corporate and Private segments (Savills, 2014, KnightFrank, 2014). Wealth management companies, private bankers and wealth families from Asia had stepped into property deals that historically dominated by institutions. These private funds had emerged as one of the most important driving forces in various cross-border real estate transactions once dominated by the corporate world prior to GFC 2008.

As Fereidouni and Tajul Ariffin (2013) explained, government economies and financial policies cover interest rates, physical infrastructure, FDI in other sectors, labour costs, exchange rate risks, property prices, tourism agglomeration were all relevant in the assessment of cross border investment in the real estates of host economies. These policies were perceived to have influence over the FREI choices and decisions. It is a challenging task for Government to balance its effort to

attract FREI into the country and at the same time to maintain the affordability of residential properties among its local residents, particularly in capital cities.

The recent AFR (2014) report detailed the emergence of the global property investors who look beyond the traditional valuation methods such as the ratio of house price to local income. The report explained that traditional valuation methods might not be applicable for the real estate valuation exercises based on current market conditions. Empirical studies demonstrated the uprising of some new and relevant variables that were considered influential and should be added to the traditional valuation methodology to enhance the relevance of research outcomes (Moshirian and Pham, 2000).

AFP (2014), Commonwealth Bank (2014) and Janda (2014) have reported recent increases in Sydney and Melbourne house prices. Reports seem to have pointed towards house prices in both of these major cities moving as a result of the Chinese investors' buying activities. As Janda (2014) reported, "Wealthy Chinese" will pour AUD44 billion into Australian real estate over the next seven years, potentially pushing prices in one of the world's most expensive housing markets even higher. The investment bank Credit Suisse used data from the Foreign Investment Review Board and other government agencies to estimate the amount of Chinese investment in Australian residential property at more than AUD5 billion a year (Economics, 2014).

Although relevant market reports and commentaries up to June 2015 were included in this study in effort to keep appraised with the ever changing market conditions, two major economic events in the second half of 2015 had the financial world shaken again with far reaching implications. Both were perceived to be relevant to this study. In August 2015, China unexpectedly devalued its currency which left the Yuan about 3% weaker against the USD. China's decision represented the largest Yuan depreciation for 20 years and according to market commentaries, the potential implications were more than substantial (Stewart, 2015). The Shanghai Composite share market Index closed near 3000, having decreased more than 40 % compared to 5122 in June 2015. The loss of market value in Chinese stocks was close to USD1.6 trillion, representing the combined value of Australian Stock market (Sheehan, 2015). There was speculation in the current market that a re-run of the 1997 Asian Economic Crisis was in the making. Sheehan (2015) attributed this free fall to the excesses in Chinese real estate development. As China is Australia's largest trading partner, Australia is vulnerable to Chinese market volatility. As Australia's residential property market had been partly driven by Chinese capital, the market's concern on the future performance of the Australian housing market was not without reason.

Bottonwood (2015) reported the world commodities market had fallen into bear market with the commodities prices falling more than 40% from its peak. Inevitably, the debate focuses around China given that its demand for raw materials was perceived to drive the great bull market of the last decade. China is currently moving into an ex-growth phase with less need for infrastructure, and thus for iron ore, steel, copper etc. The Chinese had also been moving to a model in which they create more manufactured goods from scratch, rather than assembling parts made elsewhere. This helped to explain why other Asian exports have been so weak. For commodity producing nations, falling prices mean loss export earnings, lost jobs and currency crises. Australia, having long been classified as a commodity nation, is experiencing the negative impacts due to falling commodity prices.

Reference is made to various reports, market commentaries and economists' assertion that the favourable Australian property market performance due to FREI will help Australia to cushion the negative impacts. It is undoubtedly a challenging task for the Australian government to strike a balance between the need for foreign inward investment and social wellbeing. The Government's economic and financial policies have to strategically cater for both the government's desire to attract FDI, especially the FREI, into the country and still maintain the affordability of residential properties among the local population, particularly in cities of Sydney and Melbourne.

It is expected that a better understanding of the relationship between the economy, financial policies and the residential housing market will help to identify and address issues attributable as factors gave rise to the overheating of the residential property market and at the same time, strive to maintain a steady flow of FREI into the country. The expected benefits among which will include a basis for decision making and a platform for further research that could include further segmentation studies of the residential property market.

1.5.2 Scope and Limitation

The review of literature revealed the few studies that have explored the link between overseas private investors and the performance characteristics of Australian residential property markets. In order to examine this link, variables including both traditional economic factors and non-traditional factors for the selected Melbourne residential property markets shall be incorporated in the modelling of the residential property market in Australia. This will be analysed alongside specific variables such as economies and financial determinants covering interest rates, exchange rate, tourism arrivals and education enrolments for specific time frames etc. The study period will be from year 2002 to 2013, amidst growing and inevitable globalization of the world economy. This

period also represents an interesting phase of Chinese cross-border real estate investment activities subsequent to the GFC in 2008. The series data will be analysed so as to determine the relationship between these determinants and the house prices in two specific suburbs in Melbourne.

Although the assessment GFC 2008's impact on the Australian residential property market would have been more reflective if comparison was made on the secondary data analysis before and after GFC 2008, inadequate data points subsequent to GFC 2008 might result in inferior regression modelling. As a result, quarterly secondary data from 2002 to 2013 was collected in this study to enable effective quantitative analysis with adequate data points. Collection of Chinese secondary data to assess the "Push" factors exerting buying pressure on Australian residential properties was challenging due to limited data availability, especially when secondary Chinese data would have to be collected from third party sources such as OECD and IMF.

In this study the entities of interest are the residential housing markets in two specific Melbourne suburb markets. Melbourne and Sydney are now comparable to world cities like Singapore, London, Shanghai and Vancouver. The same classification (informal) used by Economist Intelligence Unit's (EIU) 2013 Global Liveability Survey has been embraced for this study. Comparison of other leading cities, even though they may behave like Melbourne, is beyond the scope of this study. In order to enhance the relevance of this study, related market reports and commentaries on the Australian residential property market up until 30th June 2015 shall be incorporated. Simultaneously all secondary data series will be updated until June 2014.

1.6 Thesis outline

This chapter has introduced the study; Chapter Two will document the review of the relevant literature, Chapter Three will outline the research design and methodology, Chapter Four will present the results and discuss the findings, and Chapter Five will present the conclusion.

1.7 Publications and Presentations

Result from Chapter four on the quantitative research and findings was presented and published in Pacific Rim Real Estate Society (PRRES) conference 2016. As part of the research effort, the thesis was also presented PRRES 2015 international conferences on Chapter one to two, including doctoral colloquiums. The quantitative research and findings was presented at the Global Chinese Real Estate Congress Conference (GCREC) 2016 in Hangzhou, China, July 2016. An invitation from a leading Australian global property consulting firm was received to present on the research results in 2016. In the middle of year 2016 an invitation was received from the Australia China Alumni Association Alumni and RMIT Alumni to present the research findings, titled "Knowing the Future

Property Owner”. Since late 2015 and early 2016, the research outcomes were published in various leading newspapers such as the Australian Financial Review and Domain as listed below. These publications had simultaneously attracted substantial attention over hundreds of China online news portals as listed in Appendix V.

Citations for the conference and doctoral colloquium include:

WONG, P. 2016. The Drivers of Overseas Investment in Australian Residential Property Market. *Pacific Rim Real Estate Society*. Sunshine Coast, Queensland. Available: http://www.prres.net/papers/Wong_Drivers_of_oversears_investment.pdf.

WONG, P. 2016. The Global Cross Border Investments in The Australian Residential Property Market. *Global Chinese Real Estate Congress Conference*. Hangzhou, China.

Citations for news publications include:

Hughes, D. 2016. Middle Class International Homebuyers Push Up Prices Near Schools, Universities. *Australian Financial Review*. 29 December 2015, Melbourne, Australia.

Hughes, D. 2016. How Property Investors Can Get Top Financial Results from Student Housing Crisis. *Australian Financial Review*. 5 February 2016, Melbourne, Australia.

Hughes, D. 2016. Sydney and Melbourne Property are “Set for Price Correction”. *Australian Financial Review*. 19 February 2016, Melbourne, Australia.

Power, E. 2016. From China, with Love: The Residential Tourists Falling for Melbourne Property. *Domain*. 6 March 2016, Melbourne, Australia.

Power, E. 2016. Are Rich Indian Buyers the Next Big Thing in Australia Luxury Real Estate? *Domain*. 13 March 2016, Melbourne, Australia.

See Appendix V for publications over the China online news portals, as compiled by “News RMIT”.

Chapter Two: Literature Review

2.1. Introduction

Foreign investment in Australia constitutes one of the major components of the Australian economy, with FDI amounting to USD50 billion invested in the country in 2014. As Australia gets more exposed and impacted by the global liberalisation subsequent to GFC 2008, it is crucial to investigate foreign investors' appetite and their attitude towards Australian real estate.

This chapter aims to examine and review the literature on international investment fundamentals, decision making theory (resources allocation, selection and optimisation), investment activities (evaluating and estimating asset performance) and determinants related to foreign investments in the Australian housing market. Both FDI and Foreign Portfolio Investment (FPI) theories will be evaluated in the context of historical offshore investments in Australian real estate. International studies relating to outward FDI from the host countries such as the US and China shall form part of the review to examine core drivers that encouraged outward offshore investments. The objective is to identify who were these offshore private investors and what factors affected and shaped their decision making relating to Australian residential properties subsequent to GFC 2008.

This study will place emphasis on offshore private investment in Australia. The historical immigrations that impacted the Australian housing market is a major platform soliciting empirical evidence on the core drivers of foreign private investment in Australian residential properties. Empirical evidences that revealed determinants of foreign investment in the Australian housing market, for example international students in Australia is reviewed and examined underpinning the basis of this study.

Besides examining the historical empirical evidences, it is the emphasis of this study to review recent publications in literature, market commentaries, reports and government documents subsequent to GFC 2008 relating to the foreign investment characteristics in Australia. Emerging trend and habits of foreign investors in Australia is identified and uncovered to form the platform for testing in Stages IV and V of this thesis.

This chapter has seven sections. Subsequent to Section 2.1 introduction, Section 2.2 outlines the international investment fundamentals. Section 3.3 presents the overseas residential property market determinants to identify various historical investment drivers. Sections 2.4 and 2.5 depict

the Australian population growth and the related migration investment activities. Section 2.6 details the identified emerging offshore investment trends and the entire chapter will be concluded in section 2.7 summary and implications with research gaps identified.

2.2 International Investment Fundamentals

Traditional investment patterns and analysis focuses on potential gains from combining different stocks into a single portfolio. Recent research has been extended into currencies, real estate, international stocks and bonds in portfolio investment. In this global liberalisation era, the potential benefits derived from the international real estate in investment strategies resulted in the inclusion of real estate as a common asset class in any international investment portfolio analysis (Sirmans and Worzala, 2003).

Giliberto (1990) concluded that in a broader context of diversification of mixed asset portfolios, investment in real estate was perceived to have an offsetting effect on the negative consequences of excessive concentration in equities, especially when considering the relative correlation of equities' prices in international financial markets. He asserted that lack of correlation of returns among real estate assets in different countries justifies the diversification approach. Other empirical studies seem to suggest that international real estate investment could be regarded as a hedge against excessive risks associated with equity investments (Fereidouni and Tajul Ariffin, 2013 2006, Hoesli, 2004, Moshirian, 1999, Sirmans, 2003, Wilson, 2003).

The International Monetary Fund (IMF) defines FDI in the fifth Balance of Payments (BOP) manual as a type of international investment with the aim of a long lasting involvement in a business in another country. The concept of long lasting involvement implies a long relationship between the investor and the foreign firm and a significant influence upon the management of the latter. Following these recommendations FDI data in the BOP statistics were grouped under the following headings: acquisitions of shares over 10% of capital stock, intra-firm loans and Foreign Real Estate Investment (IMF, 1993).

It is seemingly common that FDI activities are diversifying into real estate investment as another important asset class investment. The real estate assets category offers investors another viable investment option to diversify and solicit better investment returns. Investment in real estate was perceived to have an offsetting effect on the negative consequences of excessive concentration in equities and bonds in a world of uncertainty. This was highlighted by Quan and Titman (1999), comparing direct real estate assets against other types of investments, in particular the share markets in the various countries. In the later research real estate assets were added to a mixed

asset portfolio along with shares and bonds as part of the investment asset class (Hoesli et al., 2004).

Moshirian and Pham (2000) exploited determinants of US investments in real estate abroad based on FDI modelling, by comparing FDI in real estate as a subset of FDI in general. They included specific explanatory variables such as financial wealth, return from the US stock market, US financial liabilities, bilateral trade and economic growth. They had validated the FDI platform for the assessment on other relevant explanatory variables. In this paper, all the specific explanatory variables listed above were the determinants of US investments in real estate abroad.

It was quite apparent that “portfolio theory” as an established driver of foreign investment capital flows was not the only theory applicable, especially in this globalization era. There were other variables considered to be influential and had been selected as relevant contributors in the studies of foreign real estate investments. In relation to studies of FDI in real estate market, Holsapple et al. (2006) claimed that FDI and Foreign Portfolio Investment (FPI) were traditionally treated as mutually exclusive, and researchers generally focused on only one or the other. While this approach may be appropriate for some types of investment, real estate investments were often hybrids that possess characteristics of both FDI and FPI. The research synthesized existing theories of FDI and FPI into one methodological approach in the case of investment in real estate. The authors extended Dunning (1997) “Eclectic Paradigm” to allow for independent and aggregate evaluation of both FDI and FPI characteristics to enhance decision making regarding foreign real estate investments.

Although the term Foreign Real Estate Investment (FREI) had been widely used by researchers, it had not been truly defined. According to international standard and industrial classification of all economic activities provided by the United Nations, a real estate sector is classified under service (tertiary) sectors. According to Topintzi et al. (2008), direct real estate investments involves investment and management of actual tangible real estate. FREI was further defined to include fund inflows from individuals as well as foreign enterprises, whenever these entities do not maintain a permanent residence in the host country. FDI’s definition by IMF and the fundamentals articulated around FREI underpinned the foundation for all research efforts of investigating various determinants of foreign real estate investments.

Empirical investigations conducted thus far suggested that there was an apparent lack of studies conducted on the FREI’s determinants from the perspective of a direct FDI model (Rodríguez and Bustillo, 2010). Early research examined individual real estate markets employing relatively crude proxies for real estate values derived from rental rate growth (Ross and Webb, 1985). Among the

theories that were mentioned, the main approach used for FREI studies so far was mainly based on Portfolio Theory as advocated by (Markowitz, 1970). In later studies conducted by the researchers and scholars, the majority found that diversification would be more likely to produce benefits in markets that were not perfectly correlated, although there was a degree of variability depending upon the countries being examined (Moshirian and Pham, 2000). The research revealed that most recent studies of FDI were based on the eclectic theory as a means of measuring the most significant determinants of FDI.

For example, currency risk represented as one of the distinct disadvantages of foreign real estate investment. Capital gains derived from disposal of these foreign estates occurred at a specific moment of time or when the property was sold, gave rise to higher foreign currency risk in comparison with equities or bonds investments. Institutional investors might be able to mitigate the currency risk through hedging. However, hedging would not be as easily accessible for individual investors compared to institutional investors (Johnson et al., 2006). Empirical works were carried out to find suitable ways of hedging against currency risk when investing in real estate. Ziobrowski et al. (1997) suggested employing currency swaps to avoid excessive currency fluctuations, whereas other authors like Hoesli et al. (2004) preferred to use forward contracts to eliminate the currency risk.

A review of historical literatures will be incomplete without examining some of the recent property market models. Reference is made to Baum and Hartzell (2012), who noted that international property investment could be complex, primarily because of the impact of tax and currency issues and other barriers that place non-domestic buyers at a disadvantage. They went on to suggest that both the theory and empirical evidence suggested a strong long-term correlation between rents and inflation. Furthermore, they elaborated that delivery of good and steady real returns from the real estate requires excellence in the investment process as follows:

- i. Understand the nature of the asset class.
- ii. Being able to develop and execute a strategy that captures the asset's attractive characteristics.
- iii. Using vehicles and structures that do not wreck the propositions.
- iv. Avoiding unmanageable and poorly-understood international risks whilst making the most of the opportunities for diversification and return that are presented.
- v. Knowing at what price to buy.

Source: Baum and Hartzell 2012

A study conducted by Rodríguez and Bustillo (2010) examined the determinants of FREI inflows for Spain over the period 1990-2007 and applied the Engle-Granger co-integrating regressions. They used time series data to run the three models namely, financial model, the demand for service model and the eclectic model.

Archer and Ling (1997)'s three-market model illustrated the critical relationship of property, space and capital markets. The paper suggested that instead of merely linking space and capital markets in both short and long run setting, it should be expanded to a three-market model by separating specific property risk components from the general capital market. It is believed that various aspects of monitoring and controlling on the cost and benefit of FREI in a property market can be assessed in a systematic manner using this model (Higgins, 2013).

To summarise, neither the portfolio approach nor the direct investment focus offered a satisfactory explanation of the foreign investment in property market. In this study we propose to discuss the foreign real estate investment from the portfolio perspective, together with other relevant explanatory variables, to investigate the relevant determinants for the real estate market in Australia. Real Estate in general or housing investment in particular can be considered as financial assets, whose price changes would influence the direction and quantity of cross border financial movements. Investors' expectation of potential increase in house prices was one of the main factors that affected the international financial flows. In fact, the majority of empirical studies had attempted to explain real estate investment by focusing on the financial factors.

2.3 Overseas Residential Property Market Investment Determinants

2.3.1 Factors Attributable to Foreign Investments in Property Market

Existing economic literature suggests that FREI (like FDI in other services) would assist a host country's economic development by ways including injection of financial resources, provision of services in terms of supply, cost, quality and variety, introduction of additional competition, generation of employment and delivery of technology into the real estate industry (Arnold et al., 2006). It is believed that FDI inflows had affected the performance of the real estate industry in host countries significantly (Jiang et al., 1998). For example, FDI in real estate had contributed to the rapid modernisation of the metropolis and facilitated and enhanced the urban development quality in China (Wei et al., 2006).

He et al. (2011) suggested that foreign real estate investors had contributed significantly in the development of China's real estate industry. Besides providing the much needed capital requirement, the FDI had educated the domestic real estate professionals on new practices in the

operation of the real estate market. Fung et al. (2010) claimed that since 1997, the investment in China's real estate sector by domestic and foreign investors was the major driver of China's economic growth. The spill over effect resulted in demand stimulation on many other industries such as electronic, machinery, steel and architecture in China.

Efforts to investigate the negative impacts of FDI in the real estate market were equally voluminous. Research conducted by Murphy and Watson (1994) suggested that although FDI were blamed as the main reason of declining housing affordability in Australia major cities, the issue was in fact more complex and the effects of economic restructuring were significant as a result of FDI into Australia. One of the reasons quoted was the deregulation of financial markets in the 1980s made finance more accessible for housing resulted in demand-push price inflation across Australia.

Evidence from literature had repeatedly confirmed the benefits and various positive impacts of FREI in the host countries. These empirical evidences had validated positive impacts derived from FDI in real estate market and seem to have surpassed the negative aspects. Evidently, countries around the world are in constant competition with each other to lure foreign investment capital. Table 2.1 depicts various studies conducted on the FDI in real estate trends in the world markets:

Table 2.1: Trends of FREI in the World Real Estate Market

Locations	FDI in Cross Border Real Estates	Source
Global	Global FDI in real estate in 2010 are approximated in USD316 billion, which is more than 50% higher than 2009 level FREI accounted for 37% of the world's wealth	Jones Lang LaSalle (2011) Brown and Matysiak (2000)
China	FDI flows into China's real estate market accounted for 10-15% of the total FDI from 1990s to 2009. The real estate sector attracted Substantial FDI in China over the period 1983- 1992.	He et al. (2009) and Chen (1996)
Lebanon	32% rise in FDI inflows in 2008 was mainly driven by real estate investment	UNCTAD (2009)
Spain	FREI in Spain represent nearly 40% of total FDI inflows	Rodriguez and Bustillo (2010)
Vietnam	FDI accounted for 54% of total Vietnam FDI in 2008	Thien Thu and Perera (2010)
Europe	Cross border investments accounted for 63% of the total real estate transactions in Europe in 2006	Jones Lang LaSalle (2007)
Finland	Cross border investments accounted for half of the annual total transactions in Finnish commercial real estate markets	KTI (2008)
Serbia	FDI in real estate made up 12% of total capital inflow in Serbia	Popov (2010)
Costa Rica	The purchases of real estate by private foreign citizens reached USD763 million or 25% of the total FDI in Costa Rica	

Source: Adapted by Fereidouni and Masron 2013

The real estate markets in some countries in the world, referring to Table 2.1, were all experiencing robust development due to FREI (Fereidouni and Masron, 2013).

The literature review revealed that most studies conducted were focused on determinants of overseas investments into the host countries' real estate market. Moshirian and Pham (2000) took a somewhat different approach by examining the factors contributing to the outward expansion of United States of America's FDI in real estate abroad. The research showed that as US foreign financial liabilities increase, there is an accompanying increase in its FDI in real estate offshore. This result is consistent with the study by Ruffin and Rassekh (1986), which showed that US FDI abroad was a substitute for US financial assets. Furthermore, the empirical results indicated that as returns from the US stock market decline, there were more incentives for US investors to invest in foreign real estate. The empirical results also showed that US financial wealth, US FDI in manufacturing and banking and US bilateral trade contributed positively to the expansion of US FDI in real estate.

A review of FDI literature appears inadequate without study into the literature that highlighted the determinants of significant FDI inflow into China. China, like many other developing countries, regards FDI as a dynamic force in economic growth and urban development. With the implementation of various economic decentralization measures to push for further growth, the significance of the FDI in its major cities was regarded as one of the major contributions to the impressive growth in China for the past decade (Wei et al., 2006).

According to Wei et al. (2006), the role of establishing various official states and development zones played a significant role in the formation of China's current city landscapes. The states in China had been actively implementing favourable policies to attract foreign investment in their effort of establishing "global cities" in their respective states/zones. They competed vigorously with each other over policies and resources made available to foreign investors. Shanghai is the success story of China policies favouring FDI, as it has become one of the most preferred location for foreign investment and the regional headquarters for major transnational corporations in Asia. The research analysed the relationship between the change of state policy and foreign investment inflows. The research concluded that the important role of the state policy in attracting FDI and resultant effect of a global city formation like Shanghai. Despite decentralization and globalization, the individual states in China still played an important role in attracting foreign investment alongside with urban restructuring.

In the midst of many scholarly studies conducted on the determinants of FDI in the world real estate markets, Ross (2011) iterated that although there had been substantial research carried out on the

FDI's impact on the overall real estate market, the same cannot be said for the Australian residential property market. He revealed that the constituents of Australia's property sector had been previously studied at an aggregate level and but not at an individual property asset class level. According to Ross (2011), with the Federal Government bearing the main responsibility of monitoring foreign investment through its Foreign Investment Review Board (FIRB) processes, the approach of State Governments can only be described as somewhat different and lacking from those provided at the Federal level. It was not surprising that the availability of both quality data and literature pertaining to FREI in residential housing market in both Sydney and Melbourne were limited, thus presenting an extant knowledge gap.

Assessing the performance characteristics of FREI and real estate market is fundamental to both investment decision making (resources allocation, selection and optimisation) and investment activities (evaluating and estimating asset performance). Overseas Investors use a range of performance measures to assist them in making investment decisions (Markowitz, 1970). These measures include specific risk and return statistics, which are analysed in order to determine the performance characteristics of different asset classes. From the review of portfolio literatures, it is apparent that FREI's unique purpose is to solicit higher returns (Rodríguez and Bustillo, 2010).

Instead of analysing a broad range of heterogeneous determinants of FREI in the residential housing market, this study will focus on investigating specific factors that drives Asia Pacific's private wealth into Melbourne residential real estate market investments. China is used as the case study due to the recent sizeable influx of both tourism arrivals and student enrolments. The three-market model illustrated by Higgins (2000) emphasised the critical relationship between property, space and capital markets and presented a platform for analysis on factors such as real estate transparency, financing cost, property prices, per capita income, the education system, tourism arrivals with emphasis being placed on immigration, education and tourism as variables of interest. Analysis of non-economic variables such as personal preference and social attributes is considered to be outside the remit of this paper.

This study is therefore an extension of the prior literature and makes allowance for emerging factors and determinants of FREI in the host country. When combined with the existing set of variables, these emerging determinants subsequent to GFC 2008 potentially provide a better explanation and prediction for the recent trend of foreign real estate investments in the Melbourne residential market.

2.3.2 Local and Overseas Government Property Market Policies

Keynes (2006) stated that governments were capable of influencing the aggregate demand of the country over which it had power by implementing fiscal policies, including changes in tax rate and spending, alongside the monetary policies associated with the management of money supplies. Among the studies conducted on how significant the impact the government policies had been on the world countries' economy, Nordhaus (1975) presented a simple yet powerful theory: Presidents in the US used many policy tools at their disposal to manipulate the economy for their electoral gain. Among the numerous studies conducted subsequent to Nordhaus's, researchers had gained grounds in identifying various political business cycles in different countries and locations. Generally, there are three major concepts to the political business cycle literature:

- i. The "classical" models that were focusing on four macroeconomic indicators: growth, inflation, unemployment, and income.
- ii. Short term economic instruments or manipulations such as tax benefits.
- iii. Monetary policy through the Federal Reserve (Fed) as an independent bureaucratic agency, although debates over how independent is the Fed is on the rise.

Source: Ladewig 2008

Review of Government policies in respect of foreign investment depicted that historically, countries had been adopting specific governing policies which they perceived would optimise the investment atmosphere and maximise FDI into their country. Governments at times have to overhaul their policies to facilitate various factors including globalisation, economic reforms, meeting the needs of changing market conditions and investors demand. Due to the shares and bonds sectors had been underperforming especially during the GFC 2008, a trend had emerged to encourage or promote FDI investing into real estates as an alternative class of investment assets.

Moshirian and Pham (1999) paper titled "Determinants of US Investment in Real Estate Abroad" presented an opposite perspective of foreign investments in real estate market by analysing factors which were contributing to the outward investments of US FDI in overseas real estate. They conducted studies on various attributes that caused US investors opting for investment in overseas real estate market. As a result of US fiscal and monetary policies, there was an increase in real estate investment abroad as a substitute for US financial assets when US foreign financial liabilities increase. The empirical results indicate that as returns from the US stock market decline, there were more incentives for US investors to invest in foreign real estate. The empirical results also showed

that US financial structure and wealth, US FDI in manufacturing and banking and US bilateral trade contribute positively to the expansion of US outward FDI in real estate.

For inbound investment, He et al. (2008) claimed the existence of a fear factor among the Americans due to the rising Chinese political and economic power. Chinese economic growth for the past decade seems to have exerted some anxieties among other countries including US. The trade imbalance was seen as an indication that China was edging over US in terms of BOP and would eventually overpower the US economically. He et al. (2008) argued that China's FDI in the US was more economically than politically driven and therefore should be understood from a business rather than political perspective.

According to Cheng and Ma (2010), Chinese firms had taken on a more capitalist perspective that resulted in radical restructuring and corporate mergers since the 1990s after three decades of economic reforms. Consequently, China companies had emerged more diversified in their ownership structure. Although the Chinese government remain insistent in maintaining their ownership control over international companies like Lenovo, their involvement in the strategy and operation of those companies is diminishing. Factors that caused China to invest overseas were steep domestic competition, declining domestic revenue, supporting future export, opening up new markets, securing raw materials, acquiring technology, acquiring global brands. Importantly, all outward FDI from China is supported and encouraged by the Chinese government policies. Deng (2004) revealed that with China, sustained economic growth was the result of substantial foreign capital inflows. The economic growth had resulted in a large current account surplus, huge foreign reserves and a high level of domestic savings. Consequently, the FDI outflows from China into the international arena were primarily a function of macroeconomic policy and constituted an inevitable path of China's economic development. The world would continue to observe increasing FDI from China to other parts of the world in the foreseeable future. China's individual firms will continue investing in overseas to reap the ownership advantages and the associated international competitiveness derived from it.

Review of the literature provided a sound perspective on the factors that drove China's investors to stretch their arms into overseas markets. The research conducted on the offshore investment in Australia's residential property market, particularly investment from China, would be incomplete without reviewing the various Chinese Governmental policies that had resulted in large outward investments from China into overseas real estate markets.

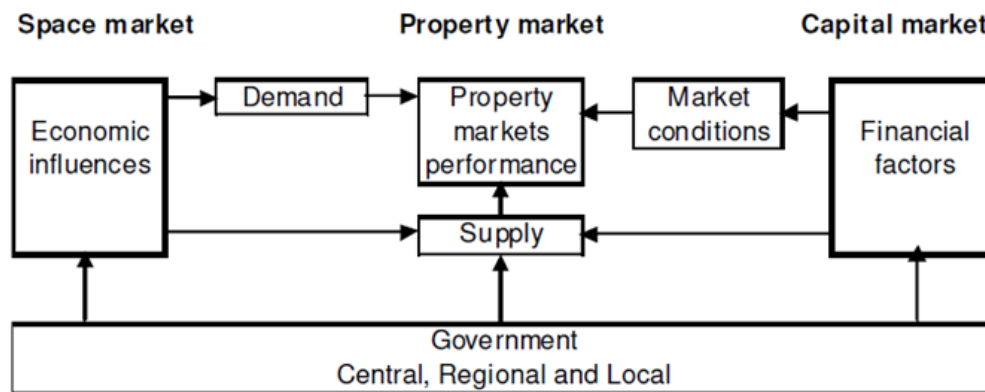
Adopting an investor friendly economic policy is a common reform option for many countries to attract FDI. Australia is certainly not left behind in this aspect. History revealed that between 1985 and 1991, tourism and real estate FDI accounted for over 50% of all Japanese FDI into Australia, peaking at 93% in 1988. During these periods, Australia, adopting the policy of encouraging business migration, has experienced large inflows of capital, much of which has been invested in property (Murphy and Watson, 1994).

Australia's migrant intake policies has changed and increased progressively since the recession of the early 1990s. In recent decades, immigration has been somewhat less sensitive to fluctuations in the business cycle (as evidenced by continuing high levels during the Global Financial Crisis) and more responsive to economic restructuring. Evidently as a result of various government policies' restructuring, the long boom from the mid 1990s has been "accompanied" by a relaxation of migration quotas. Migrant intakes had increasingly favoured younger applicants with tertiary qualifications in areas of labour shortage and strong language skills. Skilled migration has increased relative to family-based migration. The share of family migration fell from 47% in 1998–99 to 40% in 2001–02 while the skilled intake rose from 51% to 57%. The growth of migration was the outcome of the Howard Coalition Government's attempt to extract greater economic benefit from migration to garner public support for the programme (DIAC, 2004).

A trend had emerged whereby the investor's friendly migration scheme was put in place to attract significant foreign capital into the local real estate market in Australia. Burnley et al. (1998) looked at various Governmental policy implications on urban outcomes in relation to Australia's immigration programme. The Australian policy makers recognised the diverged views on the costs and benefits to the nation's major cities such as Sydney and Melbourne due to large scale immigration; and the response had since been intensified and sharpened.

Higgins (2010) illustrated the extent of Government policies' impacts on the Australia housing market by examining the structure of the property market. This study adopted the Archer and Ling (1997)'s three-market model and was simplified to exemplify the critical relationships between property, space and capital markets in assessing the Australian government policies influence over the house prices. Figure 2.1 illustrates a simplified Archer and Ling model.

Figure 2.1: Archer and Ling Three Markets Model



Source: Higgins 2010

Figure 2.1 illustrates Government's influences across the property, space and capital markets. Some of the government policies that influenced the Australia house prices are presented below:

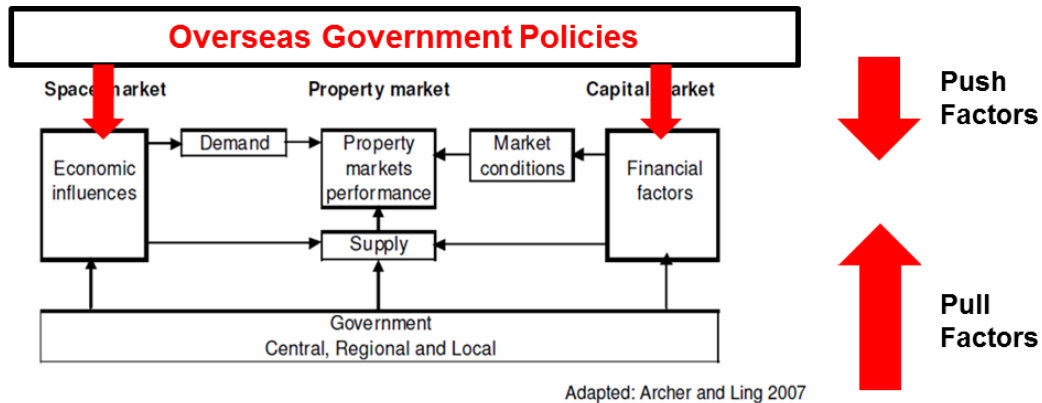
- i. **Space market (Demand)**
 - a. Population Policies (quotas on overseas migration).
 - b. Incentives for first-time home buyers.
 - c. Opportunities for offshore purchase of residential properties.
- ii. **Capital market (Finance)**
 - a. Monetary Policies (money supply, government bonds).
 - b. Changes in property taxes (negative gearing, stamp duty).
 - c. Regulations that impact on alternative asset classes.
 - d. Changes in superannuation policies (in an indirect manner).
- iii. **Property market (Property market conditions and supply)**
 - a. Release/rezoning of new residential land.
 - b. Changes in planning policies(housing density).
 - c. Building regulations (sustainability agenda).

Source: Higgins 2010

Based on the literature review on potential influences over the investment climate implicated from both local and offshore Government policies, it is believed that an additional platform should be introduced into the simplified Archer and Ling model to enable an insightful review of FDI (real estate) determinants. This new model will allow a more comprehensive review on how Government policies, from both angles of overseas Government policies and local Government policies, impact on the host country's real estate market. It is envisaged that this model can be utilised for future

case studies of various factors that incentivise overseas' outward investments into the host country property market. Figure 2.2 presents the proposed "Push & Pull" model:

Figure 2.2: Proposed Push & pull Model



Source: Author

Figure 2.2 illustrates, besides the home Government policies, there presents an additional component asserted from overseas Government policy pushing influences to the space and capital markets of the host country. Overseas Government policy examples which can potentially impact on the Australia property prices include:

- i. Space Market (Demand)
 - a. Wealth preservation and hunger for safe haven assets.
 - b. Migration (searching for better life style).
 - c. Education (inadequate tertiary places in local universities).
 - d. fierce local competition and declining domestic revenues.
- ii. Capital Market (Finance)
 - a. Relaxation of capital outflow restrictions.
 - b. Higher purchase and capital taxes as well as mortgage restrictions.
 - c. Overseas government encouragements and financial support.

Source: Deng 2004, RBA 2013, Savills 2013

Based on a literature review on foreign investment fundamentals, it appears that there have been limited studies conducted on offshore private wealth investment into the Australian residential property markets alongside the emerging determinants that attracted these offshore investors repositioning investments into Australia, subsequent to GFC 2008. The three main gaps in the literature on the foreign investments in Australia residential market have been documented in the following questions:

- i. What were the rationales for offshore investors defying the normal risk adverse investment strategies and repositioning their investments into the Australian residential property market?
- ii. What are the emerging determinants to drive offshore investors buying into residential property market in Australian major cities like Melbourne beside the conventional financial and economic factors?
- iii. Did non-traditional and emerging determinants play a part in attracting offshore investments into Australian residential property market and if yes, what are these determinants?

2.4 Population Growth and Offshore Investment

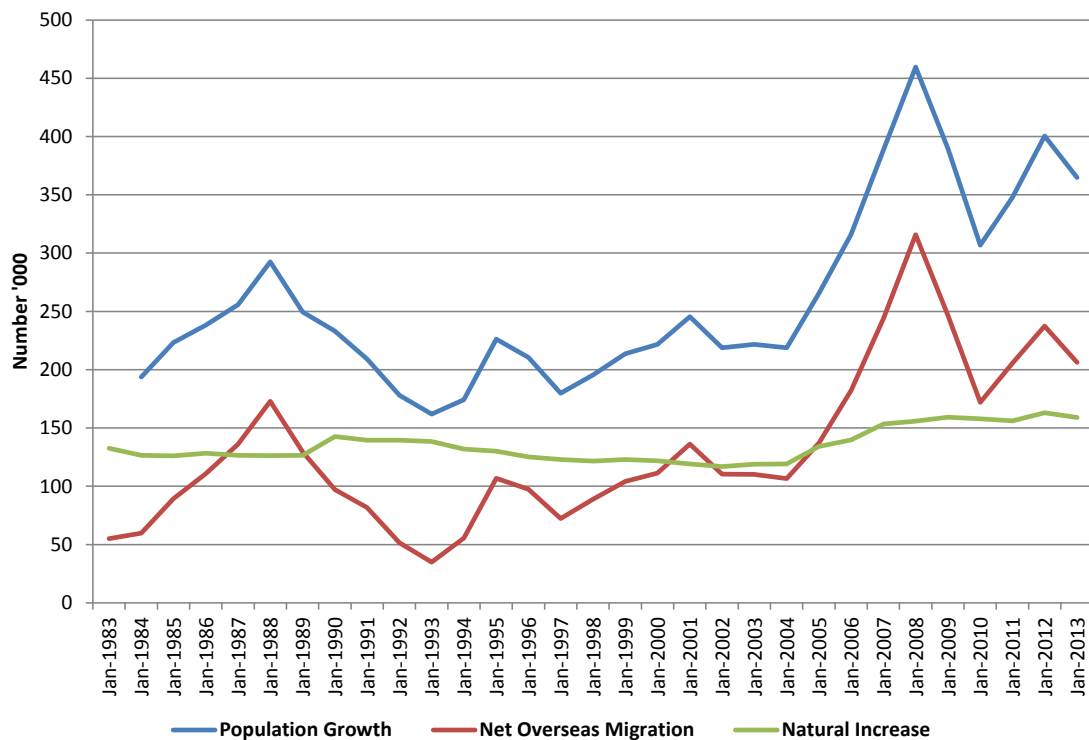
According to ABS (2008), annual population growth is the change in the Estimated Resident Population (ERP) in a single year caused by the combination of net overseas migration and natural increase. The official 'population' measure used by the Australian Bureau of Statistics (ABS) is the 'estimated resident population'. This is based on the population usually residing in particular locations and includes all people, regardless of nationality or citizenship (with the exception of foreign diplomats and their families), who have lived in Australia for 12 out of the past 16 months. Population growth refers to the change in the estimated resident population over a period of time. The two major sources of population growth are defined as:

- i. Natural increase - the population growth that results from the difference between the number of live births and deaths over a specified period.
- ii. Net overseas migration - as the difference between those who have stayed in, and those who have been absent from, Australia for at least 12 out of the past 16 months. It is affected by both temporary and permanent migration to and from Australia

Source: ABS 2012

Figure 2.3 shows the total of Australian quarterly population growth from January 1983 to January 2013. The total population growth is categorised accordance with the quarterly growth due to Natural Increase and Net Overseas Migration.

Figure 2.3: Components of Australian Population Growth

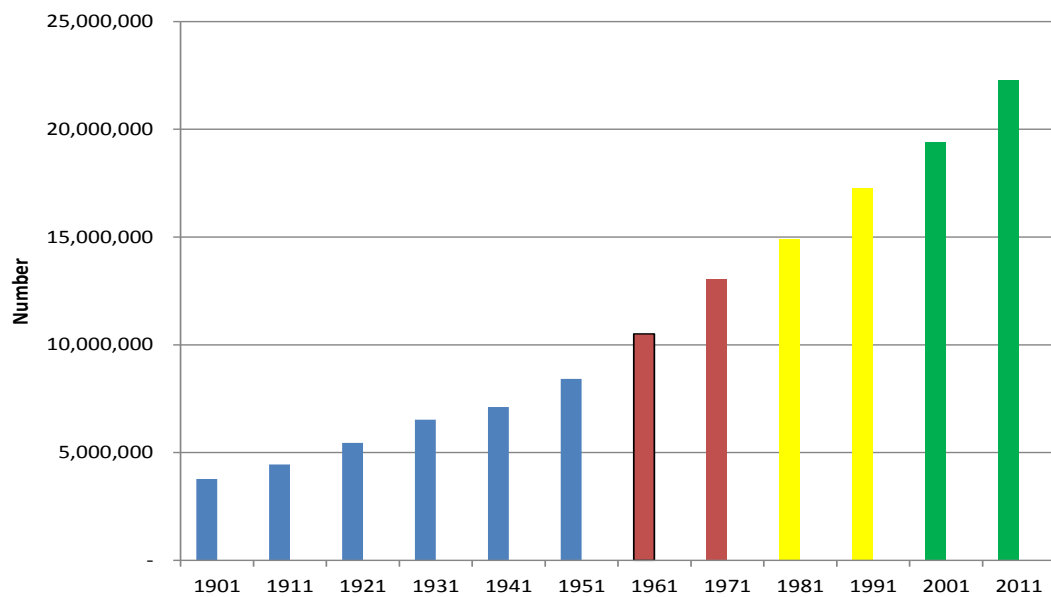


Source: ABS 2015

According to Figure 2.3, the contribution to population growth for the year 2013 was higher from net overseas migration (59%) than from natural increase (41%), though the net overseas migration contribution to this growth actually decreased slightly from 60% for the previous year ending 30 September 2012. The corresponding natural increase had increased slightly from 40% over the same period.

Net migration growth had been a major component of Australian population growth since 1988. In year 2006, Australian population growth due to net overseas migration surpassed the natural growth and has persisted ever since. In effort to provide a better understanding on the last two decades of Australia's population growth and its relationship with the Australian historical immigration and Foreign Investment activities, assessment of the Australian population growth forms the immediate step. Figure 2.4 presents an overview of Australian population growth from 1901 to 2011:

Figure 2.4: **Australia's Population from 1901 to 2011**



Source: ABS 2015

Figure 2.4 shows that Australian population increased consistently since 1901. A century of population growth observed three significant expansions between 1961 to 1971 (red bar), 1981 to 1991 (yellow bar) and 2001 to 2011 (green bar). Australian population growth exceeded two million for each of these three decades. The population grew 2.56 million for the period 1961 to 1971 and another 2.36 million between the periods of 1981 to 1991. Australia's ERP reached 22.30 million at 30 June 2011, increasing by 2.90 million people or 15% since 30 June 2001. (ABS, 2008, ABS, 2011).

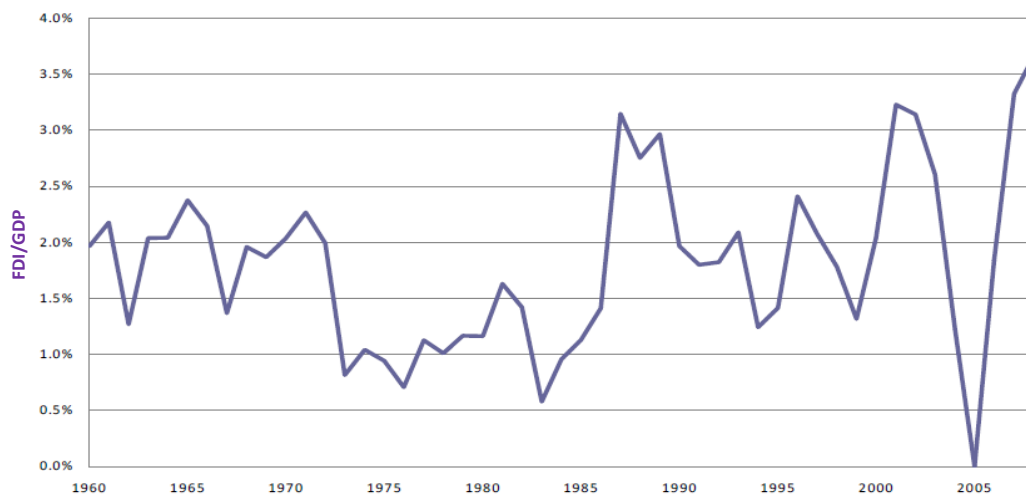
The significant population growth driven by immigration programmes into particular host countries is common throughout the world's major cities. (Jupp, 1995, Vamplew, 1987) established that immigration has a direct influence on the increment in the host country population. They had also provided empirical evidence on how Australia's population was affected by immigration programme. Immigration had been the major source of Australia's population growth since the white settlement policies (Burnley et al., 1998, Collins, 2008, Department of Immigration and Citizenship, 2009-2010, Jupp, 1995, Wilson, 1998). For example in 1851 where the Australian population was 437,655, of which 77,345, or just under 18%, were Victorians. A decade later the Australian population had grown to 1,151,947 and the Victorian population had increased to 538,628; just under 47% of the Australian total and a sevenfold increase. The rapid growth was predominantly a result of the gold rushes (Vamplew, 1987).

Australia had played a visible role in the process of diaspora dispersal over the period of almost 20 years since the 1990s. As a result, migrant intakes grew substantially during the 1990s and have reached an all-time high through much of the early years of the 21st century. This acceleration built upon a long history of post-war migration into Australia. Combined with higher birth-rates amongst the Australian born migration, the likelihood of continuing population growth over the subsequent decades was greatly enhanced. A population of almost 36 million has been proposed as a realistic prospect by 2050 (O'Reilly, 2007).

Empirical evidence revealed that the population growth was closely related to the implementation of several Australian Government immigration programmes historically. In this aspect, (Vamplew, 1987) provided empirical evidence that immigration policies were the main reasons attributed to the increase in overseas migration to Australia. The fifth decade (1980-90) started with series of Australian government immigration programs that resulted in migrations exceeding 100,000 for the 1986–87 year. Prime Minister Bob Hawke proclaimed 1989 as the Year of Citizenship and people eligible for Australian citizenship were encouraged to apply. In 1989–90, more than 130,000 people were granted citizenship. In 1991, the Access and Equity Plan was released, aimed at ensuring all clients had fair access to the department's services (Department of Immigration and Citizenship, 2009-2010). The Australian Government immigration policies implemented during these periods, 1986 to 1991, had assisted in the increased migration activities into the country in a substantial manner. The population growth in the 1990s was a substantial 2.36 million as shown in Figure 2.4.

Numerous studies had also established that immigration played a significant role in lifting the host countries' FDI (Borjas, 1994, Collins, 2008, Ley and Tutchener, 2001, Wilson, 1998). The increase in immigration activities in the host countries had also directly impacted on its real estate market on a macroeconomic perspective (Bartel, 1989, Borjas, 1994, Collins, 2008, Ley and Tutchener, 2001). In order to demonstrate the impacts of immigrants towards the Australian FDI historically and to exhibit the relationships between the two, Figure 2.5 is used to illustrate the share of FDI in Australia's yearly total GDP from 1960 to 2010.

Figure 2.5: FDI by Financial Year, as a Share of GDP Australia



Source: ABS 2011

Figure 2.5 shows that the FDI into Australia, as a share of GDP had increased most significantly during the period of 1985 - 1990, 1998 – 2003 and 2005 to 2010. In effort to demonstrate the relationship between historical FDI activities and some major historical migration events in Australia, this study compares the significant FDI increment periods between 1985 - 1990 and 1998 - 2010 as per Figure 2.5 to the various major historical Australian immigration events as detailed as follows:

Before 1960

Between the 1880s and the 1960s, Australia deliberately insulated itself from its geographical region by adopting the White Australia Policy (Willard, 1967).

1966 -1973

The rapid increase of Asian immigrants was also due to the abolition of the White Australia Policy in 1972, under Prime Minister Gough Whitlam. All restrictions include the State laws which discriminated against Aborigines, prohibitions on non-European residents including prohibition on the acquisition of citizenship, without which people were often barred from property ownership or certain occupations have been removed and racial discrimination was outlawed under a variety of State and Federal laws, starting with the South Australian Act of 1966. The policies of racial exclusion and immigrant assimilation were abandoned by the Liberal and Labour Governments with little political resistance (Jupp, 1995).

1985 -1991

The period between 1985 and 1991 was marked as an important milestone in Australian economic history in relation to both the migrations and FDI in Australia. It was during this period that the Foreign Investment Review Board (FIRB) unveiled its relaxation of restrictions on the need for local partners (Farrell, 1997). The policy liberalisation came about in response to the growing evidence of benefits brought by foreign investment. Since the 1988 Fitzgerald Inquiry the quota for skilled and business migrants had risen compared with the quota for family reunions. The foreign direct investment's contribution to the Australian economy was substantial during this assessment periods.

1998 -2007

Australia accepted 87,000 immigrants in 1994–95, the last financial year before the Howard Government was elected. Although immigration suffered a reversing trend initially during Howard Government which saw the planned immigrant intake reduced to 68,000 following the election of John Howard in 1996, immigration activities observed another significant growth since 1998. The main reason for the reversed immigration trend was due to the Howard Government's changed nature of immigration. The Howard Government introduced new immigration policies of reducing the role of family reunion and emphasising the possession of skills that were in short supply. The guest worker program of issuing long-stay temporary business visas, where skilled workers nominated by a potential employer are permitted to stay up to four years was also issued. The Howard Government had also made several changes to make it easier for overseas students to stay on after they graduated (Gittins, 2007). As a result, 2006 was the eighth straight year of net immigration (that is, net of permanent departures) in excess of 100,000.

Empirical studies seemed to be in congruence in uncovering that the Australian population growth for the last century, attributable to the Australia government immigration policies and the influx of migrants' money invested in the country, had a direct relationship with the substantial foreign investments into the country for the same period of time.

2.5 Migrations and Real Estate Markets

In 1988, Japan real estate investment in Australia became the first major real estate market component of the total FDI in Australia. According to Farrell (1997), Japanese investors were investing in commercial real estate specifically linked to the tourism industry such as hotels and commercial properties. This event coincide with Australian's policy of encouraging business

migration had produced large inflows of capital during the same period (Farrell, 1997, Murphy and Watson, 1994). The majority of the FDI from the Japanese was invested in the Australian property market.

Both Farrell (1997) and Murphy and Watson (1994) revealed that Australian's policies of encouraging business migration had produced large inflows of capital, of which much was invested in property. Among all properties purchased by offshore investors, residential housing market had attracted much attention and constituted an important element in shaping overall real estate market development. Ley (2001) disclosed that the direct relationship between migrants and the residential housing market represented an important attribute in the increasing demand for residential properties. Empirical studies had also suggested that any assessment would be incomplete without reviewing the historical perspective of this initial housing demand related to Australia's immigration programs that had grown more in significance as a key economic feature of Australia since the 1980s (Ross, 2011, Sirmans and Worzala, 2003).

Another study conducted by Bourassa and Hendershott (1995) revealed the direct relationship between residential housing prices and migration. The far larger coefficient of the growth in population caused by net migration suggested that immigrants had substantial wealth that they invested in housing. The fundamental forces driving real house prices were the growth rate in real wage income (primarily due to employment growth) and the growth in population caused by net overseas inward migration.

Australia is also one of the most urbanised countries in the world and the migrant intake had been overwhelmingly an urban affair. Migrants seemed to have a higher rate of urbanisation than other Australians (Burnley et al., 1998). This link between immigration and urbanisation had prompted a strong critique based on environmental grounds (Collins, 2008). However environmental aspects had generated less scrutiny than has been the case in other destination countries including Canada. Collins (2008) had also suggested that Australia should focus on the impacts of migration on social networks, families and neighbourhoods and on migrants from various class backgrounds and experiences. Though constrained by issues of gender, class and culture, migrants should be viewed as active agents in shaping their own lives.

Among these investing activities a common trend was observed. Migrants seem to favour residential properties in the metropolitan cities like Melbourne and Sydney. This was consistent with Leyvraz

and Redner (2002) observation which suggests that there was a connection between migration-driven growth to the distribution of city population in U.S. major cities. Burnley et al. (1997) provided views of various urban outcomes and policy implications of Australia's immigration programme. They concluded that immigration had contributed significantly to the high rates of local population growth, household formation and suburbanisation.

Review of literature also revealed that there was an apparent lack of emphasis on migrants buying residential houses for purposes other than owner's occupation. The majority of the evidence had made a common presumption, i.e. that the immigrants had been purchasing residential properties with the intention of owner occupation without considering other aspects such as investment, life style, tourism or education. This scenario presented a potential knowledge gap.

Among all these, there appears to be an apparent gap in the studies of the way and the extent to which the Australia immigration programme had affected the metropolitan cities like Melbourne and Sydney. The Australian Federal Government is bearing the main responsibility for monitoring foreign investment through its FIRB processes. The State Government's role can be described as disparate with most having absolved themselves of any degree of monitoring outside of that provided Federally (Ross, 2011).

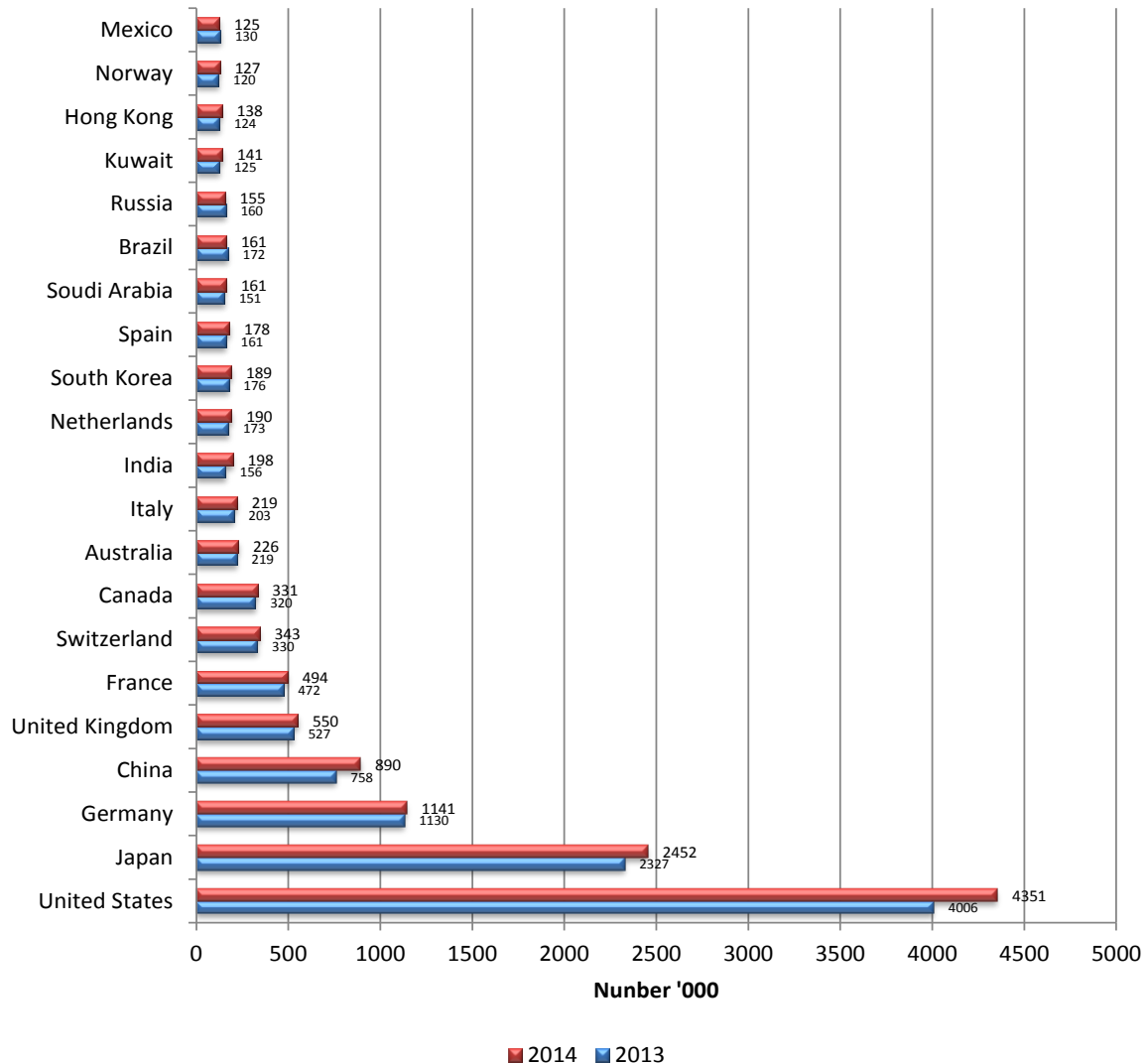
The 2014 FIRB's inquiry on Australia's foreign investment policy as it applied to residential real estate indicated much is needed to be explored of the impacts of offshore investments on Australian house prices (Economics, 2014). Although this inquiry came as a result of public concern that foreign investors are becoming more active in Sydney and Melbourne residential property markets, it indicates the importance of ensuring unwavering implementation of the Government policies in relation to the residential property market.

2.6 Emerging Foreign Investment Trends

2.6.1 Classes of Private Wealth

A high-net-worth individual (HNWI) in Western society and primarily the American's private banking business is defined typically as having investable financial assets (financial assets not including primary residence) in excess of USD1 million. Ultra-high-net-worth individual (UHNWI) is a person having investable financial assets (financial assets not including primary residence) in excess of USD30 million. Figure 2.6 compares the growth in number of HNWI between year 2013 and 2014 in the world's largest HNWI countries.

Figure 2.6: Largest Number of High Net Worth Individuals (HNWIs) By Country, 2015



Source: Capgemini 2015

USA still led the world in terms of total number of HNWIs; in 2014 the total number of HNWIs in USA increased by 345,000 from 4.00 million (2013) to 4.35 million. Japan and Germany ranked second and third respectively with 2.45 million and 1.14 million of HNWIs in 2014. China's HNWIs number is growing strongly. It had surpassed UK and France to rank number four in year 2014 with 890,000 after a significant growth of 17% in 2014. According to Balakrishnan (2015), by the end of 2014 there were almost 4.69 million millionaires living in the Asia-Pacific area, 10,000 more than in North America. North America's millionaires have USD16.2 trillion in the bank, USD400 billion more than their Asia-Pacific counterparts according to the "2015 World Wealth Report" by the Royal Bank of Canada and consulting firm Capgemini. The number of millionaires is growing and more than half that growth is driven by the U.S. and China.

Despite the turbulence of the global economy, particularly in the Eurozone, both the population and wealth of global HNWIs reached significant new highs in 2012. Even though 2012 got off to a shaky start, HNWIs ultimately benefitted from strong market returns in spite of sluggish global GDP growth (Capgemini, 2015). Table 2.2 shows the global HNWIs at the end of 2014.

Table 2.2: **HNWI Wealth Distribution by Region**

Region	HNWI Population (million)	HNWI Wealth USD(trillion)
Global	14.6	56.4
North America	4.7	16.2
Asia-Pacific	4.7	15.8
Europe	4.0	13.0
Latin America	0.6	7.7
Middle East	0.5	2.3
Africa	0.2	1.4

Source: Capgemini 2015

Table 2.2 reveals that there were just over 14.6 million HNWIs in the world. North America and Asia Pacific had the highest number of HNWIs, 4.7 million each. North America and Asia-Pacific, the two largest HNWIs regions, drove HNWIs global growth, expanding 8.3% and 8.5% respectively in HNWIs population, and 9.1% and 11.4% in wealth. North America lost its lead position as the largest HNWIs market as its market share of 4.7 million HNWIs is the same as Asia-Pacific's HNWIs population. However, Asia-Pacific is home to the majority of the fastest growing HNWIs country markets and was expected to surpass North America again in the near future (Capgemini, 2015).

According to Knight Frank (2014), immigration is playing an increasingly influential role in determining how wealth moves around the globe. As wealth grows in emerging markets, so does the desire to protect it. Increasingly, wealthy individuals are looking for places where their assets will be safe. Investor visas, which grant residency or citizenship in exchange for investment, account for a small but growing percentage of immigration worldwide. This growth is due to geopolitical pressures and the need for safety of funds and family. Two of the most popular destinations are the US and UK. The US has an annual cap of 10,000 investor immigrants and the data shows 2012 was the first year that figures came close to that limit, with 7,641 investor visas granted – more than double the 3,463 issued in 2011 and almost 10 times the amount issued in 2007. Chinese investors accounted for 80% of the total, the presence of established Chinese communities apparently outweighing tax considerations and jitters about gun control.

According to Fojtu (2012), due to a confluence of events, including an increase in personal wealth, a penchant for saving, and an appetite for a western lifestyle, the Asian and primarily Chinese, newly wealthy are the prime candidates for immigration to the west, particularly to the US. The single-largest increase in individual wealth in the last two decades has arisen from the east, most notably, China. Its rate of savings far outpaces the western world due to the lack of social safety nets like unemployment benefit, health cover and life insurance.

Many wealthy individuals from China are attempting to obtain permanent residency abroad to provide security in a stable political climate. Although their wealth was made in China, they seek benefits for their families outside of China. Most western countries have developed a system whereby a foreign national can 'purchase' residency by transferring a certain amount of assets into the country and, typically, fulfilling certain other obligations. The US and Canada have well-established systems that are increasing in popularity among the super wealthy from Asia (Knight Frank, 2014, Capgemini, 2015b).

For example, to participate in the immigrant investor programme, a wealthy foreigner needs to invest USD1 million (USD0.5 million in an economically depressed area) in an existing American business. Although this provides a fast track to green card status, the immigrant must still pass a background check and demonstrate that 10 jobs were either directly or indirectly created in the US venture. This may provide a perfect solution for a lack of domestic investment and the desire of wealthy foreigners to find stability and security in the United States. The Migration Policy Institute, a US think tank on immigration issues, identified that this programme is predominantly used by wealthy Chinese looking for that insurance policy. Even though 10,000 US immigrant investor visas are available on an annual basis, only half are issued (a 2010 figure, which may have increased) resulting in an injection of USD2.5 billion into the economy. The US may do well to step up its appeal to foreign investors through tax incentives, business opportunities and continued social and educational freedoms. This may serve to balance the flow of capital out of the US through expatriation by increasing the immigration of wealthy foreigners to jump-start a domestic economy in US (Fojtu, 2012).

The recent global Governments' asset purchases have reduced yields on traditional portfolio investments and, as a result, investors (HNWIs) have targeted tangible assets in safe haven markets. Market cooling measures including higher purchase cost and capital taxes as well as mortgage restrictions were aimed ostensibly at speculators but actually substantially affected non-residents.

However the investors and second home purchasers had become increasingly common in the cross-border residential property transactions. It is not likely that the world's key residential markets will see cooling measures implemented by Regulators to decelerate the investment from non-residents or foreign investors (Knight Frank, 2014). Given the potential easing of cooling measures in some Asian markets in 2014, the volume of cross-border purchasing activity is likely to increase due to the increase in wealth and the desire of HNWLs to increase their exposure to prime residential properties (Knight Frank, 2014).

As the Chinese are getting richer, so are the numbers of new Chinese HNWLs (Capgemini, 2015b). These new HNWLs from China are looking for different life attributes including better education, better living conditions and political stability (Knight Frank, 2014). These wealthy individuals are constantly looking for places perceived to have relatively low risk to park their assets. Wealthy Chinese may find it desirable to make such a move to a western developed country motivated by the social stigma in China against the newly rich. Due to this kind of geopolitical pressure and the need for safety of funds and family, many wealthy individuals from China are attempting to obtain permanent residency abroad to provide security in a stable political climate. Getting a foreign passport is like taking out an insurance policy that allows one easy access in and out of China. For some Chinese nationals, the dream to leave for western countries, in spite of the economic downturn in much of the western world, is still alive and heightened by economic and social pressures.

Although the first annual World Wealth Report was published in 1996 by Merrill Lynch and Capgemini, there were very few empirical studies conducted on the HNWLs and their relationship with the residential properties market and migration. Whilst this review was conducted mainly based on the World Wealth Reports published by (Capgemini, 2015b) and (Knight Frank, 2014), empirical studies on outward foreign direct investment from China reveals that with China's sustainable high economic growth, huge current account surplus, the world's largest foreign reserves, a high level of domestic savings, outward FDI from China will continue as a function of macroeconomic and natural stages of economic development (Chen et al., 2009, Cheng and Ma, 2010, Meng, 2007, Ramasamy et al., 2012, Buckley et al., 2007). Review of literature had confirmed that limited was done on the research of these Chinese HNWLs investment preferences and pattern in Australia. The presence of the knowledge gap on the specific drivers causing China's new rich to migrate and their poorly understood investment preferences and patterns in Australia were catalysts for the initiation of this study.

The World Wealth Report 2013 report from Capgemini and Royal Bank Of Canada advocated that although there are approximately 14.6 million HNWIs in the world, their wealth exceeds USD54.6 trillion. With a different perspective, Wilson (2008) and Kharas (2010) projected a 'Expanding Middle' signifying a major shift in the income towards emerging economies churning more than two billion new middle class income earners in the "middle class" countries. The sheer number and magnitude of this new head count of middle class (two billion) in the world population is substantial enough to generate interest to study their emerging influences on spending patterns, resource use, and environmental and political pressures. The middle class spending is estimated at USD21 trillion in 2010 and projected to grow to USD56 trillion by 2030.

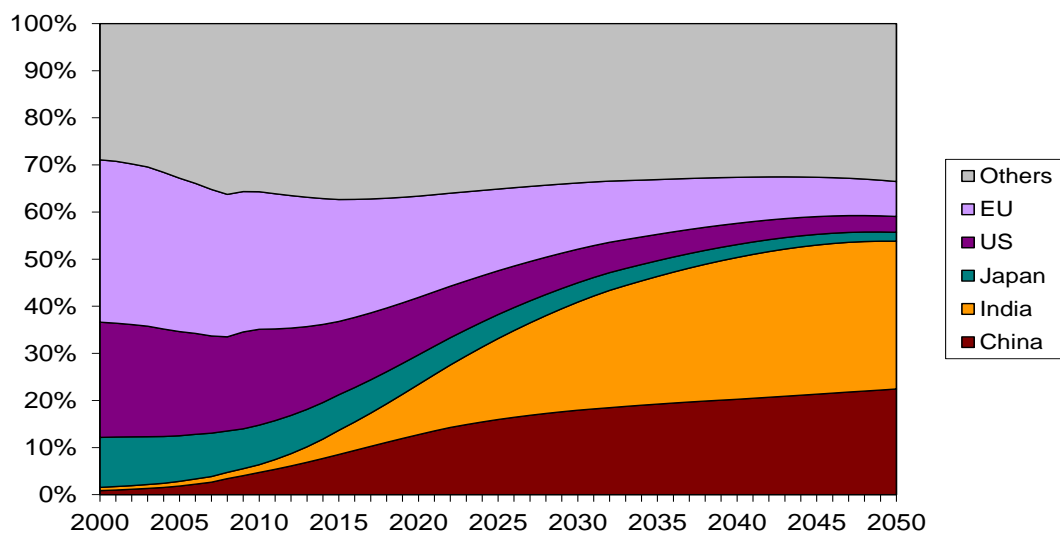
The definition of "Middle Class" was not consistent across various world bodies and authorities. The World Bank uses 'income' perspectives and defines the middle class as income earners making USD2 to USD13 per day. The African Development Bank uses the range of USD2 to USD20 per day and declared that a third of Africans had entered the middle classes (The Economist, 2011). Both of these "income" approaches of classification have proven problematic for the businesses operating in the developed world. Almost two thirds of African populations are currently earning USD2 to USD4 per day. This category of income group falls well below poverty line in developed countries. In China, the number of people earning USD2 to USD13 per day has increased from 175 million in 1990 to 800 million in 2005 and in India 150 million to 265 million over the same period. This definition might have imputed a rather optimistic element into the definition of middle class. It is very unlikely that people earning USD2 to USD13 per day will have access to aspects of middle class in the developed countries, for example good health care and education. This optimistic element is good to estimate the number of people being lifted out of poverty but poses the problem and challenges for related studies especially for chunky asset consumptions such as real estate investments.

This study adopted the Ernst & Young (2013) definition of middle class as people earning between USD10 to USD100 per day. They call it the "global middle class". This range is perceived more relevant and helpful for consumption pattern studies and companies dependent on sales to those with large disposable incomes. It is believed that middle class income earners included in this range should have the required disposable income to purchase cars, televisions and housing and provided a relevant basis for middle class evaluation in this study.

Adoption of the global middle class classification had taken away the optimism of the World Bank's middle class projection. Only a quarter of the world's population makes USD10 to USD100 of income and 60% of these 1.8 billion people live in the developed countries and 20% live in BRIC countries. However, it is this richer global middle class that is forecast to grow rapidly over the next 20 years.

Numerous empirical studies had made the similar prediction on the growth of middle class including The Economist (2011), Ernst & Young (2013), Kharas (2010) and Wilson (2008). Wilson (2008) projected the global middle class could breach 50% of the world's population by 2030, up from only 29% in 2008 and Kharas (2010) suggested that the global middle class could breach two thirds of the populations by 2050. The global income distribution gaps are narrowing due to the emergence of the Expanding Middle. The distribution of global incomes could narrow even further as other middle income countries continue to move along with China and India. The middle income group, which are dominated by a subset of the BRICs and N11 (China, India, Brazil, Egypt, Philippines, Indonesia, Iran, Mexico, Vietnam) will impact global spending patterns in a significant manner (Wilson, 2008). Figure 2.7 illustrates the shift.

Figure 2.7: **The Emerging Global Middle Class**



Source: OECD 2010

In 2000, Asia (excluding Japan) only accounted for 10% of global middle class spending. By 2040, this could reach 40%, and it could continue to rise to almost 60 % in the long-term. The observation from the OECD appears consistent with Goldman Sachs' findings on middle class emergence. A significant proportion of the new Asian middle class are also expected to be at the upper end of the income bracket and boast impressive spending power. The steep increase in Asian demand, and the replacement of US demand by Asian demand, is clearly seen as a trend that accelerates in the

coming decade. The rise of the global middle class from Asia is set to impact global consumption patterns including global real estate market (Kharas, 2010).

Although other Emerging Markets' growth will continue to be significant in the future, it is an undeniable fact that China and India will become the power houses of the global middle class consumerism over the next two decades. China has around 150 million people earning between USD10 to USD100 per day and as long as the economic growth continues, there will be as many as 500 million Chinese entering into this bracket in next 2 decades (Ernst & Young, 2013). By 2030, around one billion people in China will be upgraded to middle class or as much as 70% of China's projected population.

Regardless of eventuality the global middle class forecasts, by 2030 there will be a major shift in the distribution of wealth and the economic and political balance of power. The implication of this shift of wealth is profound. Although Emerging Market consumption is not substantial to result in the return of pre-2008 global growth, it may be enough to prevent a return to global recession in the next few years provided the Developed Markets (DMs) consumption does not decline. Business opportunities derived from the growth of global middle class shall not confine to consumer goods, instead they will be opened to potential up surge in markets such as financial and health care services. The upper class of the global middle class is expected to emerge as a force in tourism across different categories and could well be contributing to the world real estate markets future performance.

2.6.2 Residential Tourism

A model proposed by Williams and Hall (2002) depicted tourism activity as a stimulus for migration and migration as an inducement to tourism flows. Such relationships were explored in the context of a geographical extension of friendship, ethnic and kinship networks. Whilst such interdependencies are not new, their scale, intensity and geographical scope had significantly increased over recent decades.

As was noted by Williams and Hall (2002) tourist numbers may influence the number of applicants for permanent residency. They established that the higher number of overseas visitations to Australia, the greater the likelihood for applications of permanent residency in Australia. Additional applications would be received from friends and relatives in the origin country who had visited Australia and formed a favourable impression, and from those visiting for business purposes.

Migration to Australia within the category “family reunion” may stimulate Visiting Friends and Relatives (VFR) movements which in turn lead to more applications to migrate.

In identifying the strong relationship between tourism and migration, Dwyer et al. (1993) suggested that VFR tourism is an important element of what they called “chain migration”. This migration trend is most prevalent in the case of immigration from communities where wider kinship bonds are particularly strong. Permanent migration and tourism are linked and the link operates in both directions. When settlers depart from a source country to establish themselves in a new location, tourism may be stimulated through visits by friends and relatives themselves, and return by the settlers to their country of origin. These links were analysed in the Australian context in a study commissioned by the Bureau of Immigration and Population Research, which used immigration and tourism data as its key information source (Dwyer et al., 1993).

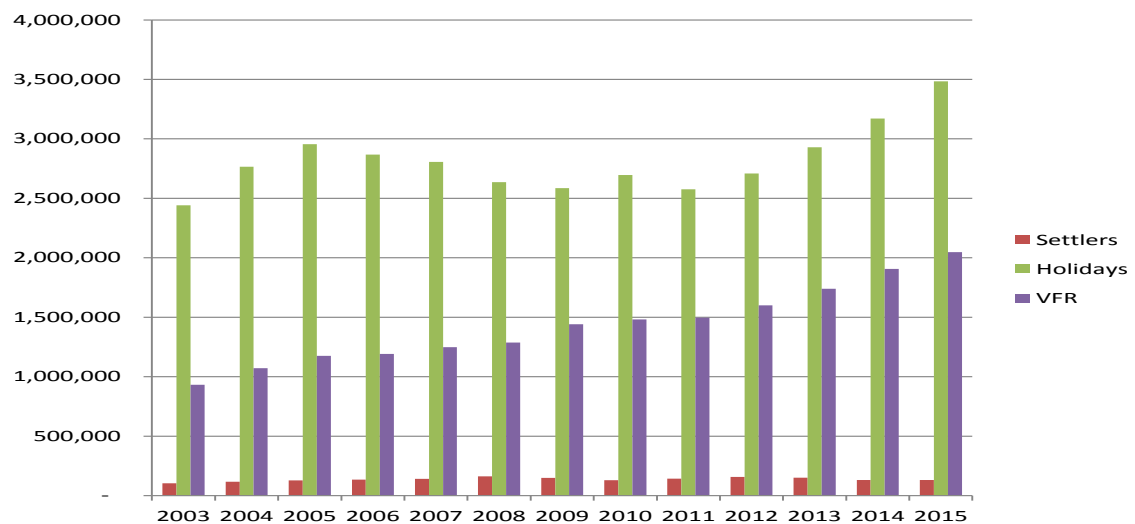
Changes to living standards may influence immigration and tourism activities in both the source country and the destination. Migration flows are influenced by fluctuating relativities in living standards, for example, migration from continental Europe to Australia was greatly diminished once European living standards rose to comparable or higher levels than those prevailing in Australia. The rising living standards and the emergence of an affluent middle class in the newly industrialising countries of North East Asia had increased the numbers able to afford to visit Australia as tourists or take advantage of the skilled migration category for the purposes of emigration. Empirical studies had identified the strong link between VFR traffic and migration. Whether it is domestic or international, migration is a precondition for VFR tourism, although the connection may be indirect when the sense of dependence is based on the migration behaviour of prior generations, (Dwyer et al., 1993, Dwyer, 2010, King, 1994, Williams and Hall, 2002).

Dwyer (2010) had acknowledged a strong relationship between VFR travel and migration and characterised travel for VFR purposes as a partial extension of chain migration. Boyne et al. (2002) had also argued that migration is a prerequisite for VFR tourism. Family reunion migration to Australia may stimulate VFR related travel, which then promotes further migration. Chain migration had created a pool of Australian residents who may stimulate tourist visits from their relatives and friends. Travel would seem most likely in cases where kinship bonds have been particularly strong.

Another form of the migration-tourist linkage has been described as 'transilient' migration. This type of migration activity are prevalent in cases where professionals and managers move internationally

for the purposes of career development (Richmond, 2002). Their period of residence in a particular location may constitute a short or medium term pause in their career. Most are in the category “skilled or business migrants”. Typically they receive a posting to a particular country and location, or respond to international advertisements for highly skilled personnel. The period of residence typically occurs over a two or three year period. Transient migration exhibits some characteristics of an extended form of tourism with an extraordinary average length of stay. Figure 2.7 compares proportions of holiday, Visiting Friends and Relatives (VFR) and Permanent Settlers to Australia.

Figure 2.8: Tourist Arrivals for Holiday, VFR versus Permanent Settlers to Australia



Source: ABS 2015

Figure 2.7 demonstrates that Australia had experienced net inward migration for the entire period under review (2003-2015) with more than 100,000 net immigrants consistently every year since 2003. As the number of permanent settlers accumulated throughout the entire review period, the number of holiday makers and visiting relatives had simultaneously been on an upward trend since. Visiting relatives’ figure exceeded 1 million since year 2004. In year 2009, a total of approximately 1.4 million tourist visited Australia were of VFR related.

A review of the literature validated that permanent migration and tourism are connected and that the links extend in both directions. Tourism has a close relationship with migration: tourism can generate permanent migration, and in turn, permanent migration can generate a demand for tourism, particularly for the purpose of visiting friends and relatives (Burnley et al., 1998, Dwyer et

al., 1993, Dwyer, 2010, King, 1994, Huong and King, 2002, Murphy and Watson, 1994 , O'Reilly, 2007, Wilson, 1998).

Since 1990 the relevant literature had progressively diversified and has started to provide a more holistic view of the relationships which connect tourism and diaspora (Coles and Timothy, 2002, Nguyen and King, 2002) and the role of production and consumption (Williams and Hall, 2002). These contributions provide invaluable contextual support for the emerging identification of tourism – migration links.

As it has increased in scale, migration to and from Australia has become increasingly complex, with greater flows of skilled migrants as well as refugees, students and even short term employment seekers (transient migrants). The diversity of migrant movements, (including an increased propensity for Australians to work overseas), has added to the complexity of the relationship between migration and tourism, both inbound and outbound(Coles and Timothy, 2002).

The complexity extends to the various motives for short-term travel (including visiting friends and relatives, leisure and business travel) and long-term migration. Though tourism and migration relationships were extensively documented in the earlier report, studies did not explore some of the complexities that have arisen over the past couple of decades. One obvious complexity has been the addition of new sources of migration including troubled areas and countries such as the Horn of Africa, Afghanistan and Iraq (Boyne et al., 2002).

Another complexity has been the rapid expansion of Australia's international student population. This trend was in its infancy during the early 1990s, but by 2010 Australia has emerged as a leading exporter of education services. At the time of writing, Australia is host to over half a million international students (589,860 international student enrolments in 2014) with a significant proportion of these students contemplating migration at the conclusion of their studies and some having come to Australia as students with a primary intention of attaining permanent residency. With students enrolled in programs ranging from a few weeks to several years their contribution to short term and longer term travel has been contested. It is however clear that this emerging trend is a vital element of Australia's relationship with emerging countries within the Asia-Pacific region and with the populous nations of China and India in particular (Hawthorne, 2010).

Whilst the earlier reports clearly indicated that there is a close relationship between migration and tourism, their comparative patterns and strengths have not been studied on a consistent basis over time. It had been difficult to track and explain the fluctuating trends over time and to be definitive about which determining factors were due to tourism or migration specific or involve a combination of factors relating to inbound and outbound tourism activities. One of the factors mentioned contributing to tourism was the reducing cost of travelling. These reduced costs may apply generally, whereas others may be more specific to countries where certain migrants have originated.

The earlier empirical studies had highlighted the different experiences and behaviours of migrant groups who had settled during different periods. In this analysis, it is suggested that we need to take into account of various new emerging migrant sources and the maturing of others. It appears likely that Asians, who have formed an increasing share of recent migrant intakes, are in a better position to stimulate more frequent travel activity because of their closer proximity to the country of origin. To date there has been little empirical investigation of the relationship between current migration and tourism in the case of earlier (e.g. from continental Europe) and more recent migrants.

Dwyer (1993) noticed that there appeared to be a link between outbound non VFR tourism and migration. In addition, there appears to be a strong link between inbound non VFR tourism – the link appears to be almost as strong as between migration and VFR tourism. The existence of a migrant culture might induce some non VFR travellers to explore countries that they are familiar with indirectly. Thus Australians may be interested in visiting Italy even though they have no connections via migration (and they might be less interested in visiting Spain, which is a country that has limited links to Australia via migration).

Tourism may also generate migration flows. Most obviously through the demand generated for labour which, if it cannot be met locally, will stimulate labour migration (Monk and Alexander, 1986). Such labour mobility may be differentiated by nationality, gender, ethnicity and skills, depending on the particular features of the tourism industry, and the local labour market (King et al., 1995). In addition, tourism may contribute to defining the search spaces of migrants (Brown and Moore, 1970), whether these are labour, life style or retirement migrants (Snepenger et al., 1995).

The links between tourism and migration are set to become more complicated in the future as changes occur in the nature of work, leisure and family organization. “Space” is being used in new and more imaginative ways for both production and consumption, and this often involves trans-

border movements and transactions which exploit place differences (Williams and Hall, 2000). One of the important consequences of the analysis of the relationship between tourism and migration is that it provides an opportunity for tourism researchers to relate to and contribute to the work of other social scientists.

Whilst studies conducted thus far on the relationship between tourism and migrations activities in Australia had been based on the perspective of VFR and Non VFR, this study intend to make specific reference to the “residential tourism” trend in Europe. Studies revealed that North Europeans had been migrating to Spain coastal towns in an increasing number since 1980s. This movement of migrations in Europe has provided a new perspective of migrations due to tourism related activities. Similar to Australia, Spain had been a country of net emigration since 1960’s.

Residential tourism is a term being used increasingly by estate agents, newspaper, academics and council officials in Spain (Aledo and Mazon, 2004, Casado-Diaz et al., 2004). It specifically refers to property ownership and short-term residence of North-Europeans in tourist areas, residence that falls short of full migrations.

Although it had always been difficult to disentangle migration and tourism in Europe, O'Reilly (2007) practical observations depicted direct resemblance of tourism-migrations pattern in Australia. Residential tourists’ definition specifically distinguishes them as an affluent group that enables them to turn tourism as a way of life and to construct fluid, leisure lifestyles between places. They are also being characterised as tourist who had ostensibly try to settle, they still remain in some ways outside or above the community they have moved to.

Some of the identified drivers that result in these residential tourists into Spain as noted by O'Reilly (2007) were globalisations, increased interconnectedness and the increased sense of the world as a single place; the development of mass tourism, in which more people visit more places than ever before, and now the travel, fluidity, flow and flux that arguably characterise modern life (Benson and O'Reilly, 2009, Urry and Larsen, 2011); the spread of mass communications, and time-space compression, rising living standards and unprecedented rises in property values in some parts of the world, especially relative to other parts; flexibility in labour markets, the ability to live and work in different places, and with these, increased leisure time in affluent societies, extended holidays, early retirement, and flexible working lives; and finally migration chains, in which, through the construction of networks, migration movements, once begun, become self-sustaining of social processes (Castles et al., 2005).

The residential tourist, being a more affluent group in Europe spent substantial amount of time in the host country throughout the year mainly for the purpose of a holiday. Many of them live on urbanizations (similar to Australia), concentrated developments of second homes and they share social spaces, newspapers, magazines, shops and even workplaces with the locals. These residential tourists were link to the residential property market of the host country in the manner that they invested in residential properties to obtain a higher return in terms of property prices improvement(Rodríguez and Bustillo, 2010).

In 2005, an international architect Jan Gehl pronounced that Melbourne was a success story in terms of liveability. Melbourne is a liveable, lively and vibrant city. Important changes had altered the nature of the central city and its daily life from almost exclusively a place of work, to a place of work, recreation and residence in almost equal measures (Gehl, 2004). Inner Melbourne had attracted new residential property development due to its amenities. The amenities had been enhanced by massive State Government and City of Melbourne (COM) investment in infrastructure including CityLink, Southern Cross Station, public places (Federation Square), parks (Birrarung Marr) and Melbourne city laneways. These investments were intended to enhance Melbourne's prospects of becoming a centre of knowledge intensive industries by enhancing the city's liveability. COM vision is to transform the Central Business Districts (CBD) and surrounds into an inviting mix for residence, work and entertainment (Birrell, 2013). According to Birrell (2013), the residential property boom in Melbourne was one of the bright spots in Melbourne economy. The State Government is keen to maintain the growth in property segment in the midst of a substantial slowdown in other economic sectors.

In 2015, Melbourne was again named the most liveable city for the fifth consecutive year by The Economist's (Lucas, 2015). Melbourne was ranked the world's most liveable city, Adelaide fifth, Sydney seventh, Perth eighth and Brisbane 18th. Australian cities were reported to be a relative picture of stability. 20% of the cities surveyed by The Economist's Intelligence Unit experienced declines in liveability over the past years. The rankings were the result of scores for "lifestyle challenges" in 140 cities worldwide. The report is used by multinational companies to decide on relative pay for employees when they move cities for work. Melbourne Lord Mayor, Robert Doyle proclaimed that the latest ranking proved a very important sale point for Melbourne in a very competitive tourism and education market.

The manner of which these “residential tourists” were defined allowed us to capture one of the main aspects of this research, i.e. to investigate the cross border property investments, led by the Mainland China Chinese, who had displayed similar “residential tourist” characteristics and invested in the residential properties in Australia major cities of Sydney and Melbourne. It is envisaged that this investigation will assist to address the market observations of the existence of some unknown and unusual factors contributing to the surge in housing demand in Australia in relation to foreign investors (CommonwealthBank, 2014). This study will also help to address the question of a surprisingly strong link between inbound non VFR tourism – in fact, the link appears to be almost as strong as between migration and VFR tourism (O'Reilly, 2007).

2.6.3 Educations and Migration

According to the Australian Department of Education and Training (DEAT) in year 2014 overseas students accounted for 25.3% of the total number of students registered in Australian higher education. An approximate 1.4 million domestic and international students enrolled at higher education institutions in 2014, represents an increase of 4.5% from 2013. There were approximately 1 million domestic students in 2014 (74.7 per cent of all students) compared to overseas student enrolments increased by 5.8% over the same period to 347,560. Australia has arguably become one of the most successful exporters of higher education. From 2014 to 2015, the number of Chinese nationals studying at Australian higher and vocational education institutions had increased from 150,893 to 170,212 students (DEAT, 2015). Table 2.4 details the top tertiary level student destinations in 2013:

Table 2.3: World Top International Student Destination 2013

Host Country	International Tertiary Student Enrolment	Global Share %
United States	842,384	19%
United Kingdom	428,724	10%
Australia	266,048	6%
France	235,123	5%
Russian Federation	213,347	5%
Germany	210,542	5%
Total		50%

Source: UNESCO 2015

Table 2.4 illustrates the ranking of the world leading education providers. In 2013 six destination countries hosted nearly half of all total international students in the survey. Australia was ranked

third, after United States and United Kingdom, with 266,048 international tertiary level student enrolments in year 2013. It is interesting to note that Australia was on the top spot when comparing the proportion of international students versus the domestic students. This implies that Australian colleges had the highest numbers of international students when compared to the rest of the world.

Empirical studies revealed that an increasingly significant element of visa policies concerns opportunities to work in the host country during and after the study period. Combined with the ageing populations of many developed countries, increased competition in the global recruitment market has contributed to student and graduate visa schemes becoming a central part of the recruitment efforts of many major study destinations. Various developments had shown that international student and graduate visa schemes are increasingly used as integral parts of recruitment strategies and are receiving more attention in accordance with their perceived importance and strategic value (Verbik and Lasanowski, 2007).

Between 1996 and 2000, 26% of Australian tertiary sector funding was removed in real terms following the election of a conservative government. Compensating for revenue reduction, universities accelerated their transition from "academy to global business," in part through increased recruitment of international students (Marginson and Considine, 2000). In 2002, 150,000 international students were enrolled in Australian courses - the majority being ethnic Chinese from Commonwealth-Asian countries, with substantial numbers attracted to two-step migration.

By the time of Australia's 2006 skilled migration review, former international students had a 99% chance of being selected, unless failing health or character checks surfaced. The scope for skilled migrations had also established new international student markets (primarily China and India), while transforming the sector and discipline of demand. Migration had also become critical to Australia's export education industry, with students by 2008 generating AUD26.7 billion per year (the third largest export), in a context where minimal growth was now evident from Australia's traditional Commonwealth-Asian source countries.

Contrary to the US who tightened international student and immigration policies subsequent to the 9/11 terrorist attack, Australia is perhaps the best example of a country using visa and immigration policies to become more attractive to international students. In addition to its points system encouraging skilled immigration, Australian regulations allow all international students completing an Australian degree to remain in the country for 18 months upon graduating. In the past,

international students were exempt from work experience requirements when applying for general skilled migration, but under legislation, introduced on 1 September 2007, authorities now provide “temporary visa mechanisms” to enable applicants to gain such experience. The changes had reportedly been made in an attempt to strengthen links between study, work experience and employment and to ensure skilled migrants had the skills for which Australia employers are looking (Citizenship, 2007).

Hawthorne (2010) exemplified a transition to what was termed “two-step migration” of which all former international students were allowed to remain in the country after completing an Australian degree under the General Skilled Migration Programme (GSM). Australia had developed unprecedented reliance on these skilled migrants, a process intensified by a period of sustained economic boom. International students who completed their higher education studies had since become a major source of skilled migrants in Australia.

By 2010 Australia had emerged as a leading exporter of education services. Australia was host to over half a million international students, with a significant proportion of these students contemplating migration at the conclusion of their studies and some having come to Australia as students with a primary intention of attaining permanent residency. With students enrolled in programs ranging from a few weeks to several years, their contribution to short term and longer term travel has been apparent. It is clear that this emerging trend is a vital element of Australia’s relationship with emerging countries within the Asia-Pacific region and with the populous nations of China and India in particular (Dwyer, 2010).

A review of empirical studies uncovered that as immigration activities increased in scale, migration to and from Australia had become increasingly complex. There were evidences that migration had geared towards greater diversity with greater flows of skilled migrants as well as refugees, students and even short term employment seekers (transient migrants). The new emerging trend of private wealth from Asia Pacific had further introduced a new dimension to this complexity. These diversity of migrant movements, specific reference is made to the increased tendency of graduates in Australia took up permanent residency status in Australia, had added to the complexity in the studies of various attributes contributing towards the inward migration in Australia. The unique characteristics of private wealth laying great emphasis on lifestyle, preservation of wealth and education for their next generations had introduced a new relationship between education and their investment activities. Along with their intension of wealth preservations, many HNWI and/or

the global middle class had sent their children overseas for further education with the ultimate intention of migrating. It is believed that this distinct requirement had resulted in many HNWI's and/or global middle class investing in the residential property markets either for owner occupying or wealth preservation purposes. Although much was deliberated on the relationship between education and migration activities, there was no specific study conducted on how education in Australia is influencing the residential properties performance in the context of private wealth investment activities in Australia. This study intends to investigate this new relationship.

2.7 Summary & Implications

Review of the relevant literature has revealed that substantive economic theories and empirical evidence underpin the conjectured relationship between FREI and the host country's real estate market performance. The review established the emergence of real estate as an important asset class of international investments. Australian real estate market is one of the asset classes that overseas investors are interested in given a favourable set of governing economic policies that are expected to maximize investors' wealth in the long run. In this aspect, the review of literature confirms the established relationship connecting migrations, population, education, tourism and property market performance in Australia.

Despite there being international agreement, it appears that this conjectured relationship was not adequately tested in the recent Australian residential property market and from the literature, there appeared to be a number of gaps (refer to Figure 2.5.1) warrant further exploration.

Table 2.4: **Literature Gap Summary**

Gap 1	Reviews to date show that there is few empirical studies revealing the overseas investments in Australian residential properties for the purpose other than owner occupying.
Gap 2	Reviews to date show that there was no empirical evidence on the rationale for overseas investors defying the normal risk averse investment strategies and allocating money into Australian real estate markets
Gap 3	Reviews to date show that there were no empirical studies on the impacts derived from the various new migration trends in terms of residential tourist and subscriber of education stemming from the emergence of new Chinese private wealth on residential properties in

Melbourne and Sydney

Gap 4 There is apparent limited information on both quality data and literature pertaining to foreign real estate investment in residential property market in Australia's metropolitan areas.

It is these gaps that have formed the foundation of the research questions for this study, which are:

1. What were the rationales for offshore investors defying the normal risk averse investment strategies and allocating money into Australian residential property market?
2. What are the determinants driving offshore investors to buy into the residential property market in Australian major cities like Melbourne beside the conventional financial and economic factors?
3. Do the non-traditional determinants identified as Residential Tourism and Education play a part in attracting offshore investments into Australian residential property market and if yes, were they significant determinants?

The conceptual framework that will guide the study has been developed from the literature review. It will focus on the relationship between Melbourne's residential property market and the FREI.

Four objectives have been developed from both the research questions and the identified gaps. These research objectives are documented below:

- i. **To identify the major determinants, both historical and emerging, in the Australian residential property market for the past decade.** How had the offshore property investment patterns shaped the overall residential property market in Australia in the past and the present, making specific reference to Melbourne?
- ii. **To explore the fundamentals of foreign cross-border real estate investment and the related influential government policies onshore and offshore.** Who are these foreign Investors? Are they mainly the migrants into Australia who are buying properties for own residential purposes or are they foreign investors acquiring properties as part of their investment portfolio? What drove them to acquire properties overseas?
- iii. **To identify and design assessment models that facilitates the research execution and analysis.** It is envisaged that a new research model allowing a more comprehensive review and tackling the complexity of how both overseas and local Government policies impacting the host country's real estate market is crucial.

- iv. **To reveal the dynamics of Overseas Real Estate Investments in Australia and the significance of these offshore investments shaping the local housing market.** Assessing the past and present, what are the different characteristics between these Offshore Investors as against the migrants when it comes to the aspect of buying residential properties in Australia? Do they buy based on a single location or do they hold a portfolio of properties / instruments on a regional basis?
- v. **To reveal the key government policies, both onshore and offshore, that had driven foreign investors into Australian residential property market.** Literature revealed that government policies of foreign nations were correspondingly instrumental in the decision making process of foreign investors. Study on foreign investments in the host country would have been more comprehensive if the research on key government policies of the foreign nation that drove its citizens pouring money overseas is incorporated.

Chapter Three: Research Design and Methodology

3.1. Introduction

The main objective of this chapter is to design appropriate research methodologies to allow for an effective assessment of the association and strength that various dynamics, drivers and new determinants have on Melbourne metropolitan house prices and two Melbourne selected suburbs. This explanatory study intends to utilise both quantitative and qualitative research methodologies and should be therefore considered mixed in research conducts (Amaratunga et al., 2002). The mixed methodologies shall form the study platform for this research assessing the strength of various long term determinants on house prices in Melbourne.

Based on the “Pull and Push” model established in this paper, this explanatory study will first evaluate the correlations and significance of 15 leading Australian economic indicators specifically from the respective Space, Property and Capital markets. Both historical secondary data and data collected in the qualitative research phase will be utilised to assess their respective impacts and influence over the Melbourne housing performance. Along with the evaluation of traditional determinants, two non-traditional determinants from the Space Market namely Education and Residential Tourism shall be introduced with detailed analysis on their impacts on Melbourne house prices utilising the model and planned methodologies.

The explanatory study and analysis was expanded to assess the correlations between various Chinese leading economic indicators and the performance of the house prices in the selected Melbourne residential property markets. The objective of this investigation is to establish if overseas economic indicators, especially from a significant offshore investor in Australia like China, had emerged as influencing determinants on the Australian residential market conditions.

This Chapter has 8 sections. Subsequent to Section 3.1 introduction, Section 3.2 outlines the research design, research approaches and the modelling design. Section 3.3 presents the detailed methodologies based upon in this research to ensure consistency and adequate coverage/analysis of important traditional and non-traditional factors. Section 3.4 depicts the data collection strategies and 3.5 details the associated sampling techniques. Section 3.6 details the quantitative research approaches utilised to assess the determinants of house prices in Melbourne whilst Section 3.7 presents the qualitative research steps. Section 3.8 summarizes the entire research design and approaches.

3.2. Research Design

3.2.1. Research Approaches

The findings from the Introduction (Chapter One) and Literature Review (Chapter Two) have shown that there is a need to reassess the complex Australian residential property market with regard to existing and emerging determinants that had potentially influenced or directly impacted the performance of the Australian residential property market. The normal investment theory and law of demand and supply was perceived inadequate to confirm the reasons of offshore investors' preference in Australian residential properties over other parts of the world. The existence of some unknown and emerging factors had contributed to the surge in housing demand in Australia with specific reference made to the foreign investors. Limited dated information was quoted as a hindrance when the research was conducted. A more extensive research into these unknown factors causing the surge of housing demand in Australia cities has become important to the Australian property industry (Commonwealth Bank, 2014).

The nature of this research has necessitated a study confronting the emerging factors of market determinants on Australian residential property market. It is important to examine this research's objective with the corresponding research design plans and undertakings to ensure effectiveness of the study. Table 3.1 depicts the research objectives and the associated research approaches:

Table 3.1 Research Objectives and Approaches

	• Research Objectives	Approaches
I	• To identify the major determinants, both historical and emerging, in the Australian residential property market	Stage One: <i>Introduction</i> <i>Literature Review</i>
II	• To explore the fundamentals of foreign cross-border real estate investment and the related influential government policies, both onshore and offshore	Stage Two: <i>Modelling</i>
	• To identify and design assessment models that facilitates the research execution and analysis	
III	• To reveal the dynamics of Overseas Real Estate Investments in Australia and the significance of these offshore investments shaping the local housing market	Stage Three: <i>Quantitative Analysis of Secondary Data</i>
	• To validate and provide insights on the relationship and validity the new market determinants have on Australian residential property markets	Stage Four: <i>Qualitative Analysis of</i>

IV	<ul style="list-style-type: none"> To reveal the key government policies, both onshore and offshore, that had driven foreign investors into Australian residential property market. 	Structured Interviews Data
V	<ul style="list-style-type: none"> Research outcomes discussion and conclusion 	Stage Five: Discussion and Implementation

Table 3.1 exhibited the key stages of this research to be executed to attain the 5 defined research objectives. Various new developments in Australian residential property market, the fundamentals of offshore investments and the traditional factors that resulted in overseas investment in the host country property market were identified in Stage One, Introduction and Literature Review. In Stage two, property market models were reviewed in an effort to develop a research model to facilitate an effective research conduct. Stage Three involved using Pearson Correlation Coefficient and Stepwise Regression Time Series methodologies to analyse secondary data collected. Qualitative (text) data was collected and analysed in Stage Four of the research to help explain, or elaborate on, the quantitative results obtained in the third phase (Creswell and Clark, 2007). The final research outcomes are tabulated and implemented at Stage 5. Figure 3.1 presents a step by step diagrammatic perspective of a research design model for this study:

Figure 3.1: **Research Design Model**

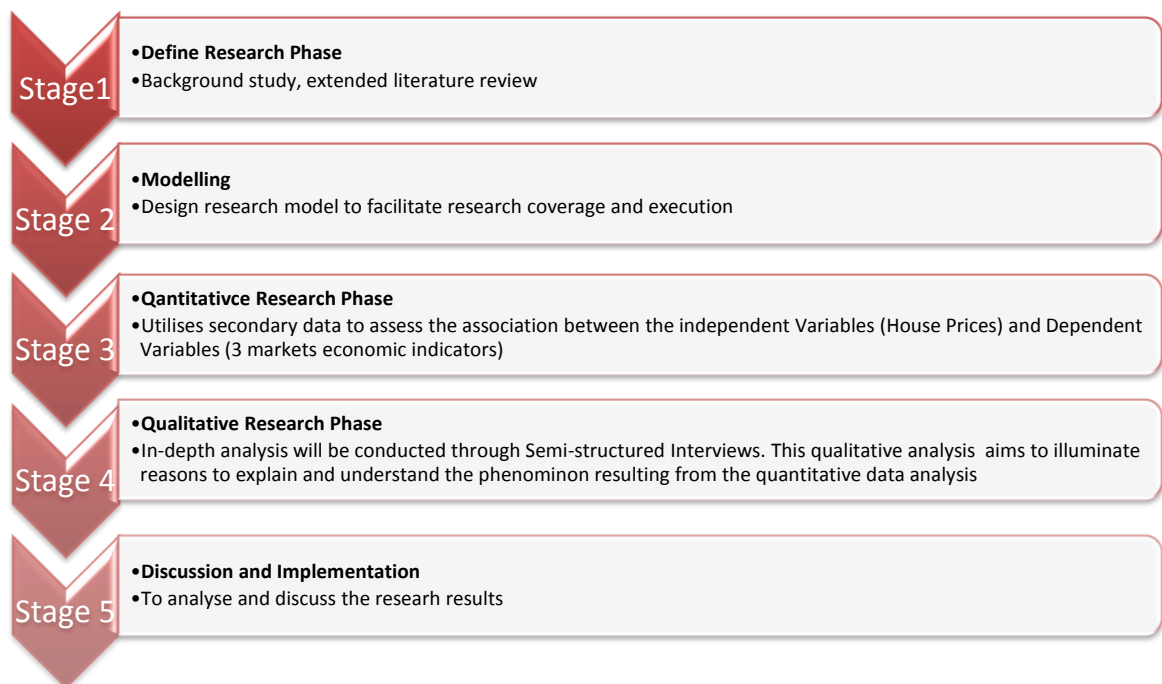


Figure 3.1 illustrates the five research stages for the attainment of the five research objectives and the research approaches that guides the entire research execution. The strategy behind the research model was to first perform a background study of the subject matter through the literature review to identify the foreign investment fundamentals and theories behind foreign investments in Australian residential property market. A research model was established in Stage Two, based on the findings from Stage One, to allow for guided parameters and systematic execution plans for the entire research exercise. New and unknown determinants that resulted in the surge in foreign investments in Australian residential property markets shall be analysed thoroughly using mixed-method research analysis in Stage Three and Four.

3.2.2. The Model

While quantitative correlation analysis can determine the relationship of individual economic variables to the house prices, it tends to overlook that most factors interact simultaneously with varying intensity and at different time periods to the house prices (Higgins, 2000). As depicted in Chapter Two section 2.3.2 instead of merely based upon space (demand) and property markets (supply) in both short and long run, this study intends to utilise the Higgins (2010) research model, adapted from the Archer and Ling (1997) model, by separating specific property investment (Property Market) and funding risk components (Space Market) from the general capital market (Capital Market) in the assessment of historical and emerging determinants. Review of the literature underlined the importance of combining these influences into the model to address the fundamental interactions and relationships between all the determinants. Foreseeing the potential risk in the research with complicated multiple economic indicators and emerging determinants blended together to form a forecasting model, this research intends to rely extensively on a comprehensive research model to provide a systematic research platform. The Higgins (2010) model is used as the first platform to build economic models which will demonstrate the best inter-relationship of separate economic variables to house prices and on the selected relevant lagged economic indicators of acceptable significance. Once the foundation for local determinant research is established, offshore elements and influences will be systematically built into the research modelling.

Moshirian and Pham (2000) exploited determinants of US investments in real estate abroad based on FDI model, by comparing FDI in real estate as a subset of FDI in general. They included specific explanatory variables such as financial wealth, return from the US stock market, US financial liabilities, bilateral trade and economic growth. They had validated the FDI platform for the exemplifications on other relevant explanatory variables. In his studies, all the specific explanatory

variables listed above were the determinants of US investments in real estate abroad or foreign real estate investments overseas. As Moshirian and Pham (1999) noted, the majority of research found that diversification by location would more likely produce benefits in the markets that were not perfectly correlated, although there was a degree of variability depending upon the countries being examined.

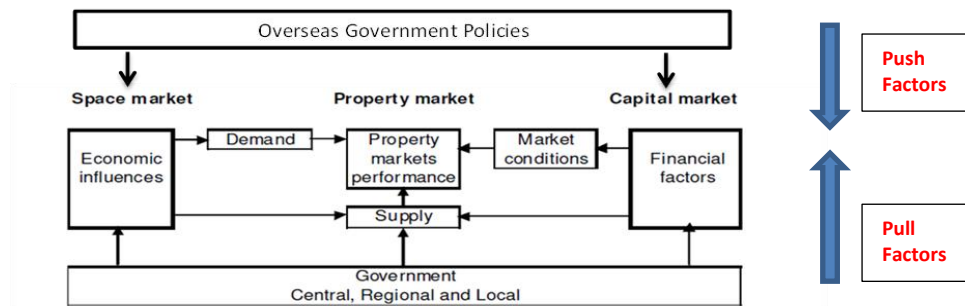
Following the review on various studies conducted specifically on FDI investments abroad, it is conclusive that equal importance, if not more, should be placed on the investigations on the source of FDI in determining the factors affecting FDI in the host country. Studies by Cushman (1987), and Froot et al. (1991) have identified exchange rates as the main determinant for FDI abroad. Nigh (1986) advocated that the size of the share market in the host country is the most significant factor for FDI abroad. Frey et al. (1985) concluded that the balance of payment was the most significant determinant of FDI abroad.

Furthermore, studies by Culem (1988) advocated that the host market size, the market growth rate, unit labour cost, trade flows and economies of scale are the determinants of FDI abroad. With regard to studies on FDI in the banking industry abroad, Goldberg and Johnson (1990) suggested that the cost of capital, market size, exchange rate, economic growth and trade were the major determinants of FDI in banking.

The review of literature resulted in a new research model and has been proposed in this study to facilitate a systematic research conduct. It is envisaged that studies on FDI in the host country will be more comprehensive if research efforts are simultaneously channelled to assess the impact on investor's decision making of the source countries' economic and financial policies.

Based on the essential fundamentals of Higgins (2010) model, Figure 3.2.4 illustrates the proposed "Push & Pull" model accomodating an additional assessment approach through incorporating source country's factors and their respective impacts on Space and Financial markets:

Figure 3.2: **Property Market Structure: The “Push & Pull” Model**



Source: Author

Figure 3.2 illustrates an added component of ‘Offshore Government Policies’ (of the country from which the offshore investors originated) and how those policies’ impacts and influences over the Space and Capital markets of the host country have been incorporated in the “Push & Pull” model. It is believed that the resultant economic outcomes of the offshore Government policies will affect meaningfully the foreign investment outflow from the source country and emerge as significant influences over the Space and Capital market of the host country. “Property Market” supply conditions are very much associated with the policy implementation of local Government agencies or in other words, not necessarily correlated to offshore government policies. As a result the offshore Government policies assessment will be centred mostly at Space and Capital market determinants. The “Push & Pull” model provides an additional platform of assessment for various determinants on foreign investments into the host country for this study.

In this study, China’s leading economic indicators that could have influenced Chinese offshore real estate investors’ choices and decision making will be explored. It is envisaged that this new model can facilitate an organised and systematic approach to investigate potential drivers of offshore property investments in host countries. It would also provide a practical platform for the review on how foreign investors were impacting the residential property market performance in Australia.

3.3. Methodologies

Only by the use of appropriate research methodologies can the body of knowledge for the Built Environment (BE) be established and advanced with confidence (Amaratunga et al., 2002). There had been strong suggestions within the research community that both quantitative and qualitative

research are best thought of as complementary and should therefore be considered mixed in research conducts.

Teddlie and Tashakkori (2009) publication of the Handbook of Mixed Methods in the Social & Behavioural Sciences, tabulated approximately 40 types of mixed method designs spanning from the health to education research fields. Creswell and Clark (2007) consolidated known mixed method designs into four major typologies: triangulation, embedded, explanatory, and exploratory designs. Table 3.2 provides a brief summary of the four mixed methods designs.

Table 3.2: **Mixed Methods Typologies: Design Type, Variants and Notations**

Design Type	Variants	Notation
Triangulation	Convergence	QUAN + QUAL
Embedded	Experimental/Correlational	QUAN(qual) or QUAL(quant)
Explanatory	Follow-up explanaton	QUAN --> qual
Exploratory	Instrument development Taxonomy development	QUAL --> quan

Source: Creswell and Clark 2007; Teddlie & Tashakkori 2009

Table 3.2 summarises that in mixed methods research, qualitative and quantitative data may be equally weighted (QUAL+QUAN), or one may be emphasised over another (example QUAL→ quan). The '+' symbol denotes both quantitative and qualitative data are collected at the same time. The symbol '→' indicates a sequential form of data collection. The capitalised notation (for example, 'QUAN') denotes a weight or priority to one method over another.

Triangulation design allows the researcher to simultaneously collect both quantitative and qualitative data, merge that data, and use the results to understand a research problem. The design takes the weakness of quantitative research (generalisation), and complements it with the strengths of qualitative research (emerging design). Embedded design is where the research has primarily focused on one type of data, supported by the other type of data. Put simply, researchers insert a qualitative component within a quantitative design. Edmonds and Kennedy (2012) explained that with mixed methods designs, the timing of the strand is relevant; that is, whether it is implemented concurrently, sequentially, nested (embedded), or multilayered. Therefore, each of the four mixed

methods designs identified in Table 3.2 has several multi-strands (or sub-designs); for example, parallel mixed designs, sequential mixed designs, conversion mixed designs, multilevel mixed designs, and fully integrated mixed designs. The type of multi-strand design used in this research study is sequential mixed design. Ivankova et al. (2006) explained that sequential studies occur in chronological order, with one strand emerging from, or following, the other.

Before suggesting an appropriate research approach in this study, it is useful to explore and understand the fundamentals of these research methodologies and to put them into perspective. Table 3.3 below summarises the fundamentals of these research methodologies:

Table 3.3: **Fundamentals of Various Mixed Methods**

Fundamentals	
Triangulation Design	<ul style="list-style-type: none"> • Researcher simultaneously collects both quantitative and qualitative data, merges those data, and uses the results to understand a research problem. • The design complements the weakness of quantitative research (generalisation), with strengths of qualitative research (emerging design).
Embedded design	<ul style="list-style-type: none"> • Researcher incorporates a qualitative research component within a quantitative design. • Researcher focuses on one type of data (QUAN) and seeks to gather support from the other type of data (QUAL).
Explanatory design	<ul style="list-style-type: none"> • Researcher conducts the mixed method in two distinct phases • Research uses qualitative data to help explain and support the initial quantitative results.
Exploratory design	<ul style="list-style-type: none"> • Researcher conducts the mixed method in two distinct phases • As opposed to Explanatory design, the qualitative results are obtained first, followed by quantitative data that informs the qualitative data

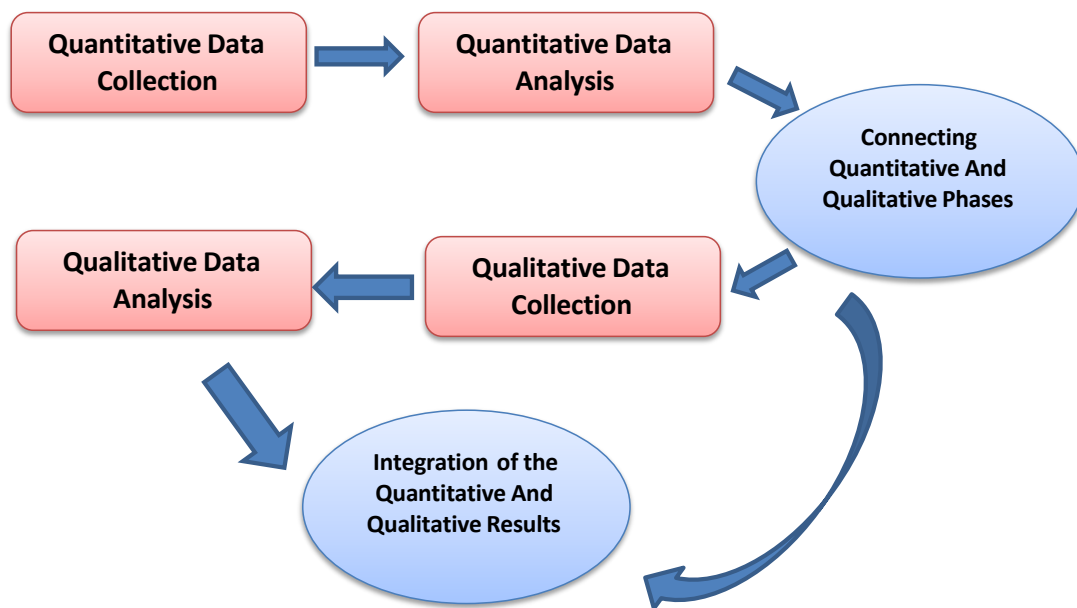
Source: Amaratunga, 2002; Creswell, 2007; Teddlie, 2009

The strengths and weaknesses of this mixed-methods design had been widely discussed in the literature (Creswell et al., 1996, Creswell and Clark, 2007, Greene, 2008, Green and Caracelli, 1997, Moghaddam et al., 2003). Its advantages include straightforwardness and opportunities for the exploration of the quantitative results in more detail. This design can be especially useful when unexpected results arise from a quantitative study (Morse, 1991). The limitations of this design are the time required and feasibility of resources to collect and analyse both types of data.

The mixed-methods sequential explanatory design consists of two distinct phases: quantitative followed by qualitative (Creswell et al., 2003). The explanatory mixed methods design features the merit of the qualitative data which will help explain initial quantitative results and provide an in-

depth perspective of research. The exploratory design is similar to the explanatory design in that it is also a two-phase method in which qualitative results are obtained first, followed by quantitative data that informs the qualitative data (Creswell and Clark, 2007, Teddlie and Tashakkori, 2009). Figure 3.3 illustrates the sequential explanatory design framework:

Figure 3.3: **QUAN → QUAL Sequential Explanatory Research Design**



Adpated: Ivankova 2006

In this design, a researcher first collects and analyses the quantitative (numeric) data. The qualitative (text) data are collected and analysed second in the sequence and help explain, or elaborate, the quantitative results obtained in the first phase.

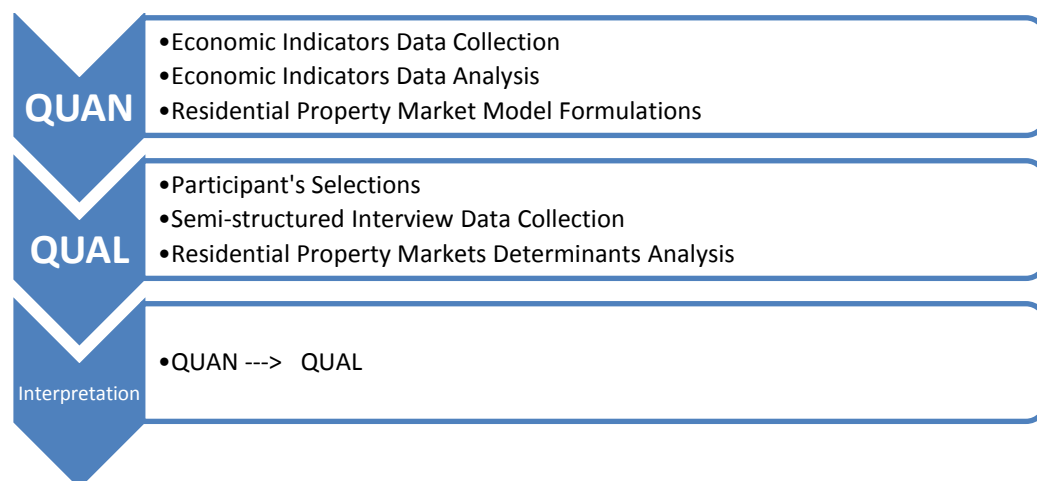
Given the nature of investigation in this research – the residential property markets modelling phase (quantitative) followed by semi-structured interview (qualitative) - this research was classified within the ‘sequential explanatory’ mixed methods design. This study prioritised the QUAL over QUAN phase, not in the manner of the research conduct but in terms of the research results interpretation. The second qualitative phase builds on the first quantitative phase and the two phases are connected in the intermediate stage in the study (Ivankova, 2006).

The rationale for this approach is that the quantitative data and their subsequent analysis provide a general understanding of the research problem. The qualitative data and their analysis refine and explain those statistical results by exploring participants’ views in more depth (Creswell et al., 2003,

Rossman and Wilson, 1985, Teddlie and Tashakkori, 2009). The reason for collecting the quantitative data first is to identify the respective leading economic indicators and new determinants that impacted the Australian residential property market. Once the significant correlated economic indicators and determinants were identified, they formed the pillars for the subsequent qualitative investigation to help explain, or elaborate on, the quantitative results obtained in the first phase.

Various leading economic indicators including both the traditional factors (for example: Currency Exchange rate) and the non-traditional indicators (for example: Tourist Arrivals Data) were collected and analysed in the first phase of research. These 'QUAN' data were analysed to assess the relationship between residential property prices and all the selected indicators. The finding of this 'QUAN' research phase provides the much needed rationales and direction for the subsequent selections of participants (QUAL) and structured interviews questionnaires. The second phase qualitative data analysis assists in identifying the theory on overseas investors' property asset allocation strategies and decision-making processes. Figure 3.4 outlines the proposed explanatory research design framework that will be utilized in the investigation of Australian residential property markets:

Figure 3.4: **Proposed Research Approach: Explanatory Design – Participant Selection Model**



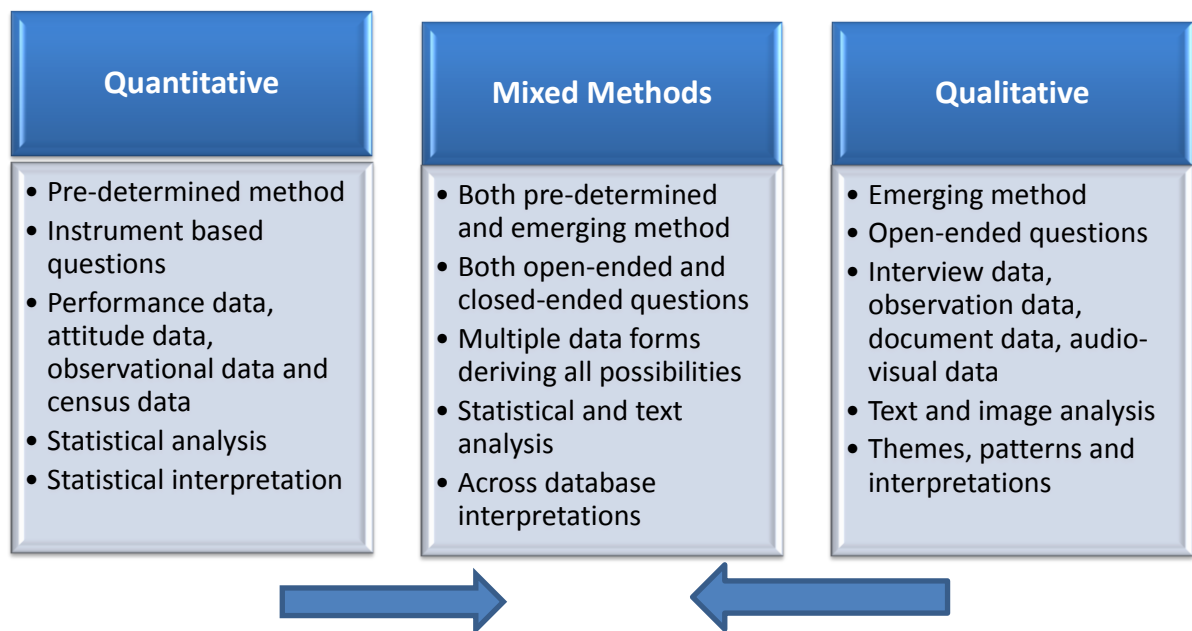
Source: Author

As shown in Figure 3.4, this study will place emphasis on the QUAL results over the QUAN results interpretation. Having established the type of mixed method research design and due to the size and characteristics of the Australian residential property market, local house prices driven by specific determinants shall be determined.

3.4. Data Collections Strategy

Mixed methods research methodology addresses both the quantitative and qualitative research (Creswell and Clark, 2007, Ivankova, 2006). Quantitative researchers use specific analysis techniques to address specific research questions. The research questions in the quantitative study are directional because they state either a relationship between two or more independent variables with the dependant variables or a comparison between the two variable groups. Qualitative research tends to be broad and allows the study to take shape as data is collected. Qualitative research normally incorporates open-ended questions that are designed to elicit answers to a wide range of possibilities including the 'how', 'what', 'who' and 'where' of a particular situation. Qualitative research has the characteristic of being non-restrictive in terms of where the research or information might lead eventually. Figure 3.5 demonstrates the typical Mixed Methods data collection strategies and the related analysis and interpretation framework.

Figure 3.5: **Mixed Methods Data Collection Strategies**



Source: Creswell 2009

Figure 3.5 illustrates the different research approaches of quantitative, qualitative and mixed methods research methodologies in terms of both data collections and analysis. Quantitative research designs can accommodate a single or multiple combination of descriptive, correlational, quasi-experimental and experimental. Qualitative designs can include a combination of biography, ethnography, oral

history, phenomenological, case study and grounded theory. The choice of the data collection and eventually interpretation strategy is a foundation of research, past and present events with the desired degree of control events embedded. Data collection strategies are distinctly different relating to open-ended versus closed-ended responses. However some data collected from surveys and interviews might be categorized into either quantitative or qualitative. The researcher is to rely on the design of response options made available in the questionnaires to determine if they are open-ended or closed-ended (Creswell and Clark, 2007). Table 3.4 depicts Yin (2013) categorization of research data collection strategies and their characteristics:

Table 3.4 Research Data Collection Strategies and Characteristics

Strategy	Research Questions	Requires control over events?	Contemporary events focus?
Experiment	How, why?	Yes	Yes
Survey	How, why, who, what, where, how many, how much?	No	Yes
Archival Analysis	How, why?	No	Yes/No
History	How, why?	No	No
Case Study	How, why?	No	Yes

Source: Yin (2009)

Table 3.4 illustrates the various categories of research data collection strategies with the related questionnaire designs and the degree of control over the events required for each of the strategies. The research questions design in the explanatory methods need archival analysis and survey to derive the research outcomes. This method does not require control over the behavioural events but there will be a greater focus on contemporary events. Based on the intended mixed method explanatory design for this research, the data collection strategy will be focusing on 'how', 'why', 'who' and 'where' questions using a survey and history strategy. The quantitative phase of this study will strive to solicit background theories of how and what factors drive overseas investors into Australia's residential property market. With these research results, the qualitative phase shall support and validate the determinants of overseas investments in Australia's residential property market. In a sequential phase research methodology, the second phase questions will be developed subsequent to the first phase's research outcomes and elaborate on the results (Creswell and Clark, 2007, Ivankova, 2006).

3.5. Sampling Techniques

Inferential Statistics deals with methods of estimating population parameters using sample data. A population is the larger group from which a researcher infers to form results using a smaller data set called the sample data. In this thesis, the population is the Australian residential property market and the sample is house prices in Melbourne Metropolitan and two selected suburbs.

A researcher's confidence in their ability to infer what's happening in the population comes down to the quality of the sample and quality of the data collected. A sample is a smaller subset of a population. If the sample is chosen appropriately, it can provide an accurate estimate of the population. Cost, time and practical constraints were cited as reasons why measuring the population was practically impossible. For example, The Australian Bureau of Statistics (ABS) conducts the Australian census that measures the entire resident population. It cost in excess of AUD400 million in 2011 (ABS, 2011).

Quantitative data collection strategies often involve random sampling. Random sampling allows every element or person in a population has an equal chance of being selected. It is believed that this probability based method will maximise the chances of gathering a representative sample (Lohr, 2009). On the contrary, qualitative data collection strategies mostly involve purposeful sampling. Elements or persons selected in the research will be based on their experience of the central event. In a mixed methods design, both purposive (qualitative research) and probability (quantitative research) sampling techniques are involved in the manner of observations (structured/unstructured), interviews (open-ended/closed-ended), focus group and questionnaires (Teddlie and Tashakkori, 2009).

According to Teddlie and Yu (2007) and Bryman (2006), the mixed methods sampling can be categorised according to Table 3.5:

Table 3.5: **Mixed Methods Sampling Methods**

Sampling Methods	
Basic Mixed Method Sampling	The researcher first divides the group of interest into strata (e.g., above average, average, below average students) and then selects a small number of cases to study intensively within each strata based on purposive sampling techniques; a "samples within sample" technique
Sequential	Sampling from the first phase 'informs' the second phase or the

Sampling	methodology and results from the first strand inform the methodology employed in the second strand. Purposive sampling followed by probability sampling
Concurrent Mixed Method	Concurrent MM designs allow researchers to triangulate the results from the separate QUAN and QUAL components of their research, thereby allowing them to “confirm, cross-validate, or corroborate findings within a single study”. Both purposive and probability sampling procedures are executed simultaneously
Multi-level sampling	Different units of analysis are “nested within one another” and sampling occurs in two or more levels of units of analysis. Probability and purposive sampling techniques are used at different levels

Within the scope of this research, sequential sampling mixed method is applied in which probability sampling is followed by purposive sampling technique. The quantitative phase of this study incorporated probability samplings characterized by econometric equations and formulas. The result of the analysis of the samples, gathered through probability technique, shall form the background theories of how and what factors that drives overseas investors into Melbourne residential property market.

On the contrary, a non-random and non-probability sampling technique shall be applied in the subsequent qualitative research phase. This study will rely substantially on expert opinions that form the sample data in search of the impact of new drivers in Melbourne’s residential property market. Judgemental decisions of the researcher with regard to whom and which profession can provide the best information to achieve the objective of the study represent the key feature of this research phase (Teddle and Yu, 2007). Only a selected group of Australian property professionals, consultants and researchers will be targeted as interviewees for the study. The selection of interviewees shall be based upon their involvement in the residential property industry and seniority in their respective organization decision making process. In this sequential phase research methodology, the second phase questions will be developed subsequent to the first phase’s research outcomes and elaborates in-depth the results interpreted (Creswell and Clark, 2007, Ivankova, 2006). The qualitative phase shall support and validate the determinants of overseas

investments in Australia residential property market. Teddlie and Tashakkori (2009) assert that there are no rules for sample sizes in qualitative studies and typically purposive samples are small. In this study, the sample size is of 15 to 20 participants aligned with grounded theory being the backbone of the research design. The participants comprise of a crossed sectional range of experts from both the overseas (China) property market and the local (Melbourne) property market.

3.6. Stage 1 - Quantitative Research

3.6.1. Data Sources

The Teddlie and Tashakkori (2009) assertion of an 'unobtrusive measure' is terminology commonly used for secondary data collection that includes written public records, written private records and archived databases. The key advantages of using unobtrusive measures is that it allows the research to gather data and report it in the original format, compared to the self-reported measures such as questionnaires and interviews. Data collected through questionnaires and interviews has the inherent weakness of being exposed to the possibility of inaccuracy bias with the responses potentially being skewed. Logically unobtrusive measures have inherent problems. The data series collected might be incomplete due to the reporting and recording being selective in nature.

The quantitative analysis phase in this research involves unobtrusive measures and data sources of public records or archived databases from Australia and overseas to enable an objective modelling of Australia's residential property market. In this study, public records from China will be relied upon as data sources from overseas. The subsequent sections involve discussion on various public records and archived databases used to form the key data sources utilised this study. The residential property performance data is from the following sources:

Real Estate Institute of Victoria (REIV) is the peak professional body for the Victorian real estate agency industry with a current membership of over 2,000 real estate agencies in Victoria. These members specialise in residential sales, commercial and industrial sales, auctions, business broking, buyers, agency, property management, owners' corporation management and valuation. This section constitutes the second phase of the study and involves the construct of a quarterly house price dataset for the selected suburbs with access to Real Estate Institute of Victoria (REIV) data base. The REIV gathers most of its data online from agents submitting their sales results electronically plus a dedicated call centre to collect property sales results at the time of contract. Table 3.6 illustrates the various public records and archived databases that form the data sources of various independent variables used for this study:

Table 3.6: Data Sources – Leading Economic indicators

<u>Independent Variables - Australia</u>	
I Space Market	
	Data Source
1 GDP per capita	ABS5206
2 Total Employed Labor Force	ABS6202
3 Population growth	ABS3101
4 Net Saving - Current Prices	ABS5232(Table 32)
5 Net Overseas Migration	ABS3101(Table 1)
II Capital Market	
	Data Source
1 10-year bank bonds	RBA F2.1 Cap Mkt Yields-Govn Bonds
2 ASX 200 Index	Yahoo Finance
3 Exchange Rate	RBA Bulletin F11 Exchange Rate
4 Mortgage Rates	RBA Bulletin F5 Indicator lending rate
5 90-day bank bills	RBA Bulletin
III Property Market	
	Data Source
1 New Housing Supply	ABS 8752 Dwellings Units Completed(Vic)
2 Building Planning Approvals	ABS 8731 Building Approvals(Vic)
3 Rent Growth	ABS 6401 CPI(Melbourne)
4 House Price Index	ABS 6401 House Price Index(Mel)
5 Building Activity-Value of Building Work done(Residential Vic)	ABS8752

The economic data is collected from the following sources:

The Australian Bureau of Statistics (ABS) collects and publishes Australian macroeconomic data and conducts the Australian census every five years at an estimated cost in excess of AUD300million. The ABS Data Quality Framework is internationally recognised and is based on the Statistics Canada Quality Assurance Framework and the European Statistics Code of Practice.

The Reserve Bank of Australia is Australia's central bank and derives its functions and powers from the Reserve Bank Act 1959. Its main role involves the conduct of the nation's monetary policy and issues its currency. Its duty is to contribute to the stability of the currency, full employment, and the economic prosperity and welfare of the Australian people. It does this by setting the cash rate to meet an agreed medium-term inflation target, working to maintain a strong financial system and efficient payments system, and issuing the nation's banknotes. Additionally, it manages Australia's gold and foreign exchange reserves. RBA Bulletin is a quarterly publication by the Reserve Bank of Australia which contains feature articles and speeches and statistical releases relating to key data produced by the Bank. These releases are among the outputs of the Bank that are reported in 'Latest News' on the RBA website homepage.

Yahoo Finance is media publishing that forms part of Yahoo!'s network. It provides financial news, data and commentary including stock quotes, press releases and financial reports. According to third-party web analytics provider Moses (2015), the website has over 52.3 million unique visits per month and is ranked first among Finance and Investing sites.

The **Australian Department of Education** is a department of the Government of Australia charged with the responsibility for national policies and programs to help Australians access quality and affordable childcare; early childhood education, school education, post-school, higher education, international education and academic research.

Australian Education Internationals (AEI) is the International Research and Analysis Unit providing data, research and analysis on many aspects of international education in Australia and globally. Data on international students studying in Australia is updated on a monthly basis. **International Group** has built collaborative networks with key international organisations including the British Council and the USA Institute of International Education, which hosts Project Atlas, an international student mobility database. Table 3.7 illustrates the various public records and archived databases that form the data sources from China for this study:

Table 3.7: **Data Sources – China Leading Economic Indicators**

<u>Independent Variables - China</u>	
I Space Market Overseas(China)	Data Source
1 Per Capita Disposable Income of urban Households, Accumulated(yuan)	NBSC [^]
2 China GDP Growth Rate	NBSC [^]
3 China CPI Inflation (All Items)	OECD Library
4 China Outflow of FDI	OECD Library
5 Price Index for Investment in Fixed Assets , Accumulated	NBSC [^]
II Capital Market Overseas(China)	
1 Shanghai Stock Market Index	Yahoo Finance
2 China Foreign Currency Exchange Rates	OECD Library
3 China Short Term Interest Rates	OECD Library
4 China Balance of Payments (MEI)	OECD Library
III Property Market Overseas(China)	
1 Price Indices of Construction and Installation , Accumulated	NBSC [^]
2 China Residential Buildings Floor Space Completed	NBSC [^]
3 Floor Space Newly Started	NBSC [^]
4 China Construction Output Value	NBSC [^]
[^] National Bureau of Statistic China	

The China economic data sources are:

The Organization for Economic Cooperation and Development (OECD) is a forum where the governments of 34 democracies work together to promote economic growth, prosperity, and sustainable development. The market economies in the forum include more than 70 non-member economies, of which China is one of the non-member economies. OECD iLibrary is the online library of the OECD featuring its publications including books, papers and statistics and is the gateway to OECD's analysis and data. OECD iLibrary also contains content published by the International Energy Agency (IEA), the Nuclear Energy Agency (NEA), the OECD Development Centre, PISA (Programme for International Student Assessment), and the International Transport Forum (ITF). OECD iLibrary offers wide ranging research and knowledge to a variety of audiences: Universities and research organisations; Businesses and private sector; Government and public administrations; Non-Governmental organisations and think tanks.

The National Bureau of Statistics of the People's Republic of China (NBSC) is an agency within the State Council of the People's Republic of China charged with the collection and publication of statistics related to the economy, population and society of the People's Republic of China at national and local levels with no means to ascertain the accuracy.

Samples of house prices collected will be based on two suburbs in Melbourne and may carry a risk of not being a full representation of house price performance across Melbourne. Although ABS data is ranked second in the world league in terms of most reliable statistics, the revision of all the economic data is relatively less frequent. The REIV gathers most of its data online from sales agencies submitting their sales results electronically and it also has a dedicated call centre to collect property sales results at the time of contract. In this data gathering exercise, REIV only include areas with 25, 30 or 50 sales per week in its snapshots thus might not be reflective of the house prices of the entire suburbs. This study has not been able to ascertain the accuracy and validity of data collected from overseas agencies such as the National Bureau of Statistics of People's Republic of China (NBSC). Limited data in NBSC and different data classification in OECD have compromised the effort to replicate the Australian independent variables in China's secondary data collections. The research resolves into the collections of "replacement" data such as "China Residential Buildings Floor Space Completed" from NBSC replacing the "New Housing Supply" from ABS. Notwithstanding the above statistics weaknesses, ABS, REIV, RBA and OECD data sources epitomized the highest quality data from the respective Governmental and industry/institutional bodies. It is envisaged that the quality of the statistical data from the Australian Governmental and institutional bodies will be adequate to enable meaningful inferences of what's happening in the Australian housing market.

3.6.2. Data Analysis

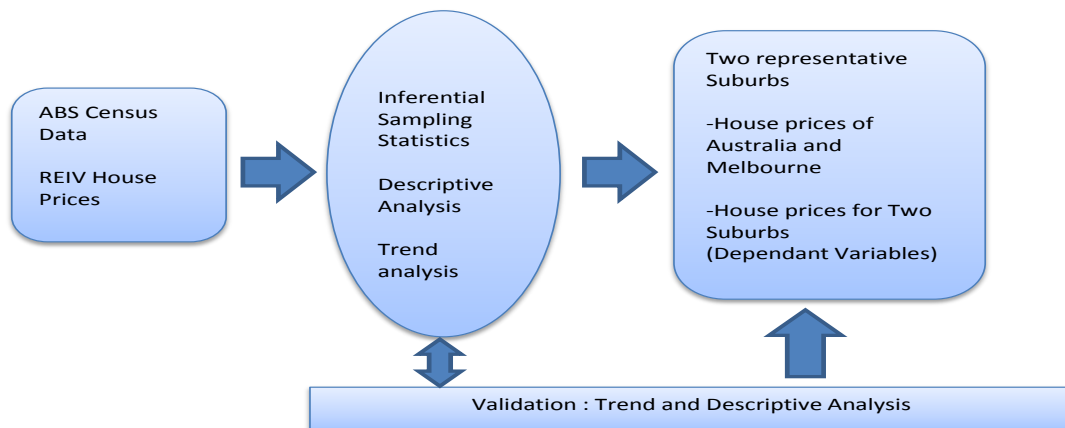
Quantitative data analysis comprises mainly the analysis of numerical data using a variety of statistical techniques with specific reference to descriptive and inferential techniques. Burns (1997) and Bryman (2006) explained that descriptive statistics allows researchers to summarise large quantities of data with the intention of discovering trends and patterns. Quantitative data analysis is often referred to as “deductive” because it is used to test hypotheses and prediction. Descriptive statistics tends to apply easy-to-understand measures to communication, the analysis and results. Outcomes of descriptive analysis mainly comprises of means and correlations, classified as “inferential statistics”. Inferential statistics are generally used to confirm or disconfirm the results obtained from the descriptive results. For example, variance (ANOVA) and covariance (ANCOVA) analysis are used to compare the means of two or more samples to determine if relationships between variables (correlation coefficient and regression analysis) are truly different from zero (*t* test and *F* test).

Tashakkori (2010) explained that a predictive quantitative design within the mixed method domain involves correlational research and uses statistical analysis on the relationship between two or multiple variables to forecast the future. This research falls into this classification of “predictive” design method having house price performance in the selected suburbs will be forecasted to predict the future trend and to validate the model. Performance and correlation analysis techniques used in past studies will be adopted to determine the house prices performance in the selected Australian residential property markets. The quantitative analysis is presented as below stages using tables and graphs supported by commentary.

Quantitative Analysis Part One – Target Suburbs

The rule for probability sampling is to utilise a small sample estimating the larger population parameters (Wetcher-Hendricks, 2011). Part One of the quantitative research is to create representative ‘location’ samples which successfully attracted overseas settlers based on ABS census data. Bartel (1989), Borjas (1994), Collins (2008), Leyvraz (2002), Ley and Tutchener (2001) established that the relationship between migrants, offshore investments and the residential housing market represents an important attribute in the increasing demand of residential property. Figure 3.6 illustrates the steps involved in selecting the representative suburbs:

Figure 3.6: Analysis of Overseas Settlers Favourite Suburbs



Source: Author

The research design will involve analysing and determining two Victorian suburbs that possess the highest number of overseas settlers based on ABS census data. Comparing ABS census data between 2002 and 2013 and the recent market commentaries shed light into the Chinese settlers' recent settlement behavioural trends. The sample of Melbourne residential property markets constitutes a smaller subset of the larger population of Australian residential property market. Using inferential statistics, conclusions can be drawn. The study first focuses on identifying one particular suburb in Melbourne that had historically successfully attracted the largest or most significant number of overseas settlers, followed by a suburb that had generated significant interest among the Chinese settlers in recent times. The second selected suburb carries the characteristic of attracting a significant degree of interest and observed incremental arrivals of Chinese settlers. The review of Chinese-national settlement patterns is closely associated with the subsequent correlation and regression analysis on the "push" factors from China. In summary, the objective of Part One is to provide two specific suburbs in Victoria that satisfy two specific criteria, i.e. one should present a sample that has the highest number of overseas settlers and the other having observed a significant increment of Chinese settlers in recent times to be analysed alongside the performance of Australian and Melbourne Metropolitan housing markets.

Quantitative Analysis Part Two – House Prices Trend Analysis

Part Two involves gathering and analysing REIV house price data for the locations selected in Phase One. Quarterly median house prices starting from the year 2002 to 2013 are collected for Australia, Melbourne Metropolitan and the two representative suburbs selected from the ABS database. Each

location provides a total of 48 data points with a total of 144 house price data points from the first quarter 2002 to the fourth quarter 2013.

Median house prices from Melbourne Metro, Suburb 1 and Suburb 2 forms the dependant variable for quantitative analysis to be carried out in this study. In order to improve the analysis and minimize seasonal variation, a yearly or four quarters Moving Average was applied to the data points to provide smoothing average house prices for all locations. Consequently, each location will provide a total of 45 data points. This exceeds the 30 data points required to ensure data are normally distributed and adequately covered as recommended by Yin (2013).

Additionally statistical testing was applied to further validate house price data to further increase confidence that the sample is representative of the entire population by descriptive analysis alongside trend plotting. Median house prices collected from REIV for the selected suburbs were analysed alongside ABS census data for the entire country and Melbourne Metropolitan. The trend of median house prices in Australia and Melbourne Metropolitan was compared against the trend of median house prices in the two selected suburbs providing the basis of visual descriptive analysis and inferential sampling. Consistent house price trends and patterns among all the selected locations provide vital statistical validation that house price performance in the two selected suburbs (REIV data) closely resemble Australian house prices as the larger population (ABS data). House prices were indexed using the base period of September (3rd quarter) 2003 for all samples used in the analysis.

Quantitative Analysis Part Three – Descriptive Analysis, Coefficient of Determination and Multiple Regression Equation

Nagelkerke (1991) depicted the use of R^2 (coefficient of determination), also called the multiple correlation coefficient. It is well established in classical regression analysis. Its definition as the proportion of variance 'explained' by the regression model makes it useful as a measure of success of predicting the dependent variable from the independent variables.

In the third part of the quantitative analysis, historical leading economic indicators and emerging market determinants will be analysed based mainly on the Higgins (2010) model to provide a structural approach to explore the significance of relationships in terms R^2 and regression significance between the DV and IV. The three predictive economic equations showing the best inter-relationship of separate economic variables to house prices form the forecasting and validation model for the entire quantitative analysis of this study. The independent determinants

were allocated into each of the Space, Property and Capital markets respectively. This was depicted in Section 3.6.1 and Table 3.6 of this Chapter.

Alongside with the traditional leading economic indicators, three emerging factors identified in Chapter One and Chapter Two will be incorporated in both correlations and regression analysis to explore the inter-relationship of these non-traditional factors with Melbourne house prices and other historical leading economic indicators. Table 3.9 shows the emerging factors included in the study:

Table 3.8: **Non-traditional Emerging Determinants**

Non-Traditional Factors	Data Source
1 Long Term Visitor Arrivals	ABS3401
2 International Student Enrolments in Victoria	AEI
3 Short Term Visitor Arrivals - Victoria	ABS3401

Leading Chinese historical economic indicators were identified in Section 3.6.1 and Table 3.7 of this Chapter and analysed systematically utilising the “push & pull” model established in this study. Due to the potential limited Chinese data availability, descriptive analysis forms the major QUAN analysis on Chinese historical economic data to provide an easy-to-understand graph, chart and analysis result, in addition to correlation analysis.

The nature of the relationship between the variables for determining the drivers of offshore investor buying activities in these suburbs was analysed using three datasets or 135 house prices (DV) data points and 32 datasets or 1,395 data points of economic indicators, non-traditional factors and Chinese Key Economic Indicators (IVs). The completion of this phase gave rise to the resulting analysis of 35 data sets covering a period of 12 years for observation starting from the first quarter of 2002 to the final quarter of 2013.

Data analysis in this research covered data collected from 2002 to 2013 and excluded data points subsequent to 2013 due to limited up to date data availability at the analysis phase of this study. Verifications of the model were conducted using house price data from the second and fourth quarters of 2014 respectively at the later stage of the research. All data collected were smoothed using a 4-quarters or one year moving average to avoid seasonal variations. Two-tailed hypotheses were used to test the relationship between house prices in the two suburbs against the entire list of economic indicators listed.

Three statistical analysis methods were applied to analyse the strength of the relationships between the DV (House Prices) and IV (Australian Leading Economic Indicators, Non-traditional factors and China Leading Economic Indicators) to confirm the validity of the model, namely:

- i. **Lagged Economic Indicators** – the economic indicators were re-entered using lagged data methodology. As changes in macroeconomic activity may take time to affect residential property market performance, the IVs will be lagged for eight quarters. The two-year lag provides sufficient time for the assumed property and macroeconomic activity to flow on to residential property performance.
- ii. **Correlation Matrix Pearson Correlation Coefficient (R^2)** – this methodology is applied to analyse the nature and relationship between the key economic factors of Australia, non-traditional factors and Chinese leading economic indicators (IVs) and house prices of the selected area of interest (DV). SPSS software was used to compute the Pearson correlation coefficients, r , along with the significance levels. This quantitative research phase would establish if there was a significant relationship between the traditional and non-traditional indicators with the median house price data of the selected suburbs. The operationalised hypothesis depicted that the research rejects the null hypothesis if there is statistically significant correlation between the economic indicators with Melbourne house prices. The strength and direction of the correlation between the house price performance in each and every location and significant influencing economic indicators were identified for both current periods and for periods lagged by eight quarters. To determine whether individual correlation coefficients were significantly different from zero, 't' tests at the 95% and 99% confidence levels were applied to the correlation results.
- iii. **Multiple Linear Stepwise Regression** - to fit a linear regression line using ordinary least squares method. The idea of this method is to predict that the relationship between the predictor (House Prices) and DV (indicators from Space, Capital and Property Markets) is explained by a linear or straight line, relationship. The single regression equation to assess the correlations between the house prices and various independent variables can be expressed as:

Regression Model	Equations
(MELBOURNE METROPOLITAN HOUSE PRICE MOVEMENT)_t	$= f(\text{Space datasets } t...t-2, \dots) + (\text{Capital datasets } t... t-2, \dots) + (\text{Property datasets } t... t-2, \dots)$
(SELECTED SUBURB'S HOUSE	$= f(\text{Space datasets } t...t-2, \dots) +$

PRICE MOVEMENT)t	(Capital datasets $t_{-1} \dots t_{-2}, \dots$) + (Property datasets $t_{-1} \dots t_{-2}, \dots$)
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The review of literature revealed three key statistical tests to confirm the validity of the residential property forecast model:

a. Coefficient of determinant (R^2)

R^2 reflects the proportion of variability in the DV that can be explained by a linear relationship with the predictor variables. The R^2 measures the goodness of fit for linear regression. The better the line fits the data, i.e. the closer the data points sit to the line, the higher R^2 will be. If there is no linear relationship between the predictor and the DV, $R^2 = 0$ or close to it.

b. Sig-value or p-value

If the Sig-value or p-value is less than 0.05 significant levels, we reject H_0 . There is statistically significant evidence that the data fits a linear regression model

c. Statistical test for bias (t-test)

T-test is a measure to determine if there is bias and the errors are normally, or nearly normally, distributed. The "t" statistic is computed by dividing the estimated value of the parameter by its standard error. This statistic is a measure of the likelihood that the actual value of the parameter is not zero. The larger the absolute value of t, the less likely that the actual value of the parameter could be zero.

d. Durbin Watson Statistics (DW)

This is a test to detect patterns in a series of errors. The Durbin-Watson test for autocorrelation is a statistic that indicates the likelihood that the deviation (error) values for the regression have a first-order autoregression component. The regression models assume that the error deviations are uncorrelated. The Durbin-Watson Statistic is used to test for the presence of serial correlation among the residuals. As a general rule of thumb, the residuals are uncorrelated if the Durbin-Watson statistic is approximately 2. A value close to 0 indicates strong positive correlation, while a value of 4 indicates strong negative correlation. This can be summarised as:

- i. an indication of how close a fit the regression equation is to the dependent time series.

- ii. Statistical test for bias (t-test) – a measure to determine if there is bias and the errors are normally, or nearly normally, distributed.
- iii. Durban Watson statistics (DW) – a test to detect patterns in a series of errors.

The main statistical software for this analysis was SPSS. The subprogram 'Multiple regression: stepwise forward model' was used to provide an acceptable regression equation to assess the correlations and predict future residential property performance. A significance level of 0.05 with a non-zero intercept was chosen as the model parameter. The above statistical testing techniques shall be applied across the datasets selected, broken down to three statistical tests as set out below:

- i. **Statistical Test #1 – Australian Key Economic Indicators:** To explore the existence of a significant relationship between the Australian leading economic indicators and median house prices in Melbourne Metropolitan and the 2 selected suburbs.
- ii. **Statistical Test #2 – Non-traditional Social Economic Indicators:** Two non-traditional factors, namely Education (International Student Enrolments) and Residential Tourism (Long Term and Short Term Tourist Arrivals) will be introduced and the same methodology shall be applied to test their relationship significance with the median house prices of the selected suburbs.
- iii. **Statistical Test #3 – Chinese Leading Economic Indicators:** To explore the existence of a significant relationship between the Chinese leading economic indicators from the respective Space, Capital and Property markets and the median house price data in Melbourne Metropolitan and the 2 selected suburbs.

The regression analysis assisted in the understanding of how the typical house price changes when any one of these independent variables is varied, while the other IVs are held fixed. The regression analysis will assist in estimating the house prices given the DVs – that is, the median value of the house prices. The relationships between the two non-traditional factors or determinants were tested for both correlations and the historical relationship between the predicted and actual performance fitting the regression model. The expected industry's interpretations on the potential correlations direction (positive (+) or negative (-)) of all the independent variables compared against house prices in Australia are listed in Appendix I.

The data rationales and industrial interpretation on the correlation direction shall serves as the foundation of result presentation in the subsequent Chapter.

3.7. Qualitative Phase

3.7.1. Semi-Structured Interview

The goal of any qualitative research interview covers a range of approaches to the interviewing process. Its goal is to see the research topic from the perspective of the interviewee, and to understand how and why he or she comes to have this particular perspective (King et al., 1994). That the researcher selects which profession can provide the best information to achieve the objective of the study and select the most appropriate representatives is a key feature of this research phase (Teddle and Yu, 2007).

King (1994) and Teddle (2009) affirmed that a questionnaire can be qualitative (open-ended/unstructured), quantitative (closed-ended/structured) or mixed methods (semi-structured). King (1994) refers the mixed methods as “structured open-response” interview that carries the following characteristics:

- i. It uses an interview schedule (like the structured interview).
- ii. Questions follow a set order.
- iii. There is flexibility in the order groups of questions are asked.
- iv. These interviews tend to focus on factual information and general evaluative comments.

Open-ended questions tend to be useful in soliciting interviewees’ opinions, attitudes and perceptions of the respondents. Closed-ended questions provide easily quantifiable information through applying a detailed schedule with questions asked in a specific order and questions are mostly closed. Every effort is made to control the way these questions are asked in order not to bias the responses of different interviewees. A closed-ended approach is useful if the researcher intends to elicit factual information (King et al., 1994).

The qualitative phase supports and validates the outcomes of the first phase on the introduced determinants of overseas investment in Australia residential property market. The research technique shall be non-random and non-probability in the qualitative research phase to rely on expert opinions that form the sample data in search of the new drivers in Melbourne residential property market. The evaluation of new determinants in the Australian residential property market can be construed through feedback and discussions with the relevant stakeholders. This research technique uses a qualitative assessment approach with semi-structured interviews selected for the study. This method allows for a focus on a particular unit of analysis rather than the collection and analysis of data (Willig, 2013, Yin, 2013).

The questionnaire design in this study uses a mixed method questionnaire (semi-structured) that incorporates both closed-ended and open-ended elements. The qualitative semi-structured interview in this study has the following aims:

- i. To identify factors, referring to the Space/Capital/Property markets, causing or influencing overseas investors' decision on the Australian residential property market.
- ii. To identify government policies and to understand the rationales and extent of such government policies causing offshore investments in the Australian residential property market.
- iii. To evaluate the impact two non-traditional factors had on overseas investor's decision making.

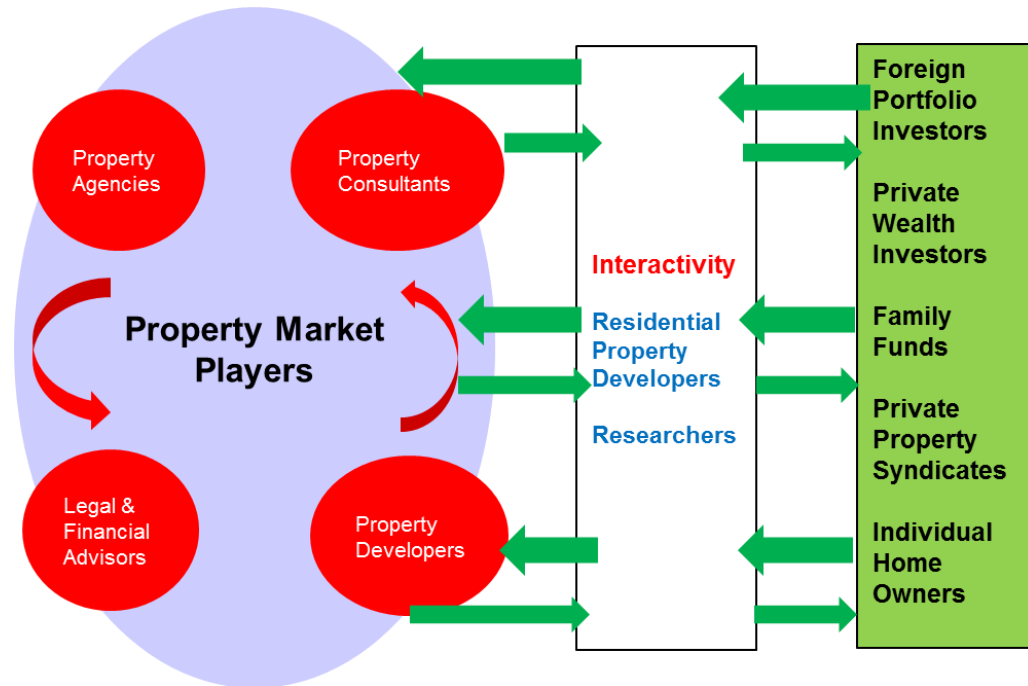
Only a selected group of Australian property professionals, consultants and researchers were targeted as interviewees for the study. The selection of interviewees is based upon their involvement in the residential property industry and seniority in their respective organisation's decision making process. In this sequentially phase research methodology, the second phase questions are developed subsequent to the first phase's research outcomes and elaborates on the results (Creswell and Clark, 2007, Ivankova, 2006). The qualitative phase will help support and validate the determinants of overseas investment in the Australian residential property market.

Teddlie and Tashakkori (2009) explained that there are no rules for sample size in qualitative studies and typically, purposive samples are small. In this study, the sample size required is 15 to 20 participants aligned with grounded theory being the backbone of the research design. The participants comprise of wide range of experts from both the Chinese property market and the Melbourne property market.

Establishing effective communication in interviews with participants is crucial for the success of this second phase of qualitative research. Howell (1989) emphasised that a "people" problem can arise in a bureaucratic structure and hinder an effective communication among the participants of a project. The use of appropriate management skills (i.e., effective communication and conflict resolution) and the development of a favourable context (e.g., mutual trust and long-term commitment) are critical to partnering success (Cheng et al., 2000). Argenti (2005) illustrated that the framework for strategic communication comprises a wide variety of iterative loops, encompassing multiple connections with multiple constituencies on multiple strategic levels. As a result of the literature review, Figure 3.7 Illustrates a model established to seek better

understanding of the communication channel between the property professionals and the offshore investors:

Figure 3.7: **Effective Communication Channels with the Offshore Investors**

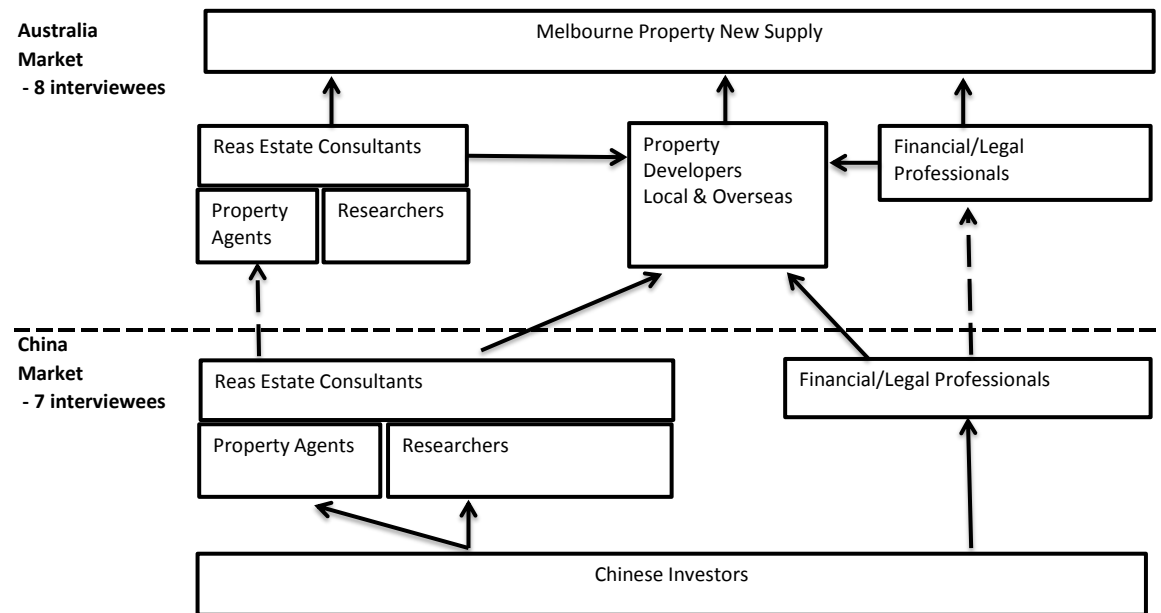


Source: Author

Figure 3.7 illustrates the interactivity loop that facilitates any potential effective communication between the property professionals and the potential local and overseas property investors. Effective communication loops involving property professionals typically comprise of Property Consultants, Agencies, Developers and Legal and Financial Advisors. They are the key players in the property industry who uphold the role of vital information providers to investors.

Following on Figure 3.8 details the interview approaches adopted in this study to ensure adequate and strategic coverage of key players in the property industry. A planned systematic interview approach is crucial to ensure the best responses are obtained from the experts in their field to achieve the objective of this study. Various leading property professionals are interviewed to identify factors encouraging offshore investments in the Australian residential property market. Figure 3.8 sets out the plan adopted in the interview with the selected property professionals:

Figure 3.8: Interview Plan for Leading Property Professionals



Source: Author

Figures 3.7 and 3.8 demonstrate the four key stakeholders in the residential housing market representing four different professional sectors, namely real estate consultants, financial and legal professionals, property agents and property reserchers. Two stakeholders from each category are interviewed to provide a range of opinions and experiences. The interview exercise is expanded to interviews conducted in China to address the “push” factors of offshore investments in Australia. “Property Market” involves supply conditions that are very much associated with the policy implementation and eventual supply conditions of local (Australian) property settings or in other words, not correlated to offshore property market conditions. As such only the local residential property developers will be interviewed due to the Australian Government policies for offshore purchasers to buy only new developments.

As a result the offshore Government policies assessment will be centred mostly on Space and Capital market determinants. Eight and seven interviews were conducted consequentially in both Australia (Melbourne) and China (Shanghai) making a total of 15 interviews with key real estate stakeholders in two countries. Two versions of the questionnaires were formulated specifically for Chinese and Australian interviewees (Appendices II & III) with a total of 12 interview questions for each segment. Codes have been assigned to each interviewee (Appendix IV) to ensure the responses were de-identified, providing anonymity for the participants. These codes were used to report interview responses.

The interviews were undertaken in June and August 2015 at the interviewee's place of work, lasting between 30 and 60 minutes covering Government policies, information on foreign investors, property market conditions, tourist arrival and international student enrolment information. Interview participants were identified through the authors' and RMIT University's networks. Ethics approval was duly obtained from RMIT University Design and Social Context College Human Ethics Advisory Network (CHEAN) on the 14th October 2014.

3.7.2. Qualitative Analysis

This stage involves the analysis of narrative data gathered from the semi-structured interviews with the selected property professionals from Australia and China. Teddlie and Tashakkori (2009) explained that qualitative data analysis is classified as "inductive" as it is utilized to discover emergent themes.

In this research particularly, data collected from semi-structured interviews are used to both discover the emerging trends in Australian residential property market and validate the research findings of the quantitative research. The qualitative data collected (descriptive and narrative) were audio recorded and transcribed. The transcripts were thematically coded using the qualitative analysis software, NVivo.

3.8. Summary

It is imperative that appropriate techniques are applied to facilitate the potential of allowing multiple ways of thinking and steering the study into different perspectives of seeing and hearing, multiple ways of making sense of the social world, and multiple standpoints on what is important and to be valued in the context of social inquiry. Empirical evidence affirmed that mixed methods multiple approaches to social inquiry and that each and every approach to social inquiry is partial to the entire event forms the basis of this research approach. Better understanding of the multifaceted and complex character of the housing market in Australia can be obtained from the use of multiple approaches and ways of investigation. A mixed methods research generates questions, alongside possible answers that are both smooth and full of relative certainties alongside possibilities and even surprises, offering some stories not yet told (Greene, 2008).

This Chapter examined the philosophical orientation, methodology and design for the data collection and analysis phases. This study uses a sequential mixed method data analysis strategy

(QUAN -> QUAL) in which the quantitative and qualitative data analysis strategies were combined, connected or integrated in one research study in search of relative certainties alongside possibilities and stories not yet told in the Australian residential property market. The mixed methods data analysis techniques were both statistical and thematic in nature in order to solicit better understanding of the multifaceted and complex character of overseas investment in the Australian residential property market (Greene et al., 1989, Teddlie and Tashakkori, 2009).

Higgins' (2010) model guides the research approach to provide a structural approach to assess key economic indicators identified alongside with the residential property market performance. The dynamic and at times complicated interconnectivity of the key factors can be systematically allocated into Space, Property and Capital Market using this model to facilitate proper and orderly analysis. A "Push & Pull" model was additionally developed in this study to provide a structural approach to evaluate the potential impact and influences resulting from overseas Government's policies.

Based on the intended mixed method explanatory design for this research, the data collection strategy is focusing on facilitating the study of "how", "who" and "why" using secondary data and semi-structured interviews. The first phase involves "unobtrusive measures" data collection from reputable agencies such as ABS, REIV, RBA, AEI, OECD and NBSC. The resulting analysis from the quantitative research provided the grounded theory for the subsequent qualitative analysis phase that involves semi-structured interviews with the real estate professionals both in Australia and China. Similarly, sequential sampling mixed method analysis is applied in this study whereby probability sampling is followed by a purposive sampling technique. The quantitative phase includes probability sampling characterised by econometric equations and formulas and the qualitative phase includes a non-random and non-probability sampling technique relying substantially on expert opinions on Australian housing market.

Quantitative data analysis comprises mainly the analysis of numerical data using a variety of statistical techniques with specific reference to descriptive and inferential techniques. Burns (1997) and Bryman (2006) explained that descriptive statistics allows researchers to summarise large quantities of data with the intention of discovering trends and patterns. Quantitative data analysis is often referred to as "deductive" because it is used to test hypotheses and prediction. Descriptive statistics tends to apply easy-to-understand measures to communicate the analysis and results. Outcomes of descriptive analysis mainly comprise of means and correlations, classified as "inferential statistics". Inferential statistics are generally used to confirm or disconfirm the results obtained from the descriptive results. This research falls into the classification of a "predictive"

design method given its focus on house price performance in the selected suburbs being forecasted to predict future trends and to ensure validity of the model. Performance and correlation analysis techniques used in past studies were adopted to determine the house price performance in the selected Australian residential property markets.

In this sequential phase research methodology, the second phase questions are developed subsequent to the first phase's research outcomes and elaborates in-depth the results interpreted (Creswell and Clark, 2007, Ivankova, 2006). Its goal is to see the research topic from the perspective of the interviewee, and to understand how and why he or she comes to have this particular perspective (King et al., 1994). The qualitative phase supports and validates the study conducted in the first phase on the new determinants of overseas investments in the Australian residential property market.

The next Chapter provides the analysis and resultant discussion of the quantitative research phase.

Chapter 4:

Quantitative Analysis

4.1 Introduction

The main objective of this Chapter is to examine the relationship and validity that various key determinants have on house prices in Melbourne Metropolitan and two selected Melbourne locations. Appropriate statistical techniques as discussed in Chapter Three (Section 3.6) were employed in this explanatory study to examine the relationship and interactions between traditional key economic indicators and the emerging determinants to explore the best model to explain the performance of house prices in the selected locations. The Quantitative analysis is guided by the “Push & Pull” model (see Chapter Three Section 3.2.2) established in this thesis to ensure consistency and systematic research implementation.

Part One of the Quantitative research involves analysis a decade of ABS census data and the market updates in search of two representative suburbs in the Australian State of Victoria that attracted the most Chinese settlers between 2001 and 2011. In Part Two of this research, median house prices (from REIV) of the selected suburbs together with house price performance in Melbourne Metropolitan were analysed descriptively with visual plot and charts to examine their historical performance for the period 2003 to 2013. Statistical testing techniques including Pearson Correlation Coefficient methodology, Stepwise Time Series Regression methodology and Descriptive Analysis were employed in part three of this research phase to provide three predictive models to confirm the validity of emerging determinants. This part of the study evaluated the correlations and significance of two non-traditional determinants from Space Market, namely Education and Residential Tourism. The relationships between these non-traditional factors were tested for both correlations and the historical relationship between the predicted and actual performance fitting the regression model. The last part of the quantitative phase involved utilising the descriptive analysis on various traditional economic data from China and compares them with house price performance in the selected locations. The objective of this investigation is to establish if overseas factors, especially from a significant offshore investor in Australia like China, had emerged as influencing determinants on the Australian residential property market.

This chapter has eight sections. Subsequent to Section 4.1 introduction, Sections 4.2 and 4.3 present the most popular suburbs for immigrants and purchaser in Melbourne and the analysis of house prices in the selected locations. Section 4.4 presents the Correlation Matrix and Stepwise Regression

analysis and the resulting discussion examining the impact of Australian traditional economic factors and determinants on house prices in the selected locations. Section 4.5 presents the analysis and results of non-traditional factors and determinants, namely Education and Tourism factors. Section 4.6 assesses the “Push” factors from China. The final results and key summaries for the Quantitative Analysis phase are presented in Sections 4.7 and 4.8.

4.2. Melbourne Population – Overseas Settlers

Empirical evidence reveals that from a macroeconomic perspective, the increase in immigration activities in the host countries had direct impact on the real estate market (Bartel, 1989, Borjas, 1994, Collins, 2008, Ley and Tutchener, 2001). The influx of migrants contributed a significant portion of overseas buying of residential properties in Australia. Farrell (1997) and Murphy and Watson (1994) revealed that Australia’s policies of encouraging business migration produced large inflows of capital. Substantial offshore capital was channelled into property investments. Among the property sub-sectors purchased by offshore investors, residential housing has constituted an important element in shaping Australian real estate markets. The direct relationship between migrants and the residential housing market represents an important attribute to the increasing demand for residential property (Leyvraz and Redner, 2002).

Many forms of migration generated tourism flows, in particular through the geographical extension of friendship and kinship networks. Migrants became the attractions of tourist flows into Australia, while they themselves became tourists returning to visit friends and relations in their countries of origin. These flows of tourism are structured throughout the life of the migrants, with each temporary or permanent round of migration creating a new spatial arrangement of friendship and kinship networks, which represent visiting friends and relations (VFR) tourism flows (Dwyer, 2010; Williams, 2000).

Tourism may also generate migration flows. Most obviously through the demand generated for labour which, if it cannot be met locally, will stimulate labour migration (Monk and Alexander, 1986). Such labour mobility may be differentiated by nationality, gender, ethnicity and skills, depending on the particular features of the tourism industry, and the local labour market (King et al., 1995). In addition, tourism may contribute to defining the search spaces or natural destinations (cultural agglomeration) of migrants (Brown and Moore, 1970), whether these are labour, lifestyle or retirement migrants (Snepenger et al., 1995).

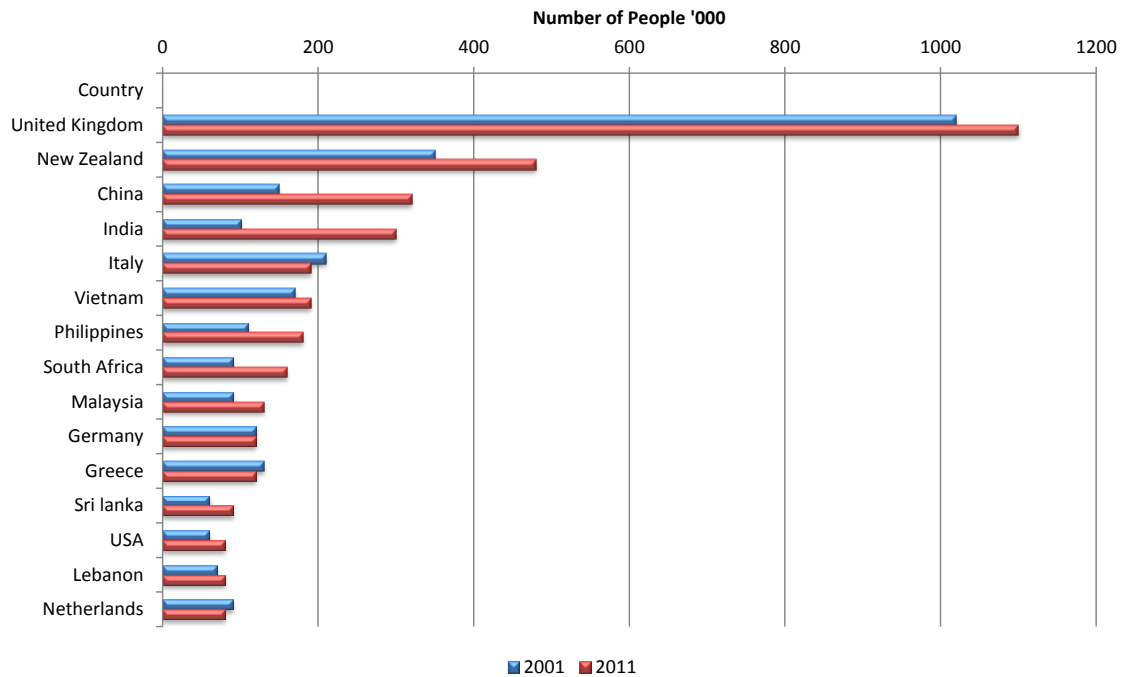
It is based on the above literature reviews that the ***first part of phase one*** of this research design involved collecting and analysing the ABS census data to determine which two Victorian suburbs

received the largest number of overseas settlers historically. This study selected and analysed the house prices movements of Melbourne Metropolitan with two suburbs that are representative samples of overseas settlers in Melbourne. In the initial stage this study focus was given to a suburb in Melbourne that had successfully attracted a substantial number of overseas settlers, followed by a suburb that had recently generated significant interest among the Chinese settlers and observed a significant increment of Chinese residents between 2001 and 2011 based on ABS census data. The second selection has a specific focus on Chinese settlers and the subsequent analysis on this suburb was closely associated with a case-study like analysis mapping the “push” factors from China that drove Chinese investing in Australian residential property market. Summarily, the objective of this phase of research is to provide two specific Melbourne suburbs that satisfy two specific criteria, being:

- i. the highest number of overseas settlers historically
- ii. observed recent significant increment of Chinese permanent settlers.

According to the 2011 ABS Census, there were 5.3 million migrants in Australia, which translates to one in every four (26%) Australian residents were born overseas. The largest contributor to Australia's migrant population continues to be people born in the United Kingdom (UK). In the 2011 Census, 1.1 million Australian residents were born in the UK, around one in every twenty Australian residents. Australian residents born in New Zealand were the second largest nationality of migrants, at close to half a million people (483,000). This was followed by migrants born in China (319,000), India (295,000), Italy (185,000) and Vietnam (185,000). Cumulatively, migrants born in these six countries accounted for about half (49%) of all migrants in Australia in 2011 (ABS, 2014). Figure 4.1 provides the list of the top 15 countries of birth of overseas born Australian residents.

Figure 4.1: Migrants in Australia by Country of Birth – 2001 and 2011



Source: ABS 2014

ABS (2014) publication of 2011 census data showed migrants had a tendency to settle in major Australian urban areas in comparison to people born in Australia. While 64% of Australian born lived in a major Australian urban area in 2011, 85% of those born overseas lived in a major urban area. The extent to which migrants settled in urban areas differs by their country of birth. In 2011, some of the most urbanised population groups in Australia were migrants born in Somalia (98%), Lebanon (97%), Macau (97%), and the Former Yugoslav Republic of Macedonia (97%). Migrants born in nations like China (97%), Vietnam (97%), Greece (95%) and India (93%) were also highly urbanised.

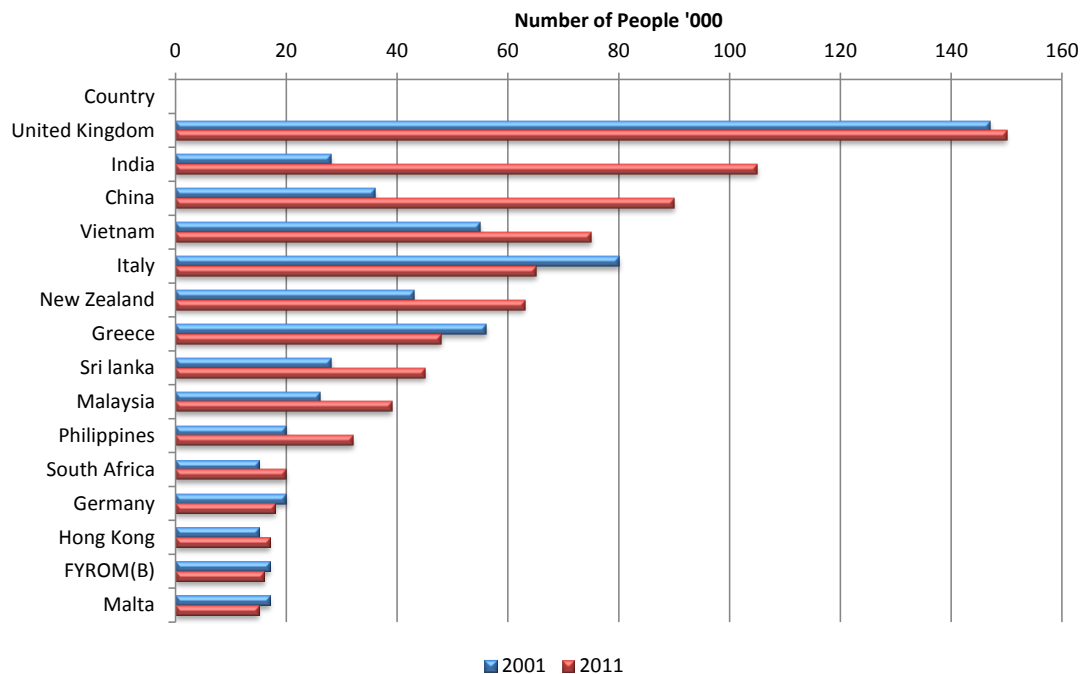
Across the Australian capitals, some common trends in settlement were evident. Suburbs located in or near city centres were strongly favoured by migrants. With the exception of Hobart and Darwin, the central business districts (CBDs) of every capital city in Australia had more than half its residents born overseas in 2011 (ABS, 2014).

Suburbs incorporated or situated near universities also featured high proportions of migrants. These include suburbs like Clayton (70%) in Melbourne, Robertson (62%) in Brisbane, Bentley and Crawley (both 62%) in Perth, Bedford Park (49%) in Adelaide, and Acton (57%) in Canberra. In some cities, new or redeveloped suburbs have attracted large numbers of migrants, such as Wolli Creek (68%) in Sydney, Jindalee (62%) in Perth and Franklin (44%) in Canberra (ABS, 2014).

In a small number of cases, suburbs with large overseas born populations did not necessarily reflect the settlement preferences of migrants. This was notable in the Darwin suburbs of Coonawarra (50%) and Eaton (44%) where large overseas born populations reflected the fact that these suburbs contained immigration detention facilities.

Melbourne is an attractive city for migrants with a legacy of settling AngloCeltic, Southern European, and Asian migrants over its 150 year history. Melbourne promoted itself as a diverse city that provides education and employment opportunities to new arrivals. Figure 4.2 exhibits the largest migrant groups in Melbourne according to the country of birth.

Figure 4.2: Migrants to Melbourne by Country of Birth – 2001-2011

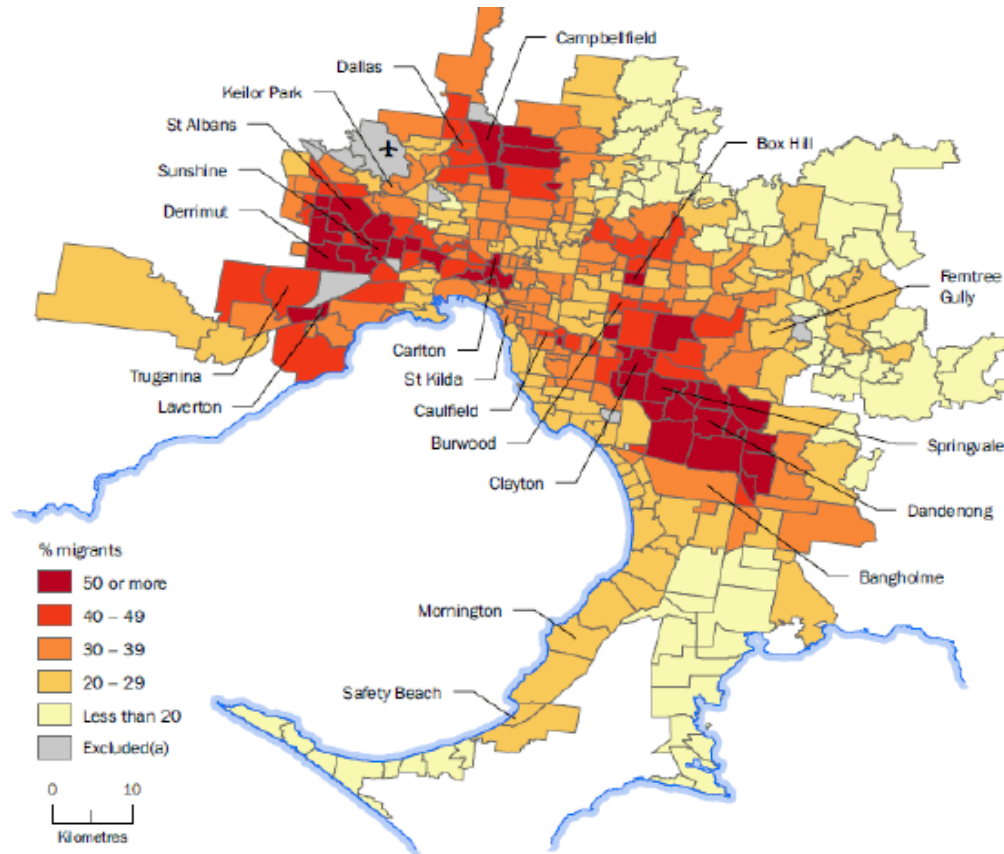


Source: ABS 2014

Migrants in Melbourne were most concentrated around three locations. In the city centre in 2011, close to two thirds of the residents of Melbourne CBD (68%), Carlton (63%), and Southbank (61%) were migrants. The close proximity of these suburbs to the University of Melbourne, RMIT University, and a range of other higher education providers made them especially popular with international students. In 2011, a quarter of the population of Melbourne CBD and a third of the population of Carlton were international students. To the west of the city, the suburbs of St Albans (62%), Sunshine North (58%) and Braybrook (57%) also had large proportions of people born overseas. Significant countries of birth for migrants in these suburbs included Vietnam, India and

Malta. To the city's southeast, Clayton (70%), Clayton South (65%), Springvale (69%), Springvale South (59%), Noble Park (60%), and Dandenong (67%) were also strongly populated with migrants (ABS, 2014). Figure 4.3 shows the proportion of overseas born people in each suburb in Melbourne.

Figure 4.3: **Percentage of Migrants in Melbourne by Suburbs – 2011**



(a) Suburbs with fewer than 100 usual residents have been excluded from analysis.

Source: ABS 2014

Although these suburbs are close to each other, the characteristics of migrants within them varied. In Clayton, for example, migrants tended to be younger, more recent arrivals to the country with a median age of 27 years and a median length of residence in Australia of 4 years (Clayton also has a campus of Monash University). The statistics of major suburbs in Victoria, Australia that attracted most overseas migrants are shown in Table 4.1:

Table 4.1: Most Popular Suburbs for Migrants in Melbourne – 2011

Melbourne	%
Clayton	70.1
Springvale	68.8
Melbourne	68.1
Dandenong	67
Clayton South	64.6
Carlton	62.9
St Albans	62
Southbank	60.6
Noble Park	60.1
Springvale South	59.4

Source: ABS 2014

Table 4.1 shows that Clayton inherited the highest numbers of overseas settlers among all the suburbs and was nominated in the ABS census 2014 as the top suburb located in or near the city centre of Melbourne that was most favoured by migrants. Clayton was therefore selected as a suburb to be further explored in this study.

In Melbourne, migrants born in China form a sizable and growing demographic group. Similar to Indian born migrants, the number of Chinese born migrants living in Melbourne has grown considerably in the past decade, more than doubling between 2001 and 2011 (from 36,000 to 90,000). Areas of Melbourne where Chinese born migrants were most strongly concentrated were in Melbourne's CBD (13%) and in a number of suburbs to the city's east. Box Hill (22%), Clayton (18%) and Notting Hill (12%) had relatively large Chinese born populations. The suburbs which attracted the majority of the Chinese born migrants is revealed in Table 4.2:

Table 4.2: Melbourne Suburbs with Highest Percentage of Persons Born in Selected Countries - 2011

United Kingdom		India		China		Vietnam	
	%		%		%		%
Bangholme	19.7	Laverton	15.1	Box Hill	22.3	Sunshine North	24.9
Mount Eliza	13.2	Glen Huntly	1.5	Clayton	17.8	Braybrook	23.4
Monington	12.8	Clayton South	14.8	Melbourne	13.0	Springvale	22.3
Mount Martha	12.7	Williams Landing	14.6	Burwood	12.0	Springvale South	19.4
Safety Beach	11.5	Albion	14.6	Kingsbury	12.0	Caimlea	18.6
Mount Dandenong	10.5	Dandenong	12.2	Box Hill North	11.6	St Albans	17.2
Franston South	10.4	Springvale	11.1	Notting Hill	11.6	Maidstone	16.6
Sandringham	10.0	Sydenham	11.0	Burwood East	11.3	Kings Park	14.1
Kalorama	10.0	Clayton	10.3	Doncaster	11.1	Sunshine West	13.8
Emerald	9.9	Truganina	10.3	Carlton	11.0	Sunshine	12.3
Total Melbourne	4.3	Total Melbourne	3.0	Total Melbourne	2.6	Total Melbourne	1.9

Source: ABS 2014

Three suburbs in Victoria had the highest number and the most significant increment of Chinese settlers, namely Box Hill, Clayton and Burwood for the decade between 2001 and 2011. Notably Clayton was again one of the favourite suburbs for Chinese migrants.

The ABS census 2011 also revealed that there was a significant increment of Chinese residents in other “up and coming” suburbs, one of them being Doncaster. Doncaster is not ranked as high as Box Hill and Clayton in terms of catchment of largest Chinese migrants. However various market commentaries and observations had on numerous occasions suggested that Doncaster has emerged as one of the favourite suburbs for Chinese settlers. According to Yang (2014), where land transactions mostly take place between private owners and buyers, most focus on inner city locations such as Melbourne, Southbank, South Yarra and St Kilda, as well as areas popular for Chinese residents such as Doncaster, Box Hill and Glen Waverley. In Melbourne, Chinese buyers overlook the northern, western and southern suburbs that are favoured by the Vietnamese, and instead focus on the city centre. Chinese born locals were moving further east, to St Kilda, Box Hill, Glen Waverley and Doncaster because of the quality schools and an established Chinese community (Allen, 2013). As a result of the above reviews, Doncaster was chosen as the second suburb to evaluate the drivers of Chinese investment in the Melbourne residential property market.

Conclusions were drawn from the review of ABS census data and empirical studies that Clayton and Doncaster possessed the common and community characteristics for Chinese settlers arriving in Australia. This research includes median house prices in Australia and Melbourne Metropolitan for benchmarking purposes concurrent with the analysis of the two selected suburbs.

4.3. Melbourne Residential Property Market Performance

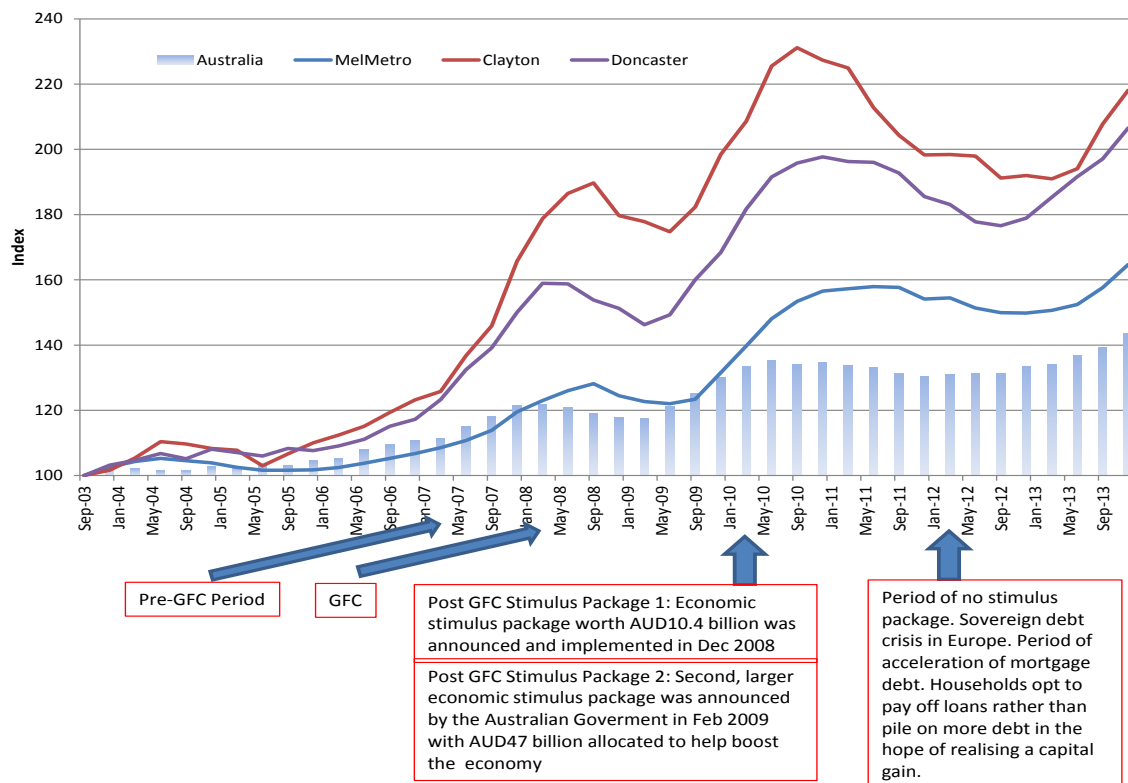
This section constitutes the *second part of phase one* of the study involving the construct of a house price dataset for the selected suburbs using Real Estate Institute of Victoria (REIV) quarterly data. REIV is the leading professional associations for the Victorian real estate industry with currently over 2,000 real estate agency members. These members are from all facets of real estate industry including residential sales, commercial and industrial sales, auctions, business broking, buyers, agency, property management, owners' corporation management and valuations. The REIV gathers most of its data online from agents submitting their sales results electronically and plus a call centre to collect property sales results at the time of contract.

Australian quarterly median house prices starting from year 2002 to 2013 were extracted from ABS database. Melbourne Metropolitan, Clayton and Doncaster median house prices for the same period were collected from REIV. Each location provided a total of 48 data points giving rise to a

total of 192 house price data points from the first quarter 2002 to the fourth quarter 2013. This database forms the dependant variable (DV) for the subsequent quantitative analysis. To avoid seasonal variation a yearly, or 4 quarters Moving Average technique was applied to the house prices data points to provide a 4 quarters smoothing average for improved analysis. Consequently, each locality provides a total 45 data points that exceeds the minimum of 30 data points to ensure data are normally distributed and adequately covered.

House prices in the selected locations and metropolitan collected from REIV were analysed alongside with the ABS Australian house prices. House prices were indexed using the base period of September (3rd quarter) 2003 to analyse the house price trend for all locations. This data collection strategy facilitated a logical statistical validation on median house prices collected by comparing median house prices collected from REIV with the median house prices collected from ABS with chart and trend analysis. If both collated in the similar manner, the imbedded trend analysis can provide a meaningful indication if Melbourne house price movements reflect the larger population of Australian residential property market performance. Figure 4.4 exhibits the median house prices of Australia, Melbourne Metro and 2 suburbs in Victoria obtained from REIV and ABS database.

Figure 4.4: **Australia, Melbourne Metropolitan, Clayton and Doncaster House Price Trend**

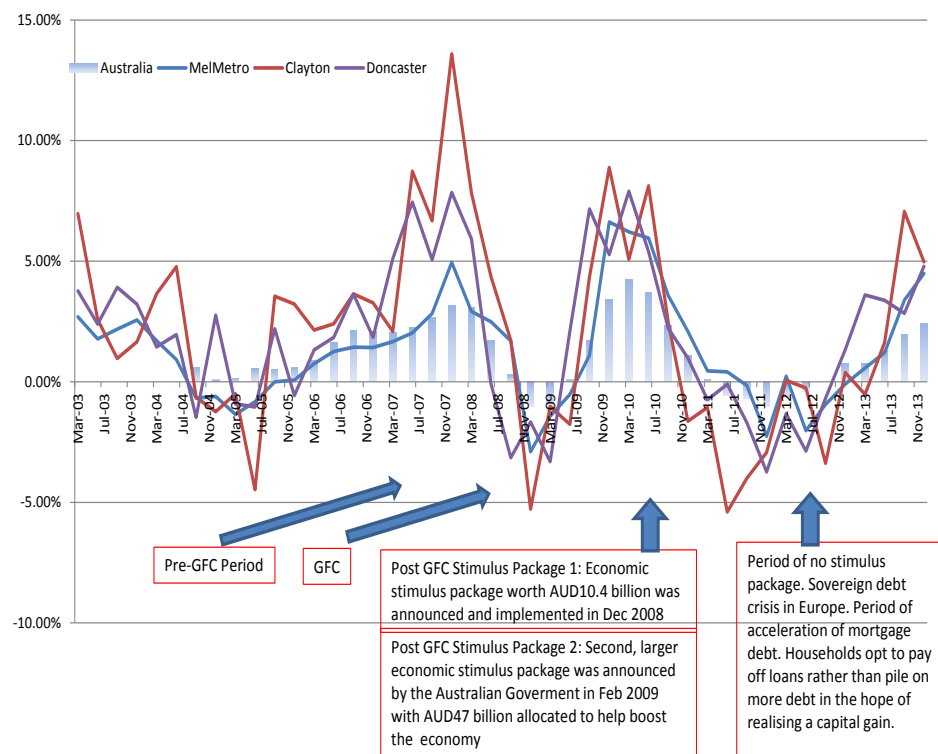


Source: ABS and REIV 2014

House prices across Australia, Melbourne Metropolitan, Clayton and Doncaster demonstrated consistent trends and patterns from 2003 to 2013. House prices trended upward since 2003 and reached a peak in 2008. During the GFC 2008 period, house prices in all observed locations fell from 2008 to middle of 2009 and staged a strong rebound from mid-2009 to mid-2010. House prices for all locations fell during the period of mid-2011 to mid-2012, before staging another rebound at beginning of 2013.

Clayton's house prices increased the most during the assessment period. House prices in Clayton increased by 120% comparing 2002 and 2013. Doncaster house prices came in second with an increase of 110% and demonstrated the steepest uptrend from the period between mid-2012 to end of 2013. Melbourne Metropolitan and Australian house prices had increased 60% and 40% respectively. Figure 4.5 illustrates the price movements based on percentage movements in all locations:

Figure 4.5: House Price Movements in Australia, Melbourne Metropolitan, Clayton and Doncaster



Source: ABS & REIV 2014

Figure 4.5 illustrates house price fluctuation by comparing the percentage changes between two consecutive quarters for all the property markets. The percentage changes demonstrated similar

patterns of volatility across all the localities. The Australian house prices were the least volatile and Clayton house prices demonstrated the highest volatility. Doncaster and Melbourne Metropolitan shared similar volatility subsequent to the period of 2009. All markets increased positively in the three major interval periods of the assessment, namely 2005 to mid-2008(the GFC 2008), mid-2009 to end-2010 and end 2012 to end 2013.

GFC 2008 affected house prices negatively for a short period of time after 2008 for all locations. The Australian Government's two Post GFC economic stimulus packages resulted in shorter downturn periods for house prices as a result of the GFC 2008. In 2008, the Australian Government implemented the first Stimulus package worth AUD10.4 billion. This package included payments to seniors, carers and families. The payments were made in December 2008, just in time for Christmas spending, and retailers predominantly reported stronger than anticipated sales. The first home buyer's grant was doubled to AUD14,000 for existing homes, and tripled to AUD21,000 for new homes. A second, larger economic stimulus package, commonly known as Economic Stimulus Package number two, was announced by the Australian Government in February 2009, with AUD47 billion allocated to help boost the economy (Canstar, 2014). This package included:

- i. AUD14.7 billion for schools
- ii. AUD6.6 billion for 20,000 new homes
- iii. AUD3.9 billion to insulate 2.7 million homes
- iv. AUD890 million for road repairs and infrastructure
- v. AUD2.7 billion in small business tax breaks
- vi. AUD12.7 billion for cash bonuses: AUD950 for every Australian taxpayer who was earning less than AUD80,000 per annum, to be paid out in March and April 2009

The Australian Economic Stimulus packages helped lift house prices for a relatively short period of time from 2009 to 2010. As shown in Figures 4.4 and 4.5, another downturn in house prices for all locations occurred from the beginning of 2011 until the end of 2012. It was during this time that some European countries were facing a Sovereign Debt Crisis. During the same period (2011 to 2012) there was no new Government stimulus packages subsequent to the two stimulus packages implemented after GFC 2008. There was a severe loss of confidence by Australian households in the residential property market (Canstar, 2014). Their caution levels increased as they opted to pay off loans rather than accumulate more debt in the hope of realising a capital gain. This period was called the acceleration of mortgage debt period in Australia (Zappone, 2011).

The median house prices in the selected suburbs in which REIV provided the data sources, demonstrated a trend and pattern consistent with the median house price performance for the entire country; although not similar in magnitude. The residential property market performance in the two selected suburbs exceeded the Melbourne Metropolitan and Australian housing market performance. The consistency of house price trends, and the better performed house prices in the selected locations have provided the much needed platform for the subsequent analysis of the unknown drivers in Australian residential property market in recent time.

4.4. Melbourne Residential Property Market Performance Determinants

The Archer and Ling (1997) model provides a structural approach on property evaluation conducts and enables systematic allocations of relevant economic and financial indicators into the defined Space, Property and Capital markets. This model enables potential key local and overseas determinants be assessed according to their critical relationship in property, space and capital markets instead of merely relying on demand and supply analysis (Higgins, 2013). The adapted Archer and Ling (1997) model, together with the “push & pull” model established in this study, were used to build an economic model showing the best inter-relationship of separate economic variables to house prices.

Part three of the quantitative research involved utilizing three key statistical tests to confirm the validity of the model, namely Correlation matrix Pearson Correlation Coefficient (R^2) methodology, Linear Stepwise Regression and Descriptive Analysis. The nature of the relationship between the variables for determining the drivers of offshore investors’ buying activities in these suburbs was primarily analysed using three primary datasets or 135 data points of house prices, namely house prices in Melbourne Metropolitan, Clayton and Doncaster (DV); 15 datasets or 675 primary data points of economic indicators (IV). The selected traditional economic indicators of acceptable significance were re-entered using lagged data for eight (8) quarters or two (2) years which gave rise to an additional 5,400 lagged data points. These were incorporated in the SPSS analysis for the traditional economic indicators. The completion of this phase enables the analysis of 18 data sets (and 6,210 data points) covering a period of 12 years for observation starting from first quarter of 2002 onwards. All data collected were smoothed using a 4-quarters or one year moving average to avoid seasonal variation. Data analysis in this research covered data collected from 2002 to 2013 and the verification of the model was conducted based on actual median house prices in the second quarter of 2014.

4.4.1. Correlation matrix

This section aims to accomplish the following objective:

To explore the existence of a significant relationship between the economic indicators from the respective Space, Capital and Property markets and the house prices in Melbourne Metropolitan, Clayton and Doncaster.

Nagelkerke (1991) depicted the use of R^2 (coefficient of determination), also called the multiple correlation coefficients. It is well established in classical regression analysis. Its definition as the proportion of variance 'explained' by the regression model makes it useful as a measure of predicting the DVs from the IVs. SPSS software was used to compute the Pearson correlation coefficients, r , along with the significance levels. As per the test criteria set in Chapter 3 - Research Design and Methodology, this quantitative research phase shall establish if there is a significant relationship between the economic indicators and Melbourne Metropolitan, Clayton and Doncaster house prices. The operationalised hypothesis depicted that this study will reject the null hypothesis if there is statistically significant correlation between the economic indicators with Melbourne Metropolitan house prices. The strength and direction of the correlations between house price performance in each and every location and significant influencing economic indicators are identified for both current and lagged eight (8) quarters periods.

4.4.1.1. Metropolitan Melbourne Residential Property Market

Correlations were measured for the Melbourne Metropolitan house prices and the respective economic indicators. The main leading economic indicators and their significant relationship with house prices in Melbourne Metropolitan are summarized in Table 4.3:

Table 4.3: Correlation of Leading Economic Indicators with Melbourne Metropolitan House Prices

Melbourne Metropolitan Property Market Traditional Determinants									
Space Market	Current	Lag (Months)							
		3	6	9	12	15	18	21	24
GDP per capita	-0.22	-0.13	-0.28	-0.41	-0.46**	-0.44	-0.32	-0.14	0.08
Total Employed Labor Force	0.47**	0.28	0.04	-0.91	-0.36*	-0.37*	-0.35*	-0.30	-0.12
Population growth	0.33	0.44**	0.50**	0.51**	0.45**	0.35*	0.35*	0.24	0.12
Net Saving - Current Prices	-0.26	-0.24	-0.06	0.19	0.22	0.14	0.20	0.16	0.10
Net Overseas Migration	-0.51**	-0.44**	-0.26	-0.06	0.16	0.39*	0.36*	0.36*	0.30
Capital Market									
10-year government bond yields	0.76**	0.65**	0.37*	0.05	-0.32	-0.41	-0.38*	-0.27	-0.08
ASX 200 Index	-0.01	0.30	0.34*	0.46**	-0.18	-0.14	-0.27	-0.39*	-0.37*
Exchange Rate	0.49**	0.46**	0.08	-0.21	-0.57**	-0.70**	-0.61**	-0.48**	-0.26
Mortgage Rates	0.45**	-0.01	-0.38*	-0.65**	-0.65**	-0.50**	-0.26	-0.07	0.05
90-day bank bills	0.49**	0.06	-0.33	-0.62**	-0.66**	-0.55**	-0.32	-0.11	0.04
Property Market									
New Housing Supply	0.17	0.24	0.31	0.28	0.24	-0.06	-0.13	-0.33	-0.38*
Building Planning Approvals	0.67**	0.61**	0.42**	0.29	0.01	-0.15	-0.26	-0.28	-0.29
Rent Growth	0.12	0.09	0.10	0.14	0.17	0.18	0.20	0.16	0.14
House Price Index	0.89**	0.78**	0.49**	0.09	-0.24	-0.40	-0.42	-0.28	-0.13
Building Activity-Value of Building Work done (Residential Vic)	0.23	0.13	0.00	-0.12	-0.17	-0.23	-0.28	-0.22	-0.17
** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)									
RED Most significantly correlated at the 0.01 level BLUE Significantly correlated at the 0.01 level GREEN Significantly correlated at the 0.05 level									

Table 4.3 provides the SPSS analysis results depicting the strength of the relationship between the selected economic factors and house prices in the Melbourne Metropolitan property market for the series of 2002-2013, illustrated by the respective r -values. All the leading economic indicators from the respective Space, Capital and Property markets with their correlations readings (r) were analysed and ranked in accordance with the strength of the correlations. The strength of the correlations was depicted between the range of one (1) to negative one (-1), with a correlation matrix closer to one having a stronger correlation and negative one depicting a strong inverse relationship between the dependant and independent variable. These correlation readings (r) are further broken down to (**) which depicts the correlation which are significant at the 0.01 level and (*) depicting the correlations significant at the 0.05 level. Significant correlations between the leading economic indicators and Melbourne Metropolitan house prices as r value were classified according to the lagged periods are summarized in table 4.4 as:

Table 4.4: Pearson Correlation coefficients, r-values and the Lagged Periods for Melbourne Metropolitan House Prices

A Pearson's Correlation was calculated to measure the strength of the linear relationship between Melbourne Metropolitan house prices and the below economic indicators.			
Leading Indicators	Market	r	Periods
The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):			
1 House Price Index(ABS All Australia)	Property Market	0.89	Current
2 10-year Government Bonds Yield	Capital Market	0.76	Current
3 Exchange Rate	Capital Market	-0.70	15 months
4 Building Planning Approvals	Property Market	0.67	Current
5 Mortgage Rate	Capital Market	-0.65	9 months
6 90-days Bank Bills Yield	Capital Market	-0.62	9 months
7 Population Growth	Space Market	0.51	9 months
8 Net Overseas Migration	Space Market	-0.51	Current
9 Total Employed Labour Force	Space Market	0.48	Current
10 GDP per Capita	Space Market	-0.46	12 months
11 ASX 200 Index	Capital Market	0.46	9 months
The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):			
12 New Housing Supply	Property Market	-0.38	24 months
The correlation is statistically insignificant in:			
13 Building Activity-Value of Building Work Done(Residential-Vic)	Property Market	-0.28	18 months
14 Net Saving - Current Prices	Space Market	-0.26	Current
15 Rent Growth	Property Market	0.20	18 months

Embedded Logical Validation:

Based on the significance level depicted by the r-value, the National House Price Index had the most significant correlation value of 0.89. In this study the National House Price Index was used as a benchmark to ensure data validity and not to be used as a determinant. The strong correlation confirmed that the Melbourne Metropolitan house price data collected from REIV were reflective and consistent with the ABS national house prices. Similar validation has been applied in Clayton and Doncaster house prices in the subsequent sections.

Among the leading economic indicators, eleven (11) variables were statistically significant at the 0.01 level (2-tailed) deriving from Capital, Property and Space Markets respectively. 1 variable was statistically significant at the 0.05 level (2-tailed) from Property Market and 3 variables were statistically insignificant from Property and Space Markets.

Significant Relationships

Based on the result from Table 4.4, it can be seen that over the period of 2002 to 2013, there were eleven (11) variables significantly correlated with the house price performance in Melbourne

Metropolitan. Table 4.5 provides the ranking according to their significance level, or r-value as below:

Table 4.5: R-value Rankings for Melbourne Metropolitan Housing Market

	Leading Indicators	r
1	10-year Government Bond Yield	0.76
2	Exchange Rate	-0.70
3	Building Planning Approvals	0.67
4	Mortgage Rate	-0.65
5	90-day Bank Bills Yield	-0.62
6	Population Growth	0.51
7	Net Overseas Migration	-0.51
8	Total Employed Labour Force	0.48
9	GDP per Capita	-0.46
10	ASX 200 Index	0.46
11	New Housing Supply	-0.38

As per table 4.5, 10-year Government Bond Yields and the Foreign Exchange rate were the two most significant indicators in Pearson Correlation Analysis having each attained higher than 0.7 r-value significance level. Building Planning Approvals, Mortgage rate and 90 day Bank Bills Yield achieved above the 0.6 level, with Population Growth and Net Overseas Migration both demonstrating their significant correlations by breaching above 0.5 levels. Notably there were six economic indicators which demonstrated negative correlations with the house prices in Melbourne Metropolitan namely: Foreign Exchange Rate; Mortgage Rate; 90-day Bank Bill Yield; Net Overseas Migration; GDP per Capita; and New Housing Supply. Negative correlations depict that these indicators have inverse relationships with house prices in Melbourne and their rationales were explained in Chapter Three and Appendix I. Among the six negative indicators, Net Overseas Migration and GDP per Capita demonstrated irregular relationships. They were expected to have positive correlations and move in the same direction as the Melbourne house prices. These irregularities shall be assessed in later sections with the analysis of Clayton and Doncaster sub-markets correlation reports and Stepwise Regression analysis to allow a complete analysis result.

Insignificant Relationships

Table 4.4 highlighted that there were three variables that are insignificantly correlated with the house prices in Melbourne Metropolitan, namely Building Activity-Value of Building Work Done in Property Market, Net Saving in Space Market and Rent Growth rate in Property Market. According to the statistical testing, these economic indicators had an insignificant impact or relationship with the house price performance in Melbourne Metropolitan area. Notably the traditional leading

economic indicators such as Net Saving and Rent Growth in Property Market valuation exercises had dropped from the listing and became insignificantly correlated with the house prices in Melbourne Metropolitan.

4.4.1.2. Clayton Residential Property Market

The correlations analysis was repeated for the Clayton housing market. The leading economic variables and the significance of their relationship with house prices in Clayton are tabulated as follows in Table 4.6:

Table 4.6: Correlation of Leading Economic Indicators with Clayton House Prices

Clayton Property Market Traditional Determinants									
A Space Market	Current	Lag (Months)							
		3	6	9	12	15	18	21	24
1 GDP per capita	0.20	0.16	0.05	-0.08	-0.15	-0.12	10.00	0.21	0.39*
2 Total Employed Labor Force	0.43**	0.24	0.10	-0.03	-0.17	-0.19	-0.22	-0.15	0.06
3 Populations growth	0.26	0.31	0.32	0.28	0.19	0.07	-0.06	-0.18	-0.27
4 Net Saving - Current Prices	0.03	-0.09	0.09	0.13	0.30	0.01	0.09	0.25	-0.06
5 Net Overseas Migration	-0.17	-0.06	0.19	0.40**	0.53**	0.57**	0.47**	0.32	0.25
B Capital Market									
1 10-year bank bonds	0.64**	0.51**	0.29	0.00	-0.20	-0.26	-0.22	-0.13	0.10
2 ASX 200 Index	0.07	0.31	0.31	0.36*	0.23	-0.02	-0.18	-0.24	-0.20
3 Exchange Rate	0.29	0.29	0.00	-0.24	-0.42**	-0.63**	-0.51**	-0.35**	-0.04
4 Mortgage Rates	0.26	-0.08	-0.31	-0.48**	-0.40**	-0.22	-0.02	0.28	0.29
5 90-days bank bills	0.33	0.01	-0.26	-0.46**	-0.43**	-0.27	-0.05	0.19	0.31
C Property Market									
1 New Housing Supply	0.19	0.18	0.15	0.12	-0.10	-0.23	-0.26	-0.43**	-0.33
2 Building Planning Approvals	0.51**	0.33	0.17	0.01	-0.30	-0.28	-0.44**	-0.38**	-0.28
3 Rent Growth	0.08	-0.01	-0.03	-0.08	-0.12	-0.15	-0.22	-0.26	-0.31
4 House Price Index	0.84**	0.64**	0.31	-0.06	-0.35**	-0.44**	-0.39**	-0.24	-0.11
Building Activity-Value of Building									
5 Work done (Residential Vic)	-0.02	-0.01	-0.33	-0.29	-0.44**	-0.46**	-0.40**	-0.39**	-0.26
** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)									
<div> <div>RED</div> <div>BLUE</div> <div>GREEN</div> </div> <div> Most significantly correlated at the 0.01 level Significantly correlated at the 0.01 level Significantly correlated at the 0.05 level </div>									

Significant correlations at 0.01 level (2-tailed) are highlighted in bold (**) and bold (*) at 0.05 significance level are shown in Table 4.5 above. Only two traditional economic indicators from Space market, namely Total Labour Employed Force and Net Overseas Migration were significantly correlated. The majority of the significant correlated economic indicators were from Capital and Property market highlighting the significance of Capital Market and Property Market driving the house prices in Clayton. Table 4.7 shows the summary significant correlations between the leading economic indicators and Clayton house prices as r-value:

Table 4.7: Pearson Correlation coefficients, r values and the Lagged Periods for Clayton House Prices

A Pearson's Correlation was calculated to measure the strength of the linear relationship between Clayton house prices and the below economic indicators.			
Leading Indicators	Market	r	Periods
The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):			
1 House Price Index(ABS All Australia)	Property Market	0.84	Current
2 10-year Government Bonds Yield	Capital Market	0.64	Current
3 Exchange Rate	Capital Market	-0.63	15 months
4 Net Overseas Migration	Space Market	0.57	15 months
5 Building Planning Approvals	Property Market	0.51	Current
6 Mortgage Rate	Capital Market	-0.48	9 months
7 Building Activity-Value of Building Work Done(Residential-Vic)	Property Market	-0.46	18 months
8 90-days Bank Bills Yield	Capital Market	-0.46	9 months
9 New Housing Supply	Property Market	-0.43	24 months
10 Total Employed Labour Force	Space Market	0.43	Current
The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):			
11 GDP per Capita	Space Market	0.39	24 months
12 ASX 200 Index	Capital Market	0.36	9 months
The correlation is statistically insignificant in:			
13 Population Growth	Space Market	0.32	9 months
14 Net Saving - Current Prices	Space Market	0.30	12 months
15 Rent Growth	Property Market	-0.22	18 months

Among the leading economic indicators, nine variables (excluding House Price Index) are statistically significant at the 0.01 level (2-tailed) deriving from Capital, Property and Space Markets respectively; compared to 11 significant variables in Melbourne Metropolitan market. Two variables are statistically significant at the 0.05 level (2-tailed) from Property and Space Markets. Three variables are statistically insignificant from Property and Space Markets.

Significant Relationships

From the analysis results of Table 4.7, there were 11 variables significantly correlated with the house price performance in Clayton over the period from 2002 to 2013. Table 4.8 ranked the leading economic indicators according to their significance level, or r -value, as below:

Table 4.8: R-value Rankings for Clayton Housing Market

Leading Indicators	r
1 House Price Index	0.84
2 10-year Government Bond Yields	0.64
3 Exchange Rate	-0.63
4 Net Overseas Migration	0.57
5 Building Planning Approvals	0.51
6 Mortgage Rate	-0.48
7 Building Activity-Value of Building Work Done(Residential-Vic)	-0.46
8 90-day Bank Bills Yield	-0.46
9 New Housing Supply	-0.43
10 Total Employed Labour Force	0.43
11 GDP per Capita	0.39
12 ASX 200 Index	0.36

Similar to the Melbourne Metropolitan property market, 10-Year Government Bond Yields and the Foreign Exchange Rate are again ranked highest achieving above 0.6 correlation strength or r-value. Net Overseas Migration had emerged as the third most significantly correlated indicator in Clayton property market. This is consistent with research findings in section 4.2.1 in this Chapter that Clayton attracted the most overseas settlers in Victoria (ABS, 2014).

Notably, there are only five economic indicators which demonstrated negative correlations with the house prices in Clayton, as compared to six in Melbourne Metropolitan residential property market. These five negative correlated indicators were Foreign Exchange Rate, Mortgage Rate, Building Activity, 90-day Bank Bill Yields, and New Housing Supply. Both Net Overseas Migration and GDP per Capita were showing positive correlations instead of negative relationship as in Melbourne Metropolitan property market. Negative relationships for rest of the five economic indicators with the Clayton house prices are regular and logical.

Insignificant Relationships

Table 4.7 highlighted that there are three variables that were insignificantly correlated with the house prices in Clayton. Similar to Melbourne Metropolitan property market, both Net Saving and Rent Growth rate, which were anticipated as key economic indicator for property market performance, were insignificantly correlated with the house prices in Clayton. Population growth had also dropped to the insignificant correlation category for the Clayton housing market. According to the statistical testing, these economic indicators had an insignificant impact or relationship with the house price performance in Clayton area.

4.4.1.3. Doncaster Residential Property Market

The same correlation analysis was performed on the Doncaster housing market and the leading traditional economic variables and the significance of their relationship with house prices in Doncaster are summarised as follow in Table 4.9:

Table 4.9: Correlation of Leading Economic Indicators with Doncaster House Prices

Doncaster Property Market Traditional Determinants									
	Current	3	6	9	Lag (Months)				
					12	15	18	21	24
Space Market									
GDP pe capita	0.07	-0.04	-0.17	-0.26	-0.31	-0.26	-0.12	0.09	0.32
Total Employed Labor Force	0.45**	0.22	-0.08	-0.28	-0.37	-0.40	-0.27	-0.10	0.07
Populations growth	0.23	0.32	0.38*	0.36*	0.30	0.20	0.07	-0.05	-0.15
Net Saving - Current Prices	0.03	-0.17	0.06	0.16	0.16	-0.01	0.15	0.16	-0.01
Net Overseas Migration	-0.27	-0.19	-0.07	-0.25	0.37*	0.45**	0.45**	0.33	0.32
Capital Market									
10-year bank bonds	0.66**	0.47**	0.15	-0.20	-0.31	-0.32	-0.26	-0.18	-0.08
ASX 200 Index	0.23	0.46**	0.45**	0.27	0.09	-0.15	-0.38	-0.24	-0.13
Exchange Rate	0.45**	0.21	-0.15	-0.45**	-0.65**	-0.61**	-0.50**	-0.27	-0.07
Mortgage Rates	0.13	-0.21	-0.48**	-0.55**	-0.43**	-0.29	-0.10	0.03	0.15
90-days bank bills	0.19	-0.15	-0.44**	-0.55**	-0.46**	-0.33	-0.15	0.00	0.14
Property Market									
New Housing Supply	0.16	0.24	0.29	0.08	0.01	-0.30	-0.40*	-0.29	-0.25
Building Planning Approvals	0.54**	0.46**	0.25	-0.01	-0.22	-0.30	-0.39*	-0.38	-0.32
Rent Growth	0.02	0.00	-0.03	-0.03	-0.03	-0.06	-0.05	-0.09	-0.10
House Price Index	0.84**	0.55**	0.18	-0.17	-0.37	-0.42	-0.37	-0.28	-0.19
Building Activity-Value of Building Work done (Residential Vic)	0.13	-0.11	-0.22	-0.29	-0.39*	-0.37*	-0.46**	-0.25	-0.20
** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)									
<div>RED</div> Most significantly correlated at the 0.01 level <div>BLUE</div> Significantly correlated at the 0.01 level <div>GREEN</div> Significantly correlated at the 0.05 level									

Table 4.9 shows that Doncaster residential property market behaved similarly to Clayton housing market with only Total Employed Labour Force and Net Overseas Migration from the Space market proving significantly correlated. The selected suburbs seems to perform in a similar manner to previously identified significant drivers such as net saving, population growth and income growth (GDP per capita) which did not emerge as significantly correlated. In contrast, determinants that closely associated with offshore investment such as Net Overseas Migration, 10-year bank bonds and Foreign exchange rates had emerged as strong contenders in the correlation analysis. See Table 4.10 for the significant correlations between the leading economic indicators and Doncaster house prices:

Table 4.10: Pearson Correlation Coefficients, r-values and the Lagged Periods for Doncaster House Prices

A Pearson's Correlation was calculated to measure the strength of the linear relationship between Doncaster house prices and the below economic indicators.			
Leading Indicators	Market	r	Periods
The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):			
1 House Price Index(ABS All Australia)	Property Market	0.84	Current
2 10-year Government Bonds Yield	Capital Market	0.66	Current
3 Exchange Rate	Capital Market	-0.65	12 months
4 Building Planning Approvals	Property Market	0.55	Current
5 90-days Bank Bills Yield	Capital Market	-0.55	9 months
6 Mortgage Rate	Capital Market	-0.48	9 months
7 Building Activity-Value of Building Work Done(Residential-Vic)	Property Market	-0.46	18 months
8 ASX 200 Index	Capital Market	0.46	3 months
9 Total Employed Labour Force	Space Market	0.45	Current
10 Net Overseas Migration	Space Market	0.45	15 months
The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):			
11 New Housing Supply	Property Market	-0.40	18 months
12 Population Growth	Space Market	0.38	6 months
The correlation is statistically insignificant in:			
13 GDP per Capita	Space Market	0.32	24 months
14 Net Saving - Current Prices	Space Market	0.16	12 months
15 Rent Growth	Property Market	-0.10	24 months

In a similar fashion to Clayton's housing market, Table 4.10 shows that drivers closely associated with offshore investments had emerged as strongly within the 11 most significant correlated indicators, for example 10-year Government Bond Yields, Exchange Rate and Net Overseas Migration. Two variables were statistically significant at the 0.05 level (2-tailed) namely New Housing Supply and Population Growth. The most noteworthy finding from the correlation analysis in both Clayton and Doncaster housing market is that previously significant determinants in residential property market such as GDP per Capita, Net Saving and Rent Growth reduced their influence.

Significant Relationships

Table 4.10 depicted the 12 most significantly correlated determinants with the house prices performance in Doncaster over the period 2002 to 2013. Table 4.11 ranked them according to their significance levels, or r-value:

Table 4.11: **R-value Rankings for Doncaster Housing Market**

Leading Indicators	<i>r</i>
1 House Price Index(ABS All Australia)	0.84
2 10-year Government Bond Yields	0.66
3 Exchange Rate	-0.65
4 Building Planning Approvals	0.55
5 90-day Bank Bills Yield	-0.55
6 Mortgage Rate	-0.48
7 Building Activity-Value of Building Work Done(Residential-Vic)	-0.46
8 ASX 200 Index	0.46
9 Total Employed Labour Force	0.45
10 Net Overseas Migration	0.45
11 New Housing Supply	-0.40
12 Population Growth	0.38

Table 4.11 showed that 10-Year Government Bond Yields and Foreign Exchange Rate emerged as the highest ranked economic indicators in Doncaster residential property market. This is the same as Melbourne Metropolitan and Clayton. Similar correlation pattern was observed in the three property markets in this study consistently. Determinants that were closely associated with offshore investment such as 10-year Government Bond Yield, Foreign Exchange Rate and Net Overseas Migration had emerged as strong contenders as the key drivers in the housing market performance at the expense of traditional drivers such as population growth, rent growth and population growth. Two traditional indicators remained significantly correlated; Building Planning approvals and Mortgage rate. The rationale and expected matrix outcomes for all the indicators are listed in Appendix I.

4.4.2. Stepwise Regression

This section aims to accomplish the following objectives:

To explore and test the significant determinants of the various economic indicators from the respective Space, Capital and Property markets have on the house prices in Melbourne Metropolitan, Clayton and Doncaster and to formulate three predictive models using linear regression equations for the three housing markets.

SPSS software was used to compute Linear Stepwise Regression to fit a linear regression line using the ordinary least squares method. The idea of this method is to minimise the Sum of Squared distances, *S*, for each variables pair from a fitted regression line. The regression line that minimises the *S*-value is known as the Line of Best Fit. Linear regression also assumes that the relationship between the predictor (House Prices) and dependant variables (indicators from Space, Capital and Property Markets) is explained by a linear relationship. R-square (R^2) reflects the proportion of

variability in the dependant variables that can be explained by a linear relationship with the predictor variable (house prices). A simple representation of the Line of Best Fit is as follow:

House Price Movement_t =

$$f(\text{Space datasets } t, \dots, t-2, \dots) + (\text{Capital datasets } t, \dots, t-2, \dots) + (\text{Property datasets } t, \dots, t-2, \dots)$$

Three key statistical tests were used to confirm the validity of these models, namely

i. Coefficient of Multiple determination (R^2)

R^2 reflects the proportion of variability in the dependent variable that can be explained by a linear relationship with the predictor variables. The R^2 measures the goodness of fit for linear regression. The better the line fits the data, i.e. the closer the data point sits on the line, the higher R^2 will be. If there is no linear relationship between the predictor and the dependent variable, $R^2 = 0$ or close to it.

ii. Sig-value or p-value

If Sig-value or $p < 0.001$ and as the p-value is less than 0.05 level of significance, we reject H_0 . There is statistically significant evidence that the data fits a linear regression model.

iii. Statistical test for bias (t-test)

T-test is a measure to determine if there is no bias and the errors are normally, or nearly normally, distributed. The "t" statistic is computed by dividing the estimated value of the parameter by its standard error. This statistic is a measure of the likelihood that the actual value of the parameter is not zero. The larger the absolute value of t, the less likely that the actual value of the parameter could be zero.

iv. Durbin Watson Statistics (DW)

This is a test to detect patterns in a series of errors. The "Durbin-Watson test for autocorrelation" is a statistical model that indicates the likelihood that the deviation (error) values for the regression have a first-order autoregression component. The regression models assume that the error deviations are uncorrelated. The Durbin-Watson Statistic is used to test for the presence of serial correlation among the residuals (Durbin and Watson, 1950). As a general rule of thumb, the residuals are uncorrelated if the Durbin-Watson statistic is approximately 2. A value close to 0 indicates strong positive correlation, while a value of 4 indicates strong negative correlation.

The selected lagged economic variables were re-entered using all lagged data from three months to 2 years to establish the close fit otherwise erroneously eliminated due to timing difference between the Dependant Variables and the Independent Variables

As per the test criteria set in the Chapter 3, Research Design and Methodology, the main objective of this section is to establish if the economic indicators fit the linear regression model with house prices in Melbourne Metropolitan, Clayton and Doncaster. The Linear Stepwise Regression model between the house prices performance in each and every location and significant influencing economic indicators are identified for both current and lagged eight (8) quarters period.

4.4.2.1. Melbourne Metropolitan Residential Property Market

The result of stepwise multiple regression analysis presents the complex interactions of the all the leading economic variables in an effort to provide an acceptable econometric model representing future house prices in Melbourne Metropolitan. The application of a stepwise multiple regression on the lagged significant leading economic variables against the house prices in Melbourne Metropolitan, taking off the comparison variable of House Price Index, is presented in Table 4.12:

Table 4.12: Single Equation Regression Model for Melbourne Metropolitan Residential Property Market

Melbourne Metropolitan Variables in Model		$R^2 = 91\%$					
Variables	Description	Lagged	B-value	Coefficient	T-test	Sig.	DW test
1 10BondCurr	10-year Government Bond Yield	Current	0.28	0.554	9.361	0	
2 BuiltCurr	Building Planning Approvals	Current	0.16	0.315	5.144	0	
3 Forex5	Foreign Currency Exchange	15 months	-0.23	-0.312	-5.039	0	
4 GDP6	GDP Growth	18 months	-1.64	-0.195	-3.451	0.002	2.595

Multiple Linear Regression Equation =

$$2.39 + 0.28(10\text{BondCurrent}) + 0.16(\text{BuiltCurr}) - 0.23(\text{Forex5}) - 1.64(\text{GDP6})$$

The model Equation:

Melbourne Metropolitan House Prices =

$$2.39 + 0.28(10\text{BondCurrent}) + 0.16(\text{BuiltCurr}) - 0.23(\text{Forex5}) - 1.64(\text{GDP6})$$

The adequacy of the equation was reflected in the high “R²” readings (91%) and the significant t-values for each economic variable. Linear regression was established in the relationship between Melbourne Metropolitan house prices (DV) and the indicators from Space, Capital and Property

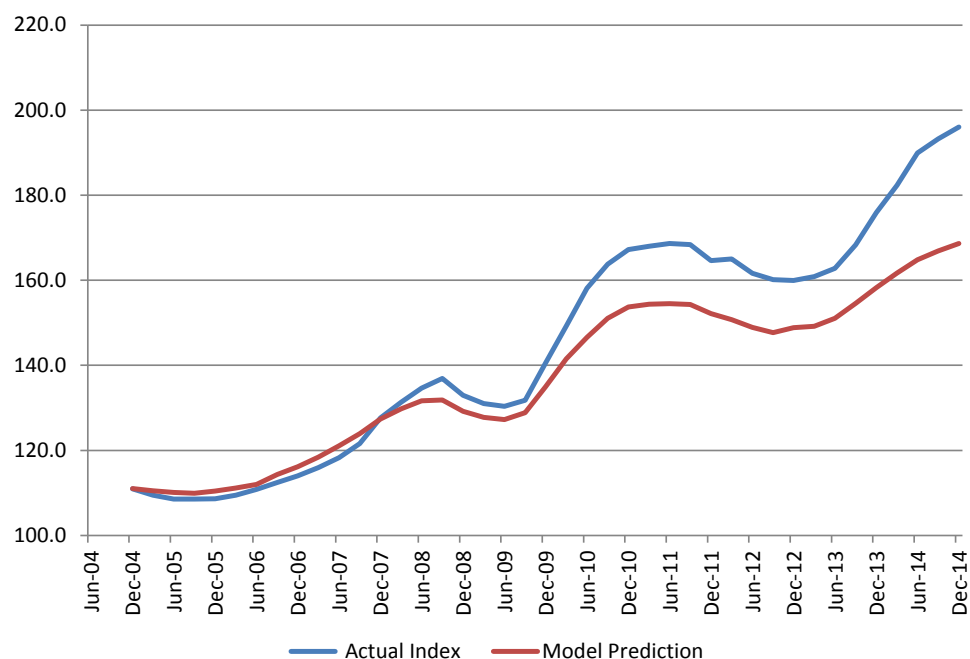
Markets (IV) and weather the relationship could be explained by a linear, or straight line, relationship. The IVs in the predictive model were consistent with the result of Pearson Correlation analysis in Section 4.4.1 on Melbourne Metropolitan residential property market. Three independent variables that demonstrated both the characteristics as the major determinants in regression analysis and significantly correlated for the house prices in Melbourne Metropolitan are listed in table 4.13:

Table 4.13: Significant Determinant in Melbourne Metropolitan

	Determinants	Period	Markets	B-Value	Coefficient
1	10-year Government Bond Yield	Current	Capital	0.28	0.554
2	Building Planning Approvals	Current	Property	0.16	0.315
3	Foreign Currency Exchange	15 months	Capital	-0.23	-0.312
4	GDP Growth	18 months	Space	-1.64	-0.195

Figure 4.6 shows the graph plotted comparing the Melbourne Metropolitan house prices indices calculated using the regression equation compared with the actual Melbourne Metropolitan house price fluctuations:

Figure 4.6: Melbourne Metropolitan House Prices Calculated Based on Regression Equation



To validate the calculated regression equation, the forecast house prices in Melbourne Metropolitan were further compared with the recent house prices of Melbourne Metropolitan, as per REIV data up to the second quarter of 2014 in Table 4.14 as below:

Table 4.14: Forecast Results for Second Quarter 2014

Melbourne Metropolitan House Price Index			
Period	Actual	Model Prediction	Difference
Jun-13	162.82	151.05	-7.23%
Sep-13	168.33	154.56	-8.18%
Dec-13	175.88	158.24	-10.03%
Mar-14	182.34	161.72	-11.31%
Jun-14	189.94	164.84	-13.21%

The forecasted house price indices for Melbourne Metropolitan using the regression equation demonstrated a relatively lower increase for the 12 months assessment periods from December 2013 to December 2014. The Model prediction derived a 9.13% growth in the 12 month period (from 151.05 to 164.84) and the actual index for house prices in Melbourne Metropolitan in 2014 showed 16.66% increase (162.80 to 189.90). There was a -13.21% difference when comparing the actual index and the prediction on June 2014 data. This regression equation is considered inaccurate in forecasting the residential property market performance in Melbourne Metropolitan until the period ended June 2014 with more than 13% difference. The subsequent sections strive to derive a more accurate model prediction by introducing non-traditional socio-economic factors.

4.4.2.2. Clayton Residential Property Market

The application of a stepwise multiple regression on the lagged significant leading economic variables was repeated for Clayton to explore the manner of the interactions of the all the leading economic indicators against the housing performance. An econometric model representing future house prices in Clayton is presented in Table 4.15:

Table 4.15: Single Equation Regression Model for Clayton Residential Property Market

Clayton		R ² = 93.8%					
Variables	Description	Lagged	B-value	Coefficient	T-test	Sig.	DW test
1 10BondCurr	10-year Government Bond Yield	Current	0.552	0.579	8.699	0	
3 NOM3	Net Overseas Migration	9 months	0.352	0.572	6.005	0	
4 Built\$1	Building Activity-Residential Built(\$)	3 months	1.177	0.551	7.719	0	
5 GDPCurrent	GDP per Capita	Current	6.585	0.35	5.918	0	
6 Save1	Net Saving - Current Price	3 months	-0.038	-0.206	-3.601	0.001	
7 MRate3	Mortgage Rate	3 months	-0.35	-0.343	-5.655	0	
8 NewHse8	New Housing Supply	24 months	0.287	0.245	4.021	0	
9 Forex7	Foreign Exchange	21 months	-0.208	-0.156	-2.393	0.024	2.464

Multiple Linear Regression Equation =
"-1.219+0.552(10BondCurr)+0.352(NOM3)+1.177(Built\$1)+6.585(GDPCurr)-0.038(Save1)-0.35(MRate3)+0.287(NewHse8)-0.208(Forex7)"

The model Equation:**Clayton House Prices =**

$$-1.219 + 0.552(10\text{BondCurr}) + 0.352(\text{NOM3}) + 1.177(\text{Built}\$1) + 6.585(\text{GDPCurr}) - 0.038(\text{Save1}) - 0.35(\text{MRate3}) + 0.287(\text{NewHse8}) - 0.208(\text{Forex7})$$

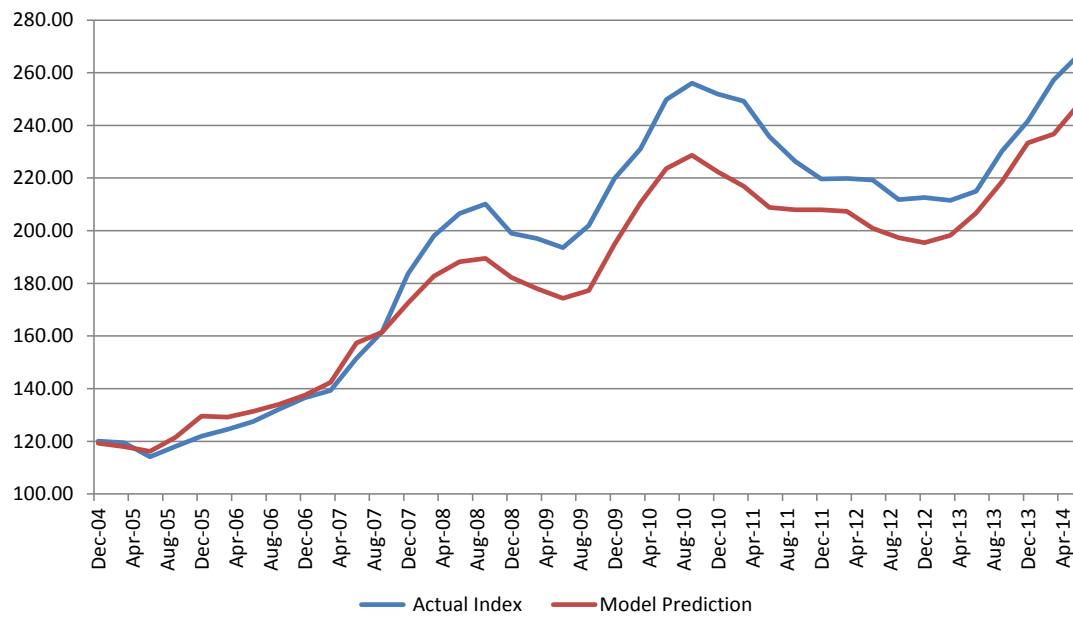
An econometric regression model was established for Clayton residential property market with a relatively high “R²” reading (93.8% range) and the significant t-values for each economic variable. Similar to the previous section, the key drivers in this predictive model were compared with the result of Pearson Correlation analysis in Section 4.4.1 on Clayton residential property market to solicit consistency. Notably among the 11 significant correlated variables established in the correlation analysis for Clayton market, seven of them had been fitted in this regression line. Table 4.16 below depicted three key determinants that emerged significant in both regression and correlation analysis:

Table 4.16: Significant Determinants in Clayton

Determinants	Periods	Markets	B-Value	Coefficient
1 10 Year Government Bond Yields	Current	Capital Market	0.552	0.579
2 Net Overseas Migration	9 months	Space Market	0.352	0.572
3 Building Activities(\$) – Residential Building	3 months	Property Market	1.177	0.551

Figure 4.7 shows the graph comparing the Clayton house prices indices using the regression equation with the actual Clayton house prices fluctuations:

Figure 4.7: Clayton House Prices Calculated Based on Regression Equation



To validate the calculated regression equation, the forecast house prices in Clayton were compared with the recent house prices of Clayton, as per REIV data up to the second quarter of 2014 in Table 4.17 as below:

Table 4.17: Forecast Results for Second Quarter 2014

Clayton House Price Index			
Period	Actual	Model Prediction	Difference
Jun-13	214.99	206.78	-3.82%
Sep-13	230.16	218.59	-5.03%
Dec-13	241.61	233.32	-3.43%
Mar-14	257.29	236.67	-8.01%
Jun-14	266.99	248.25	-7.02%

There was a surge in Clayton actual house prices over the period of 12 months from June 2013 (214.99) to June 2014 (266.99) by 24.19% in the Clayton. The forecasted house price indices using the regression equation had shown similar escalation although in a smaller quantum (20.05% growth in 12 months).

The reading of the latest index for the second quarter in 2014 shows a difference of just slightly above 5% of -7.02% compared to the actual house price index. The subsequent readings for this series are believed to be lower in the prediction model. This regression equation for Clayton, based on the traditional economic indicators, provides a relatively accurate forecast for the residential property market performance in Clayton. The subsequent sections intend to establish a more accurate forecasting model by incorporating the non-traditional social economic factors.

4.4.2.3. Doncaster Residential Property Market

In the final regression analysis on traditional economic indicators, stepwise multiple regression analysis is applied to Doncaster residential property market. Besides providing an analysis on the interactions of the all the traditional economic indicators, the application regression modelling had provided a predictive model presented in Table 4.18:

Table 4.18: **Single Equation Regression Model for Doncaster Residential Property Market**

Doncaster		R ² = 83%					
Variables	Description	Lagged	B-value	Coefficient	T-test	Sig.	DW test
1 10BondCurr	10-year Government Bond Yield	Current	0.160	0.221	2.024	0.052	
2 ASX6	ASX 200 Index	18 months	-0.129	-0.306	-3.231	0.003	
3 Built\$4	Building Activity-Residential Built(\$)	12 months	-0.471	-0.296	-3.369	0.002	
4 EmpCurr	Employment Growth	Current	5.994	0.5	4.617	0	
5 MRate1	Mortgage Rate	3 months	-0.341	-0.443	-4.034	0	
6 Forex6	Exchange Rate	18 months	-0.281	-0.278	-2.685	0.012	2.71

Multiple Linear Regression Equation =
 $0.17 + 0.160(10\text{BondCurr}) - 0.129(\text{ASX6}) - 0.471(\text{Built}\$4) + 5.994(\text{EmpCurr}) - 0.341(\text{MRate1}) - 0.281(\text{Forex6})$

A linear regression line was successfully established with a relatively significant “R²” reading (83%) and the significant t-values for each economic variable identified. The significant independent variables in Doncaster forecasting model are consistent with the result of Pearson Correlation analysis in Section 4.4.1 on Doncaster residential property market with six of them fitting on the regression line. Among the significant correlated economic indicators identified by the correlation and regression analysis, three significant independent variables are identified and in Table 4.19 below:

Table 4.19: **Significant Determinants in Doncaster**

Determinants	Periods	Markets	B-Value	Coefficient
1 10 Year Government Bond Yields	Current	Capital Market	0.16	0.221
2 Employment Growth	Current	Space Market	5.994	0.5
3 Mortgage Rate	3 months	Capital Market	-0.341	-0.443

Figure 4.8 shows the graph plotted comparing the Doncaster house prices indices using the regression equation with the actual Doncaster house prices fluctuations. Actual median house prices from March 2014 to December 2014 were included in this analysis to compare with the mode prediction to validate if the model provides satisfactory forecasting into 2014:

Figure 4.8: Doncaster House Prices Calculated Based on Regression Equation



The model developed fitted accurately and provides a similar trend for the housing index in Doncaster when compared with the actual median house prices from 2002 to 2013. However as represented in Figure 4.8, the model prediction did not provide an accurate projection subsequent to 2013. To further validate the calculated regression equation, the forecast house prices in Doncaster are compared with the recent house prices of Doncaster, as per REIV data up to the final quarter of 2014 in Table 4.20 as below:

Table 4.20: Forecast Results for Second Quarter 2014

Doncaster House Price Index			
Period	Actual	Model Prediction	Difference
Jun-13	211.6	208.99	-1.23%
Sep-13	217.6	216.10	-0.69%
Dec-13	228.0	225.47	-1.11%
Mar-14	234.4	227.78	-2.82%
Jun-14	239.9	228.50	-4.74%

There was a surge in Doncaster house prices over the period of 12 months from June 2013 to June 2014 by 13.36% (from 211.6 to 239.9) in the actual Doncaster house price index. The forecasted house price indices for Doncaster using the regression equation demonstrated a lower increase for the 12 months validation periods (9.34% growth in 12 months) compared to the actual house price index in Doncaster. Due to the slower growth projected by the model, the gap between the actual house price index and the model prediction was widening towards 2014 resulting in the bigger

difference in the second quarter 2014 of -4.74%. Based on the traditional economic indicators, the model provides an accurate forecast for the residential property market performance in Doncaster until 2013 but not for the later part of the data series in 2014.

4.4.3. Discussion

Across all the forecasting models established for the Melbourne Metropolitan, Clayton and Doncaster residential property markets based on traditional economic indicators, factors associated with offshore investments had emerged as the dominant determinants among the traditional economic indicators. Factors closely associated with foreign investments such as 10-year Government Bond Yields (10Bond) and Foreign Currency Exchange (Forex) consistently emerged as the leading determinants across all the residential property markets under the assessment. Their significance, highlighted by both high r-value (Correlation analysis) and b-value (Regression analysis) overtook the importance of other local determinants such as Mortgage Rate (MRate) and Building Activity on Residential Properties (Built\$). Previously regarded as crucial residential property determinants such as rent growth, GDP per capita, net saving, population growth appeared less significant in their associations with the property market performance in all the property markets under the assessment.

According to Bowe (2012), Australia's second largest export is actually Australian Commonwealth Government Bonds (ACGBs). In the 12 months through June 2012, Australia sold AUD58 billion worth of ACGBs to foreign investors, which exceeds the AUD48 billion worth of coal exported and is second only to the AUD85 billion of iron ore exports over the same period. As at June 2015, the Australian Office of Financial Management (AOFM, 2015) reported that approximately 65.2% of the Australian Government Securities (Treasury Bonds, Treasury Indexed Bonds, and Treasury Notes) were in the hands of foreign investors. The substantial extent of Australia's sovereign bond exports contributed to the resilience of Australia's currency without providing the same direct economic benefits as its other large exports during the assessment period. Australia's AAA/Aaa rating still has a 'stable outlook'. These foreign investors see Australia as offering an attractive opportunity when compared to other developed markets globally. However, the performance of ACGBs was subjected to adversity in recent times subsequent to the Australian dollar's devaluation from the highest level of USD 1.30 in 2014 to USD 0.75 in June 2015. Australian bonds still offer investors a positive real return. However, for foreign investors to obtain this real return, the currency must remain unhedged.

A recent development in Australian immigration policies has simultaneously impacted the ACGBs' performance. As mentioned in the first Chapter, the recent Business Innovation and Investment

Provisional visa subclass 188 requires visa holders to own and manage a new or existing business in Australia, or to invest in Australia. The Australian Government Department of Immigration and Border Protection (DIBP, 2015) defines the four main streams of this visa as:

- i. **Business Innovation stream:** for people with business skills who want to establish, develop and manage a new or existing business in Australia. Applicants must be nominated by a state or territory government.
- ii. **Investor stream:** for people who want to make a designated investment of at least AUD1.5million in an Australian state or territory and maintain business and investment activity in Australia. Applicants must be nominated by a state or territory government.
- iii. **Significant Investor stream:** for people who are willing to invest at least AUD5million into complying significant investments in Australia and want to maintain business and investment activity in Australia. Applicants can be nominated by a state or territory government or Austrade on behalf of the Australian government.
- iv. **Premium Investor stream:** for people who are willing to invest at least AUD15million into complying premium investments in Australia and want to maintain business and investment activity in Australia. Applicants must be nominated by Austrade on behalf of the Australian government.

Source: DIBP 2015

All visa holders are required to invest substantial amounts, varying from AUD1.5 million to AUD5 million, into a designated investment in a State or Territory Government security using unencumbered funds accumulated from qualifying businesses or eligible investments and be prepared to hold that investment for at least four years from date of issue in their nominating state or territory. Although the investor schemes were relatively new immigration policies, it is believed that the migration visa requirement would have partly contributed to the Bond market favourable performance.

The significant negatively correlated relationship between the Foreign Exchange Rate (Forex) and the Melbourne residential property market is consistent with the overseas investment stratagem in which Australian assets became more economically to acquire when the Australian dollar is devalued against other foreign currencies and particularly relevant to holding long terms assets in Australia such as property. It is noteworthy that Net Overseas Migration (NOM) emerged as significant in Clayton, consistent with the survey conducted by ABS (2014) that Clayton attracted the largest number of overseas migrant settlements in Victoria.

4.5. Melbourne Residential Property Market Performance Non-traditional Determinants

Section 4.4 presented the major determinants for the housing market in Melbourne Metropolitan, Clayton and Doncaster. It was established that traditional economic indicators closely associated with foreign investments in Australia were ranked significantly higher than the traditional economic indicators in both the correlation matrix and regression analysis. Alongside the evaluation of traditional determinants, two non-traditional determinants from Space Market, namely International Student Enrolments (Education) and Overseas Visitors to Australia (Residential Tourism) were introduced into this section. Besides statistically exploring the significance of these new emerging determinants discovered in the literature review, the interactions between the two new factors with the existing traditional economic indicators are analysed in this section. In summary, this study intends to explore the significance of two non-traditional social economic factors that had potentially played a role in driving offshore investors to invest in Australian residential property beside all the traditional determinants illustrated in Section 4.4.

4.5.1. Correlation Matrix Including Non-traditional Determinants

4.5.1.1. Education – International Student Enrolments

Correlations were measured for Melbourne Metropolitan, Clayton and Doncaster house prices and the Victorian overseas student enrolment data for all sectors (schools, Vocational Education, Higher Education and English Language Intensive Courses for Overseas Students (ELICOS)). The variable of International Student Enrolments, herein after depicted as Education, and the significance of its relationship with house prices in Melbourne Metropolitan, Clayton and Doncaster are summarized in table 4.21:

Table 4.21: Correlation of Foreign Student Enrolments with Melbourne Metropolitan, Clayton and Doncaster House Prices

		Lag (Months)							
	Current	3	6	9	12	15	18	21	24
Melbourne Metropolitan	0.25	0.34*	0.39*	0.37*	0.32	0.23	0.16	0.07	-0.01
Clayton	0.51**	0.50**	0.46**	0.39*	0.25	0.13	-0.02	-0.12	-0.16
Doncaster	0.39**	0.42**	0.41**	0.31	0.22	0.09	0.01	-0.02	-0.12
** Correlation is significant at the 0.01 level (2-tailed)			RED	Most significantly correlated at the 0.01 level					
* Correlation is significant at the 0.05 level (2-tailed)			BLUE	Significantly correlated at the 0.01 level					
			GREEN	Significantly correlated at the 0.05 level					

Table 4.21 shows the summary analysis of Education in Australia. Education was significantly correlated with house prices in Melbourne Metropolitan, Clayton and Doncaster residential property markets for the series of 2002-2013. Significant correlations between Education in Victoria

and house prices as r-values are further classified according to the lagged periods as listed in Table 4.22 below:

Table 4.22: International Student Enrolment Pearson Correlation coefficients, r values and the Lagged Periods Analysis

Foreign Student Enrolments - Victoria	Market	r	Periods
<u>Correlation is significant at the 0.01 level (2-tailed)</u>			
1 Clayton	Non-traditional	0.51	Current
2 Doncaster	Non-traditional	0.42	3 months
<u>Correlation is significant at the 0.05 level (2-tailed)</u>			
1 Melbourne Metropolitan	Non-traditional	0.39	6 months

Table 4.22 depicts that there is statistically significant correlations between Education and all the property markets tested. Foreign student enrolment in Victoria was statistically significant at the 0.01 level (2-tailed) with the house prices in both Clayton and Doncaster and 0.05 level (2-tailed) with the house prices in Melbourne Metropolitan. In summary, Education was statistically significantly correlated to all the property markets in these three locations. Table 4.23 to 4.25 illustrate the rank analysis of Education comparing correlation significance (r-value) with the traditional economic indicators in Melbourne Metropolitan, Clayton and Doncaster:

Table 4.23: Foreign Student Enrolments Ranking According to r-value in Melbourne Metropolitan

Leading Indicators	Market	r	Periods
<u>The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):</u>			
1 House Price Index	Property Market	0.89	Current
2 10-year Government Bonds Yield	Capital Market	0.76	Current
3 Exchange Rate	Capital Market	-0.70	15 months
4 Building Planning Approvals	Property Market	0.67	Current
5 Mortgage Rate	Capital Market	-0.65	9 months
6 90-days Bank Bills Yield	Capital Market	-0.62	9 months
7 Population Growth	Space Market	0.51	9 months
8 Net Overseas Migration	Space Market	-0.50	Current
9 Total Employed Labour Force	Space Market	0.48	Current
10 GDP per Capita	Space Market	-0.46	12 months
11 ASX 200 Index	Capital Market	0.46	9 months
<u>The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):</u>			
12 Foreign Student Enrolments	Non-traditional	0.39	6 months
13 New Housing Supply	Property Market	-0.38	24 months
<u>The correlation is statistically insignificant in:</u>			
14 Building Activity-Value of Building Work Done(Residential-Vic)	Property Market	-0.28	18 months
15 Net Saving - Current Prices	Space Market	-0.26	Current
16 Rent Growth	Property Market	0.20	18 months

Table 4.24: Foreign Student Enrolments Ranking According to r-value in Clayton

Leading Indicators	Market	r	Periods
<u>The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):</u>			
1 House Price Index	Property Market	0.84	Current
2 10-year Government Bonds Yield	Capital Market	0.64	Current
3 Exchange Rate	Capital Market	-0.63	15 months
4 Net Overseas Migration	Space Market	0.57	15 months
5 Building Planning Approvals	Property Market	0.51	Current
5 Foreign Student Enrolments	Non-traditiona	0.51	Current
6 Mortgage Rate	Capital Market	-0.48	9 months
7 Building Activity-Value of Building Work Done(Residential-Vic)	Property Market	-0.46	18 months
8 90-days Bank Bills Yield	Capital Market	-0.46	9 months
9 New Housing Supply	Property Market	-0.43	24 months
10 Total Employed Labour Force	Space Market	0.43	Current
<u>The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):</u>			
11 GDP per Capita	Space Market	0.39	24 months
12 ASX 200 Index	Capital Market	0.36	9 months
<u>The correlation is statistically insignificant in:</u>			
13 Population Growth	Space Market	0.32	9 months
14 Net Saving - Current Prices	Space Market	0.30	12 months
15 Rent Growth	Property Market	-0.22	18 months

Table 4.25: Foreign Student Enrolments Ranking According to r-value in Doncaster

Leading Indicators	Market	r	Periods
<u>The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):</u>			
1 House Price Index	Property Market	0.84	Current
2 10-year Government Bonds Yield	Capital Market	0.66	Current
3 Exchange Rate	Capital Market	-0.65	12 months
4 Building Planning Approvals	Property Market	0.55	Current
5 90-days Bank Bills Yield	Capital Market	-0.55	9 months
6 Mortgage Rate	Capital Market	-0.48	9 months
7 Building Activity-Value of Building Work Done(Residential-Vic)	Property Market	-0.46	18 months
8 ASX 200 Index	Capital Market	0.46	3 months
9 Total Employed Labour Force	Space Market	0.45	Current
10 Net Overseas Migration	Space Market	0.45	15 months
11 Foreign Student Enrolments	Non-traditiona	0.42	3 months
<u>The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):</u>			
12 New Housing Supply	Property Market	-0.40	18 months
13 Population Growth	Space Market	0.38	6 months
<u>The correlation is statistically insignificant in:</u>			
14 GDP per Capita	Space Market	0.32	24 months
15 Net Saving - Current Prices	Space Market	0.16	12 months
16 Rent Growth	Property Market	-0.10	24 months

The ranking analysis in Tables 4.23 to 4.25 demonstrates the strength of correlations of Education compared to other traditional economic indicators. Education, as a significantly correlated indicator with house prices in Melbourne Metropolitan, comes in at 12th place after Net Overseas Migration and above 13th placed New Housing Supply. In the Clayton housing market, Education ranked even higher and shared the same fifth ranking with Building Planning Approvals. Simultaneously,

Education ranked 11th when compared to other traditional significant correlated economic indicators in the Doncaster housing market.

Education in the Clayton residential property market ranked the highest among the three property markets in terms of the significance level, with a r-value of 0.507 and strongly correlated for the current period. Monash University and the John Monash Science School are both located in Clayton. According to ABS (2014), suburbs incorporating or situated near universities featured high proportions of migrants. These include suburbs like Clayton (70%) in Melbourne, Robertson (62%) in Brisbane, Bentley and Crawley (both 62%) in Perth, Bedford Park (49%) in Adelaide, and Acton (57%) in Canberra. Monash University had continued its rise in the international university rankings, according to results released by Times Higher Education (Williams, 2015). In 2014 the University had achieved a ranking of 83, representing an improvement of eight places since 2013. The total number of international students enrolled in Monash University stands at 23,778 or 36.5% of the 65,006 student enrolment in 2014 (University, 2014). John Monash Science School is the State's first specialist science secondary school and is a state government coeducational specialist selective school in Victoria.

4.5.1.2. Residential Tourism

The objective of this section is to explore if the Overseas Tourist Arrivals in Australia resulted in increased offshore investments in residential property in Australia. Correlations were measured for Melbourne Metropolitan, Clayton and Doncaster house prices and Tourist Arrivals in Australia. As per Chapter Three, this incorporated the analysis of three types of Overseas Arrivals data aimed at to providing a better understanding of the significance level for each data set and eventually a better comparative assessment. Among these three Overseas Arrivals statistics, the indicator that demonstrates the strongest r-value relationship with the house prices of Melbourne Metropolitan, Clayton and Doncaster will be selected to form part of the final analysis with the other leading economic indicators. These three data sets of Overseas Arrivals that were incorporated in the analysis are:

- i. Long-term visitor arrivals (LTVA) - Overseas visitors who state that they intend to stay in Australia for 12 months or more (but not permanently).
- ii. Short-term visitor arrivals (STVA) - Overseas visitors who intend to stay in Australia for less than 12 months.
- iii. Short-term visitor arrivals in Victoria (STVAV) – overseas visitors who had chosen to stay in Victoria state for the longest duration of their time in Australia

Source: ABS 2014

Data collection and classification of Long Term Visitors (LTVA) and Short Term Visitors (STVA and STVAV) data are mutually exclusive and distinctive in ABS's database. However STVA and STVAV were under the same dataset group and not mutually exclusive. As such, only one of the two (STVA or STVAV) was used as a potential factor for Melbourne Metropolitan, Clayton and Doncaster markets analysis. The DVs listed above and the significance of their relationship with house prices in Melbourne Metropolitan, Clayton and Doncaster are summarized as follow in table 4.26:

Table 4.26: Correlations between House Prices and Overseas Visitor Arrivals

Melbourne Metropolitan									
	Lag (Months)								
	Current	3	6	9	12	15	18	21	24
Long Term Visitor Arrivals	-0.47**	-0.36*	-0.25	-0.03	0.18	0.36*	0.40*	0.47**	0.44**
Short Term Visitor Arrivals	0.22	0.11	0.01	-0.14	-0.22	-0.34*	-0.30	-0.26	-0.20
Short Term Visitor Arrivals - Victoria	0.44**	0.46**	0.28	-0.06	-0.21	-0.35*	-0.31	-0.29	-0.21

Clayton									
	Lag (Months)								
	Current	3	6	9	12	15	18	21	24
Long Term Visitor Arrivals	-0.13	0.02	0.14	0.28	0.44**	0.44**	0.39*	0.27	0.26
Short Term Visitor Arrivals	0.06	-0.03	0.07	-0.17	-0.15	-0.21	-0.14	-0.07	0.00
Short Term Visitor Arrivals - Victoria	0.20	0.10	0.01	-0.17	-0.33	-0.32	-0.26	-0.19	-0.17

Doncaster									
	Lag (Months)								
	Current	3	6	9	12	15	18	21	24
Long Term Visitor Arrivals	-0.22	-0.14	0.01	0.14	0.26	0.38*	0.39*	0.39*	0.45**
Short Term Visitor Arrivals	0.16	0.17	0.01	-0.13	-0.23	-0.34*	-0.34*	-0.22	0.00
Short Term Visitor Arrivals - Victoria	0.33*	0.27	0.14	-0.13	-0.29	-0.33*	-0.37*	-0.32	-0.26

** Correlation is significant at the 0.01 level (2-tailed)	RED	Most significantly correlated at the 0.01 level
* Correlation is significant at the 0.05 level (2-tailed)	BLUE	Significantly correlated at the 0.01 level
	GREEN	Significantly correlated at the 0.05 level

Table 4.26 shows the summary outcomes for the correlation analysis for the three different Overseas Arrivals data sets and the results are as follow:

- Long Term Visitor Arrivals (LTVA) demonstrates significant positive correlations (at 0.01 level (2-tailed)) with house prices in all the residential property markets in this study for the series of 2002-2013. The strength of correlation was the highest towards the latter part of the time series in month 21 (Melbourne Metropolitan), month 15 (Clayton) and month 24 (Doncaster).
- Short Term Visitor Arrivals (STVA) demonstrates much weaker and negative correlation with house prices in all markets. Only 0.05 level (2-tailed) significance level for Melbourne Metropolitan and Doncaster residential property markets
- Short Term Visitor Arrivals in Victoria State (STVAV) demonstrates significant positive correlations attained the 0.01 (2-tailed) significance level with Melbourne Metropolitan

house prices and 0.05 level (2-tailed) with Doncaster house prices. The strength of correlation was the highest at the beginning of the time series, occurring in the third month for Melbourne Metropolitan and current month for Doncaster residential property market.

Table 4.26 depicted that statistically significant correlations existed between the Visitor Arrivals (Residential Tourism), a non-traditional socio-economic indicator and all the property markets tested. Both LVTA and STVAV are statistically significant at the 0.01 level (2-tailed) with house prices in all Melbourne Metropolitan. LVTA is statistically significant at 0.01 level and STVAV is less significant fetching 0.05 level (2-tailed) in Doncaster's residential property market. In the residential property market in Clayton, only LVTA is statistically significantly correlated to residential property prices. Table 4.27 to 4.29 provide the snap shot of the analyses for both LVTA and STVAV in terms of correlation significance (r-value) with the housing markets in Melbourne Metropolitan, Clayton and Doncaster conducted on top of the rank analysis of Education as presented in Table 4.23 to Table 4.25:

Table 4.27: Tourist Arrivals Ranking According to r-value in Melbourne Metropolitan

Leading Indicators	Market	r	Periods
The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):			
1 House Price Index**	Property Market	0.887	Current
2 10-year Government Bonds Yield	Capital Market	0.761	Current
3 Exchange Rate	Capital Market	-0.703	15 months
4 Building Planning Approvals	Property Market	0.668	Current
5 Mortgage Rate	Capital Market	-0.650	9 months
6 90-days Bank Bills Yield	Capital Market	-0.619	9 months
7 Population Growth	Space Market	0.509	9 months
8 Net Overseas Migration	Space Market	-0.506	Current
9 Total Employed Labour Force	Space Market	0.476	Current
10 Long Term Visitor Arrivals	Non-traditional	0.474	21 months
11 Short Term Visitor Arrivals - Victoria	Non-traditional	0.463	3 months
12 GDP per Capita	Space Market	-0.463	12 months
13 ASX 200 Index	Capital Market	0.460	9 months
The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):			
14 Foreign Student Enrolments	Non-traditional	0.390	6 months
15 New Housing Supply	Property Market	-0.384	24 months
The correlation is statistically insignificant in:			
16 Building Activity-Value of Building Work Done(Residential-Vic)	Property Market	-0.278	18 months
17 Net Saving - Current Prices	Space Market	-0.255	Current
18 Rent Growth	Property Market	0.195	18 months

Table 4.28: Tourist Arrivals Ranking According to r-value in Clayton

Leading Indicators	Market	r	Periods
The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):			
1 House Price Index	Property Market	0.839	Current
2 10-year Government Bonds Yield	Capital Market	0.639	Current
3 Exchange Rate	Capital Market	-0.631	15 months
4 Net Overseas Migration	Space Market	0.572	15 months
5 Building Planning Approvals	Property Market	0.507	Current
6 Foreign Student Enrolments	Non-traditiona	0.507	Current
7 Mortgage Rate	Capital Market	-0.480	9 months
8 Building Activity-Value of Building Work Done(Residential-Vic)	Property Market	-0.458	18 months
9 90-days Bank Bills Yield	Capital Market	-0.456	9 months
10 New Housing Supply	Property Market	-0.432	24 months
11 Total Employed Labour Force	Space Market	0.431	Current
12 Long Term Visitor Arrivals	Non-traditiona	0.427	12 months
The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):			
13 GDP per Capita	Space Market	0.392	24 months
14 ASX 200 Index	Capital Market	0.359	9 months
The correlation is statistically insignificant in:			
15 Population Growth	Space Market	0.318	9 months
16 Net Saving - Current Prices	Space Market	0.297	12 months
17 Rent Growth	Property Market	-0.219	18 months

Table 4.29: Tourist Arrivals Ranking According to r-value in Doncaster

Leading Indicators	Market	r	Periods
The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):			
1 House Price Index	Property Market	0.836	Current
2 10-year Government Bonds Yield	Capital Market	0.658	Current
3 Exchange Rate	Capital Market	-0.647	12 months
4 Building Planning Approvals	Property Market	0.546	Current
5 90-days Bank Bills Yield	Capital Market	-0.545	9 months
6 Mortgage Rate	Capital Market	-0.480	9 months
7 Building Activity-Value of Building Work Done(Residential-Vic)	Property Market	-0.458	18 months
8 ASX 200 Index	Capital Market	0.457	3 months
9 Total Employed Labour Force	Space Market	0.452	Current
10 Net Overseas Migration	Space Market	0.450	15 months
11 Long Term Visitor Arrivals	Non-traditiona	0.448	24 months
12 Foreign Student Enrolments	Non-traditiona	0.423	3 months
The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):			
13 New Housing Supply	Property Market	-0.396	18 months
14 Population Growth	Space Market	0.376	6 months
15 Short Term Visitor Arrivals - Victoria	Non-traditional	0.330	Current
The correlation is statistically insignificant in:			
16 GDP per Capita	Space Market	0.322	24 months
17 Net Saving - Current Prices	Space Market	0.160	12 months
18 Rent Growth	Property Market	-0.102	24 months

LTVA was statistically significantly correlated in all the property markets in Melbourne Metropolitan, Clayton and Doncaster at the 0.01 level and none fell below the 0.05 significance level; confirming

LTVA was a relatively strong emerging indicator in all property markets. STVAV demonstrated a strong correlation with the house prices in Melbourne Metropolitan, Doncaster but not in Clayton.

The ranking analysis also demonstrated the strength of the relationships for both LTVA and STVAV compared to other traditional economic indicators. LTVA as a significantly correlated indicator with house prices in Melbourne Metropolitan came in at 10th place and STVAV came in at 11th position after Total Employed Labour Force and above 14th placed Education. However, LTVA ranked lower than fifth place Education and fourth place Net Overseas Migration in terms of r-value or significance level In the Clayton housing market. In the Doncaster residential property market, LTVA came neck and neck with Education at 11th position and STVAV ranked in a relatively lowly 15th position in terms of correlation significance.

4.5.2. Stepwise Regression Including Non-traditional Determinants

This section aims to determine the significant relationships and interactions between the predictors comprising of traditional and non-traditional indicators (Education and Residential Tourism) with house prices in Melbourne Metropolitan, Clayton and Doncaster by using Stepwise Regression analysis. All the traditional and non-traditional economic indicators in Space, Capital and Property markets are built into this regression model to fit a linear regression line using ordinary least squares method.

4.5.2.1. Melbourne Metropolitan Residential Property Market

In Section 4.4.2.1.Melbourne Metropolitan Residential Property Market Analysis, stepwise multiple regression analysis was performed to provide an acceptable econometric model predicting future house prices in Melbourne Metropolitan based on the interactions between the leading economic variables. In this section two additional indicators are added, namely Education and Residential Tourism (LTAV and STVAV) into the modelling. Similar methodologies shall be applied with the application of a stepwise multiple regression on the lagged variables against the house prices in Melbourne Metropolitan. The result of the stepwise multiple regression analysis is presented in table 4.30:

Table 4.30: Single Equation Regression Model for Melbourne Metropolitan Residential Property Market with Non-traditional factors

Melbourne Metropolitan		$R^2 = 92\%$					
Variables	Description	Lagged	B-value	Coefficient	T-test	Sig.	DW test
1 10BondCurr	10-year Government Bond Yield	Current	0.28	0.55	9.20	0.00	2.595
2 BuiltCurr	Building Plannings Approval	Current	0.17	0.33	5.11	0.00	
3 Forex5	Foreign Currency Exchange	15 months	-0.22	-0.31	-4.81	0.00	
4 GDP6	Population Growth	18 months	-1.29	-0.15	-1.84	0.08	
5 STVAV2	Short Term Visitor Arrival (Vic)	6 months	0.58	0.05	0.68	0.50	

Multiple Linear Regression Equation =
 $2.18+0.28(10BondCurrent)+0.17(BuiltCurr)-0.22(Forex5)-1.26(GDP6)+0.09(STVAV2)$

The Model Equation:

House Prices in Melbourne Metropolitan =
 $2.18+0.28(10BondCurrent)+0.17(BuiltCurr)-0.22(Forex5)-1.26(GDP6)+0.09(STVAV2)$

The adequacy of the equations was reflected in the high “R²” readings (92% range) and the significant t-values for each economic variable. There was a small improvement in the R² of this model with non-traditional factors of Residential Tourism (RT) indicating a better single regression line was fitted. As per Table 4.30, RT represented by STVAV2 was fitted as one of the determinants in this latest forecasting model. The “R²” had improved from 91% in the earlier regression model (without the Residential Tourism) to 92% in the latest forecasting model. Figure 4.9 shows the graph based on Melbourne Metropolitan’s actual house prices index compared to the forecasting model’s index with and without the non-traditional factor of RT:

Figure 4.9 Comparison - Melbourne Metropolitan Actual House Prices and Two Regression Forecasting Models

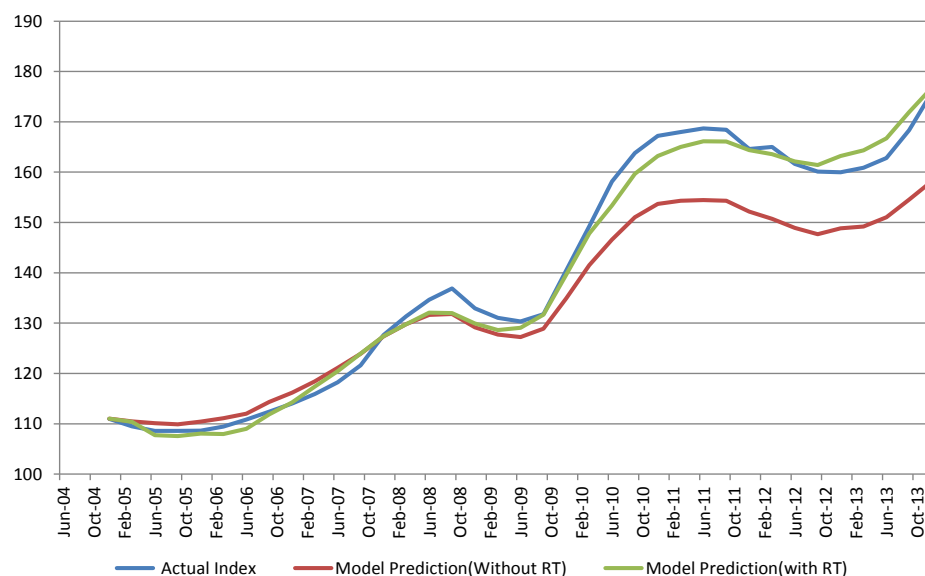


Figure 4.9 exhibits the impact after the regression model incorporated the non-traditional factor – Residential Tourism. The effect of Residential Tourism as a new determinant of house prices in Melbourne Metropolitan improved the accuracy of the fitted regression line. The improved accuracy was particularly noticeable towards the latter part of the data series. The new fitted line with the Residential Tourism element moved the fitted line closer to the actual Melbourne Metropolitan house price Indices starting from year 2013 till the end of the time series. The house price surge observed in Melbourne Metropolitan towards the latter part of the time series, which was unable to be modelled relying on traditional economic indicators, can be partly explained in this new equation by incorporating the impact of Residential Tourism. In summary, this model provided a better equation result as reflected in the higher “R²” readings and validated with the latest forecast results in 2014. The model was validated with the actual house prices until June 2014 as tabulated in Table 4.31:

Table 4.31: Model Validation For Melbourne Metropolitan Property Market with Residential Tourism

Period	Actual	Model Prediction	Difference
Jun-13	162.82	166.70	2.38%
Sep-13	168.33	171.90	2.13%
Dec-13	175.88	176.83	0.54%
Mar-14	182.34	182.83	0.27%
Jun-14	189.94	187.79	-1.13%

As presented in Table 4.31, the forecasted house price indices for Melbourne Metropolitan using the latest regression equation demonstrated a relatively lower growth rate for the 12 month assessment periods from June 2013 to June 2014 compared to the actual Melbourne house price indexes. The model predicted a 9.68% growth (from 166.70 to 187.79) while the actual index for house prices in Melbourne Metropolitan grew approximately 12.00% (162.82 to 189.94) for the 12 month period. However, the difference between the actual index and the model prediction was less than 2% for the entire 12 month period. The latest regression model has provided a more accurate forecast compared to the model developed earlier without the Residential Tourism variable.

4.5.2.2. Clayton Residential Property Market

Similar to the previous section, two additional indicators were added, namely Education and Residential Tourism to analyse the Clayton housing market response to these emerging determinants. The same methodologies were applied with the application of a stepwise multiple regression on the lagged variables against the house prices in Clayton. The result of the stepwise multiple regression analysis is presented in Table 4.32:

Table 4.32: Single Equation Regression Model for Clayton Residential Property Market with Non-traditional factors

Clayton		$R^2 = 95\%$					
Variables	Description	Lagged	B-value	Coefficient	T-test	Sig.	DW test
1 10BondCurr	10-year Government Bond Yield	Current	0.514	0.549	8.927	0	
3 NOM3	Net Overseas Migration	9 months	0.344	0.505	5.578	0	
4 Built\$1	Building Activity-Residential Built(\$)	3 months	1.067	0.515	7.761	0	
5 GDPCurrent	GDP pe Capita	Current	7.131	0.383	6.925	0	
6 Save1	Net Saving - Current Price	3 months	-0.053	-0.277	-4.697	0	
7 MRate3	Mortgage Rate	3 months	-0.455	-0.413	-6.704	0	
8 NewHse8	New Housing Supply	24 months	0.313	0.266	4.76	0	
9 Forex7	Foreign Exchange	21 months	-0.430	-0.273	-3.643	0.001	
10 LTVA2	Long Term Visitor Arrival	6 months	0.508	0.259	2.547	0.017	2.464
Multiple Linear Regression Equation = "-1.805+0.514(10BondCurr)+0.344(NOM3)+1.067(Built\$1)+7.131(GDPCurr)-0.053(Save1)-0.455(MRate3)+0.313(NewHse8)-0.43(Forex7)+0.508(LTVA2)"							

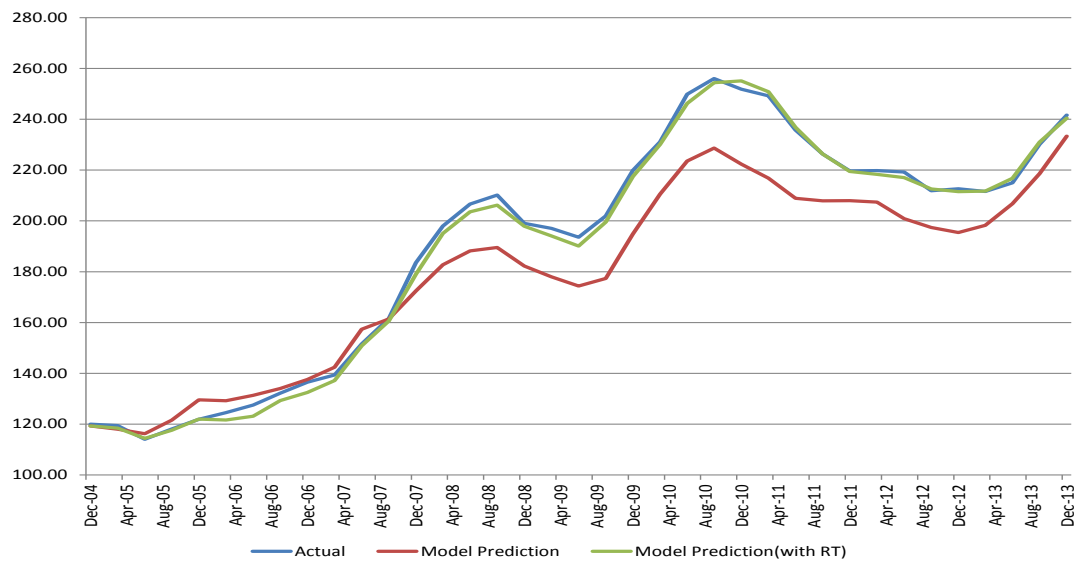
The Model Equation:

Clayton House Prices=

$$-1.805+0.514(10BondCurr)+0.344(NOM3)+1.067(Built\$1)+7.131(GDPCurr)-0.053(Save1)-0.455(MRate3)+0.313(NewHse8)-0.43(Forex7)+0.508(LTVA2)$$

The adequacy of the equation is reflected in the high “ R^2 ” readings (95% range) and the significant t-values for each economic variable. An improved regression equation was enabled in the latest predictive model having the “ R^2 ” reading increase from 94% to 95% compared to the model with only the traditional economic indicators. Although the non-traditional socio-economic factor of Education was reflected as a strongly correlated factor in the correlation analysis, it was not included in the latest forecasting model. Residential Tourism was included in this latest equation reflected as LTVA2 (Long Term Visitor Arrival, lagged six months). Figure 4.10 illustrates Clayton’s actual house price index compared to the forecasting model’s index with and without the non-traditional factor of RT:

Figure 4.10: Comparison - Clayton Actual House Prices and Two Regression Forecasting Models



The latest forecasting model with the incorporation of RT as a variable was well fitted. The model's forecasted house prices showed a close resemblance to the actual house prices in Clayton until the end of the analysis period in December 2013. Comparison was made to the forecasting model developed without RT. The regression equation that included RT has provided a better prediction compared to the model developed without RT. Not only did the "R²" readings improve from 93.8% to 94.8%, the effect of RT as a new determinant of house prices in Clayton improved the accuracy of the fitted regression line in a significant manner. The house price surge observed in Clayton towards the latter part of the time series which could not be modelled relying on traditional economic indicators could be explained in this new equation after RT was included.

To validate the calculated regression equation, the forecasted house prices in Clayton were compared with the recent actual house prices of Clayton up to the final quarter of 2014 as Table 4.33 below demonstrates:

Table 4.33: Model Validation For Clayton Property Market with Residential Tourism

Period	Actual	Model Prediction	Difference
Jun-13	214.99	216.74	0.81%
Sep-13	230.16	230.97	0.35%
Dec-13	241.61	240.44	-0.48%
Mar-14	257.29	244.85	-4.83%
Jun-14	266.99	249.42	-6.58%

The latest regression model of house price indices from 2002 to 2013 provides an accurate forecast compared to the model developed earlier without the RT. The forecasted house price indices for Clayton using the regression equation demonstrated a relatively slower increase for 12 month

periods from June 2013 to June 2014. The model predicted a 15.08% growth and the actual index escalated by 24.19% for the same period of time. House price index in Clayton in June 2014 was 266.99 while the model forecasted 249.42, representing a -6.58% deficit. Although the actual house prices in Clayton grew faster than forecasted, the difference between the actual index and the model prediction was less than 10% for the entire 12 month period.

4.5.2.3. Doncaster Residential Property Market

In section 4.4.2.2, a Submarket Analysis stepwise multiple regression analysis was performed to explore the interactions of the traditional economic variables to provide an acceptable econometric model to predict future house prices in Doncaster. In this section, two additional indicators, namely Education and Residential Tourism, are added to explore their interactions with the traditional economic indicators. The same methodologies were applied with lagged variables against house prices in Doncaster excluding the comparison variable of House Price Index. The result of the stepwise multiple regression analysis is presented in Table 4.34:

Table 4.34: Single Equation Regression Model for Doncaster Residential Property Market with Non-traditional factors

Doncaster		R ² = 83%					
Variables	Description	Lagged	B-value	Coefficient	T-test	Sig.	DW test
1 10BondCurr	10-year Government Bond Yield	Current	0.15	0.208	1.875	0.071	
2 ASX6	ASX 200 Index	18 months	-0.17	-0.398	-4.791	0	
3 Built\$4	Building Activity-Residential Built(\$)	12 months	-0.67	-0.419	-4.909	0	
4 EmpCurr	Employment Growth	Current	6.40	0.534	4.817	0	
5 MRate1	Mortgage Rate	3 months	-0.24	-0.318	-3.299	0.003	
6 STVAVCurr	Short Term Visitor Arrivals (Vic)	Current	0.56	0.234	2.726	0.011	2.71

Multiple Linear Regression Equation =

$$= -0.7 + 0.15(10BondCurr) - 0.17(ASX6) - 0.67(Built\$4) + 6.40(EmpCurr) - 0.24(MRate1) + 0.56(STVAVCurr)$$

The Model Equation:

Doncaster House Prices=

$$= -0.7 + 0.15(10BondCurr) - 0.17(ASX6) - 0.67(Built\$4) + 6.40(EmpCurr) - 0.24(MRate1) + 0.56(STVAVCurr)$$

As per Table 4.34, the regression equation was well fitted due to the incorporation of two new variables, namely Residential Tourism (STVAVCurr) and Mortgage Rate (MRate). The adequacy of the equation is reflected in the high “R²” readings (83% range) and the significant t-values for each economic variable. The “R²” value remained the same at 83% in both models. Figure 4.11 exhibits the visual representation of the improved predictive results comparing the three regression models; namely the model with the traditional leading economic indicators, the model incorporating the non-traditional factor, RT and the actual Doncaster house price index:

Figure 4.11: Comparison - Doncaster Actual House Prices and Two Regression Forecasting Models

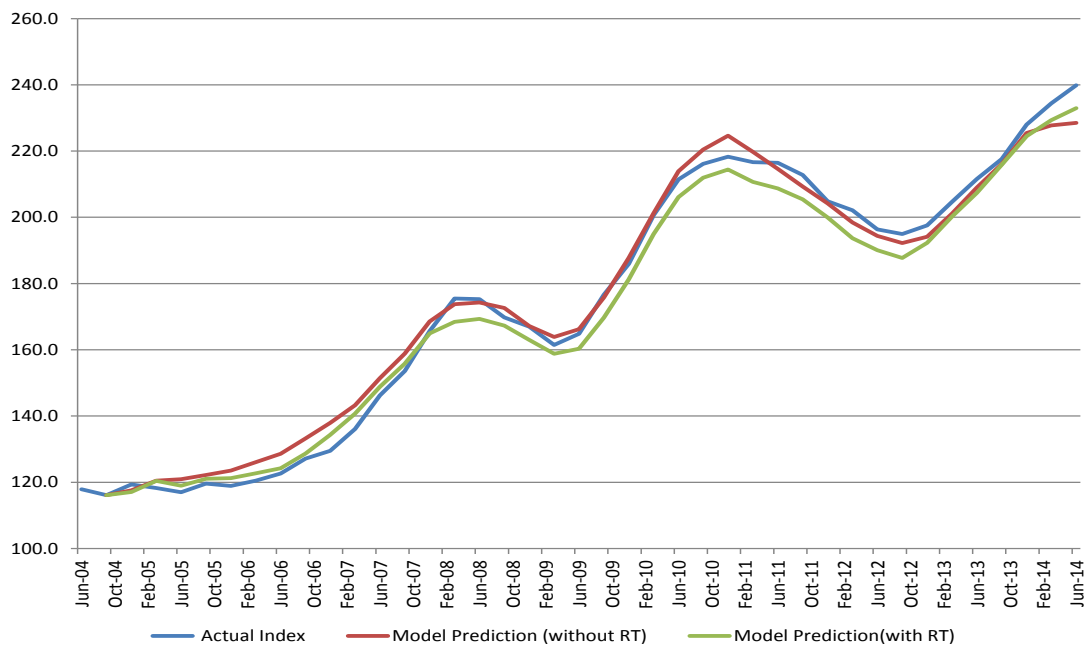


Figure 4.11 shows the forecasting model without the non-traditional factors compared to the latest model with the traditional model. The model that incorporated RT as a determinant has provided much better forecasting results. The effect of RT, as a new determinant of house prices in Doncaster, improved marginally the accuracy of the fitted regression line and its significance was particularly noticeable towards the latter path of the data series. The new fitted line with the RT element moved the fitted line closer to the actual Doncaster house price indices starting from year 2012 until the end of the time series. The house price surge observed in Doncaster towards the latter part of the time series, which was unable to be modeled relying on traditional economic indicators, was better explained in this new equation by incorporating the new determinant of RT. To validate the accuracy of the new regression equation, the forecasted Doncaster house prices were compared with the actual house prices of Doncaster in 2014 in Table 4.35 as below:

Table 4.35: Forecast Results for the Five Quarters until June 2014 - Doncaster

Period	Actual	Model Prediction	Difference
Jun-13	211.6	207.41	-1.98%
Sep-13	217.6	215.86	-0.80%
Dec-13	228.0	224.50	-1.54%
Mar-14	234.4	229.35	-2.15%
Jun-14	239.9	232.96	-2.88%

The forecasting model had accurately predicted house prices in Doncaster until June 2014. The difference between the predicted and actual house prices was less than 3% for all the quarters in

comparison. The forecasted house price index for Doncaster in June 2014 shows a small difference of 2.88% less than the Actual Index. In fact, the predicted average Index growth rates were almost identical with the actual indices for the 12 months assessment periods from June 2013 to June 2014. The model predicted a 12.32% growth (207.41 to 232.96) in the 12 month period versus the actual reading of 13.36% (211.6 to 239.9) increase for the same period of time.

4.5.3. Discussion

Education

A Pearson Correlation Coefficient analysis was performed to explore if International Student Enrolment (Education) was statistically significantly correlated to house prices in Melbourne Metropolitan, Clayton and Doncaster. A new non-traditional indicator, International Student Enrolments in Victoria was introduced to establish if this factor had potentially assisted in driving overseas investments in Australia's residential property markets. The significance of this new determinant was further tested using Stepwise Multiple Linear Regression analysis to establish if the relationship between the predictor (Education) and the house prices (dependent variable) was explained by a linear relationship. The result of Stepwise Multiple Linear Regression analysis presents the interaction of Education, as a new determinant, with all other leading economic indicators in provision of an acceptable model representing future house prices in Melbourne Metropolitan, Clayton and Doncaster.

Correlation analysis revealed that there were statistically significant relationships between Education and house prices in Melbourne Metropolitan, Clayton and Doncaster residential property markets from 2002 to 2013. Significant correlations between Education and house prices as r-value were classified accordingly in Figure 4.15.

Education was statistically significant at the 0.01 level with house prices in both Clayton and Doncaster and at 0.05 level (2-tailed) with the house prices in Melbourne Metropolitan. Education was ranked alongside all the identified traditional factors. It was ranked at 12th place after Net Overseas Migration and above 13th placed New Housing Supply in Melbourne Metropolitan. In Clayton, Education ranked even higher and shared the same fifth ranking with Building Planning Approvals in terms of significance level. Education ranked 11th in Doncaster housing market. The high ranking of Education as a determinant in Clayton was due to the presence of Monash University and John Monash Science School in Clayton (ABS, 2014). According to ABS (2014), suburbs incorporating or situated near universities featured high proportions of migrants.

The Stepwise Multiple Linear Regression analysis provided three adequately fitted regression lines that possess high “R²” readings (above 90% range) for all three housing markets. However, none of these equations had included Education as a significant predictor. Education had failed to demonstrate itself to be an essential determinant impacting house prices in Melbourne Metropolitan, Clayton and Doncaster.

Residential Tourism (RT)

Pearson Correlation Coefficient analysis was performed to explore if RT was statistically correlated to house prices in Melbourne Metropolitan, Clayton and Doncaster. This new non-traditional indicator represented by Long Term Visitor Arrivals (LTVA) and Short Term Visitor Arrivals in Victoria (STVAV), was tested to establish if it had assisted in driving overseas investments in Australia’s residential property markets. The significance of this new determinant was further tested using Stepwise Multiple Linear Regression analysis to establish if the relationship between the predictor (Residential Tourism) and house prices (dependent variable) was explained by a linear relationship. The result of Stepwise Multiple Linear Regression analysis with the interaction of Residential Tourism as a new determinant, with all other leading economic indicators is an acceptable model representing future house prices in Melbourne Metropolitan, Clayton and Doncaster.

Analysis revealed that there were statistically significant relationships between RT and house prices in Melbourne Metropolitan, Clayton and Doncaster for 2002-2013. Significant correlations between RT and house prices as r-values were classified according to the lagged periods in Table 4.28.

RT was ranked to assess its interaction with other significant economic leading indicators. Conclusively RT was statistically significantly correlated in all the residential property markets (Melbourne Metropolitan, Clayton and Doncaster) at the 0.01 level and 0.05 (2-tailed) levels. RT was ranked 10th in Melbourne Metropolitan, 12th in Clayton and 11th in Doncaster.

The Stepwise Multiple Linear Regression analysis had also provided three adequately fitted lines that possess high “R²” readings at or above the 90% range with RT incorporated as a determinant. The effect of RT, as a new determinant of house prices improved the accuracy of the fitted regression line and its significance was particularly noticeable towards the latter part of the data series for Melbourne Metropolitan and Doncaster. The new fitted line moved closer to the actual house price indexes from 2002 to 2013. The house price surge observed in Melbourne Metropolitan towards the latter part of the time series, which was unable to be modelled relying on traditional economic indicators, was partly explained in this new equation after RT was included. The inclusion of RT as a determinant resulted in a very close resemblance to the actual house prices movement in

Melbourne Metropolitan and Doncaster. The fitted regression lines were validated using the latest house prices until 2014. The regression models were able to forecast house prices accurately with less than 3% variance in Doncaster, 7% in Clayton and 2% in Melbourne Metropolitan.

4.6. Overseas Determinants - China Factors

A “Push & Pull” model was developed in this study to facilitate orderly assessment of potential factors exerted from overseas government policies that “push” the outward FDI into the Australian residential property market (refer to Figure 3.2). This model was structured mainly based on the main structure and essence of the three markets model from Higgins (2010). The three market model amplifies the critical relationships between Property, Space and Capital Markets in assessing the Australian government policies’ influence over house prices (Higgins, 2010). The “Push & Pull” model, beside illustrating the extent of the Australian Government policies’ impacts on the Australian housing market, assisting in an orderly assessment of external factors and their impact on the structure of the local residential property market. This model aims to provide a structural platform for systematic assessment of various economic, financial and property market dynamics on housing market with an added “push” platform representing interactions originated from the foreign investors’ country (or countries).

These “push” factors were factors originated from overseas and potentially exerting additional interactions among all the determinants on top of the original “pull” factors from the Australian economic system. China’s major economic and financial indicators form the basis of assessment for this section and are analysed as the “Push” factors resulting from China’s government policies impacting on Australian Space and Capital Markets particularly.

The Australian factors and determinants were duly assessed and analysed in earlier sections of this Chapter. This section intends to show the “Push & Pull” model for the allocations of relevant economic and financial indicators (from China) into the defined Space, Property and Capital Markets for assessing the critical relationship among the potential key overseas determinants and to build an economic model showing the best inter-relationship of separate economic variables to house prices at both local and offshore economic and financial levels.

In the planned research execution, Australian historical leading economic indicators used in the earlier sections of this chapter were to be replicated to allow for comparison and to provide the consistent assessments on China’s leading economic indicators. However this was proven to not be a viable research proposition due to a lack of long series of China statistical data. Specific property economic data such as rent growth that formed an important Australian leading economic indicator

in the property market assessment does not exist in the National Bureau of Statistics China (NBSC) database. The lack of Chinese property leading indicators resulted in some replacement metrics being adopted by using other more common Chinese leading indicators or replacement with other existing Chinese economic indicators. Table 4.36 shows the selected Chinese leading economic indicators and their data points, replacing the Australian leading economic indicators in earlier sections of this Chapter:

Table 4.36: Chinese Independent Variables and Data Points

Independent Variables - China					
I Space Market	Data Source	Commencement Date**	Data Intervals	Last Date	Data Points Collected
1 Per Capita Disposable Income of urban Households, Accumulated(yuan)	NBSC~	Q1 2005	Quarterly	Q4 2013	32
2 China GDP Growth Rate	NBSC~	Q1 2002	Quarterly	Q4 2013	45
3 China CPI Inflation (All Items)	OECD Library	Q1 2002	Quarterly	Q4 2013	45
4 China Outflow of FDI	OECD Library	Q1 2007	Quarterly	Q4 2013	28
5 Price Index for Investment in Fixed Assets , Accumulated	NBSC	Q4 2002	Quarterly	Q4 2013	42
					192
II Capital Market					
1 Shanghai Stock Market Index	Yahoo Finance	Q1 2003	Quarterly	Q4 2013	43
2 China Foreign Currency Exchange Rates	OECD Library	Q1 2002	Quarterly	Q4 2013	45
3 China Short Term Interest Rates	OECD Library	Q1 2002	Quarterly	Q4 2013	45
4 China Balance of Payments(MEI)	OECD Library	Q1 2002	Quarterly	Q22013	43
					176
III Property Market					
1 Price Indices of Construction and Installation , Accumulated	NBSC~	Q4 2002	Quarterly	Q4 2013	42
2 China Residential Buildings Floor Space Completed	NBSC~	Q1 2004	Quarterly	Q4 2013	37
3 Floor Space Newly Started	NBSC~	Q1 2004	Quarterly	Q4 2013	37
4 China Construction Output Value	NBSC~	Q4 2003	Quarterly	Q4 2013	38
					154
~ National Bureau Of Statistics China					Total Data Points Collected
					522

As shown in Table 4.36, all leading Chinese Economic indicators were collected from OECD and NBSC to form the ‘unobtrusive measure’ (Teddle and Tashakkori, 2009) of the independent variables (IVs) of the model. However, contrary to the research design and intention, the collection of Chinese statistical data proved to be a challenging exercise. On top of the non-existence of some data as stipulated above, limited data series in the data sets listed in Table 4.36 had posed threats to the implementation of the forecasting model and the eventual accuracy and validity of the statistical testing. Table 4.36 highlighted that only 522 data points were collected compared to the research design’s objective of 624 data points of Chinese leading economic indicators. The data points were further reduced substantially after the application of data smoothing and lagging (8 quarters).

Unless the relationships between the Dependant Variables (DVs) and Independent Variables (IVs) are very strong, a small sample may not be enough to detect significant relationships. Small samples do not provide a precise estimate of the strength of the relationship, which is measured by adjusted “R²”. If a precise estimate is needed, larger samples would be necessary. A larger sample was not

available with reference to Chinese leading economic indicators. Wang and Jain (2003) explained that large sample properties are the basis of statistical analysis and inference. Quarterly data need more data points because of the presence of seasonality in the data.

Due to the limited time series and substantial paucity of data point availability, the multiple regression analysis is not viable for the statistical testing for the “Push” factors from China. Instead, descriptive analysis is used in this section to replace multiple regression modelling. The final stage of the quantitative research on Chinese leading economic indicators is consisted predominantly of conducting bivariate statistical analysis to test the model. Bivariate analysis represents a simple descriptive analysis, to describe the relationship between two variables (Babbie, 2015). The study applied easy-to-understand measures to communicate the analysis and results and correlations as inferential statistics for the model. Correlation matrix Pearson Correlation Coefficient (R^2) methodology was use to analyse the nature and relationship between the economic factors from China in the respective Space, Property and Capital Markets (IV) and house prices of the selected areas (DV).

4.6.1. Descriptive Correlation Analysis

This section aims to explore the existence of significant relationships between the China’s economic indicators from the respective Space, Capital and Property Markets and house prices in Melbourne Metropolitan, Clayton and Doncaster. SPSS software was used to compute both the Pearson Correlation Coefficients, r-value, along with the significance levels. As per the test criteria set in the Chapter 3: Research Design and Methodology, the strength and direction of the correlations between house prices performance in each and every location and significant influencing economic indicators shall be identified for both current and lagged eight (8) quarters period. Microsoft Excel was used to tabulate graphs and charts for trend analysis on significant correlated Chinese economic indicators with house prices in the selected locations.

4.6.1.1. Melbourne Metropolitan Residential Property Market

Correlations were measured for Melbourne Metropolitan house prices and the respective economic indicators from China. The main leading economic variables and the significance of their relationship with house prices in Melbourne Metropolitan are summarised in Table 4.37:

Table 4.37: Correlation of Chinese Leading Economic Indicators with Melbourne Metropolitan House Prices

Melbourne Metropolitan	Lag (Months)								
	Current	3	6	9	12	15	18	21	24
Space Market									
Per Capita Disposable Income of urban Households, Accumulated(yuan)	-0.06	-0.12	-0.19	-0.12	-0.03	-0.01	-0.05	-0.01	0.22
China GDP Growth Rate	0.59**	0.45**	0.20	-0.06	-0.35*	-0.45**	-0.52**	-0.52**	-0.31
China CPI Inflation (All Items)	0.35*	0.17	0.03	-0.10	-0.12	-0.16	-0.30	-0.12	-0.26
China Outflow of FDI	0.09	0.16	0.10	-0.13	-0.17	-0.10	-0.10	0.30	0.22
Price Index for Investment in Fixed Assets , Accumulated	0.22	-0.19	-0.54**	-0.70**	-0.58**	-0.35*	-0.12	0.06	0.21
Capital Market									
Shanghai Stock Market Index	0.41**	0.57**	0.51**	0.37*	0.04	-0.31	-0.40*	-0.46**	-0.31
China Foreign Currency Exchange Rates	0.13	0.27	0.33*	0.23	-0.02	-0.30	-0.54**	-0.62**	-0.59**
China Short Term Interest Rates	0.32*	-0.06	-0.35*	-0.60**	-0.58**	-0.41*	-0.31	-0.11	0.02
China Balance of Payment(MEI)	-0.20	-0.29	-0.26	-0.11	0.01	0.06	0.13	0.08	-0.05
Property Market									
Price Indices of Construction and Installation , Accumulated	0.23	-0.18	-0.53**	-0.69**	-0.57**	-0.34*	-0.11	0.07	0.22
China Residential Buildings Floor Space Completed	0.04	0.03	-0.03	-0.01	0.02	-0.08	-0.10	-0.01	0.20
Floor Space Newly Started	0.43**	0.21	-0.08	-0.28	-0.48**	-0.48**	-0.44*	-0.24	-0.04
China Construction Output Value	0.07	0.01	-0.08	-0.09	-0.09	-0.06	-0.10	-0.04	0.09
** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)									
RED Most significantly correlated at the 0.01 level BLUE Significantly correlated at the 0.01 level GREEN Significantly correlated at the 0.05 level									

Table 4.37 shows the summary of the SPSS's analysis for various Chinese leading indicators from Space, Capital and Property Markets that provide significant relationships between the selected economic factors and the house prices in Melbourne Metropolitan residential property markets for the series of 2002-2013. Significant correlations between the leading economic indicators and Melbourne Metropolitan house prices as r value classified according to the lagged periods are listed in Table 4.38 as below:

Table 4.38: Pearson Correlation Coefficients, r values and the Lagged Periods For Melbourne House Prices

Leading Indicators	Market	r	Periods
The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):			
1 Price Index for Investment in Fixed Assets , Accumulated	Space Market	-0.70	9 months
2 Price Indices of Construction and Installation , Accumulated	Property Market	-0.69	9 months
3 China Foreign Currency Exchange Rates	Capital Market	-0.62	21 months
4 China Short Term Interest Rates	Capital Market	-0.60	9 months
5 China GDP Growth Rate	Space Market	0.59	Current
6 Shanghai Stock Market Index	Capital Market	0.57	3 months
7 Floor Space Newly Started	Property Market	-0.48	12 months
The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):			
8 China CPI Inflation (All Items)	Space Market	0.35	Current
The correlation is statistically insignificant in:			
9 China Outflow of FDI	Space Market	0.30	21 months
10 China Balance of Payment(MEI)	Capital	0.29	3 months
11 China Residential Buildings Floor Space Completed	Property Market	0.20	24 months
12 Per Capita Disposable Income of urban Households, Accumulated(yuan)	Space Market	-0.19	6 months
13 China Construction Output Value	Property Market	-0.09	9 months

Among the leading Chinese economic indicators, seven variables were statistically significant at the 0.01 level (2-tailed) deriving from Capital, Property and Space Markets respectively. One variable was statistically significant at the 0.05 level (2-tailed) from Space Markets. Five variables were statistically insignificant from Capital, Property and Space Markets. Of all the Chinese economic indicators that were significantly correlated with house prices in Melbourne Metropolitan, six of the leading indicators were correlated within the short term or 12 month lagged periods.

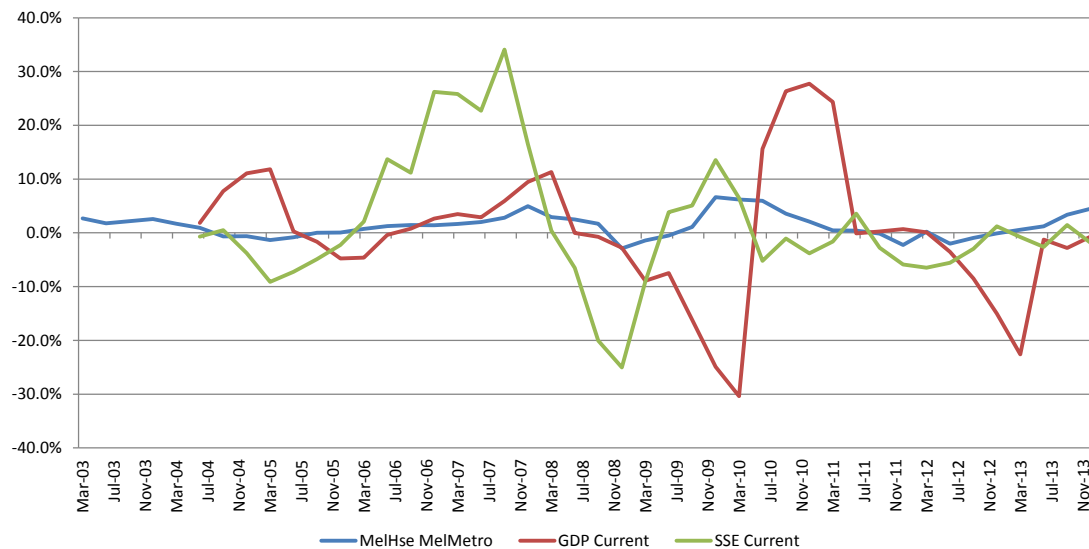
Significant Relationships

Table 4.38 showed that over the period from 2002 to 2013, there were eight variables significantly correlated with the house price performance in Melbourne Metropolitan. Three economic indicators demonstrated a positive correlation with the house prices in Melbourne Metropolitan and five economic indicators demonstrated negative correlation. The positively correlated Chinese indicators, namely China GDP Growth Rate, Shanghai Stock Market Index and China CPI inflation are all significantly correlated for the short term period or within a 12 month lagged period. Both Chinese Foreign Exchange Rates and China Short Term Interest Rates were negatively correlated with Melbourne Metropolitan house prices. The other negatively correlated Chinese leading economic indicators were Price Index for Investment in Fixed Assets, Price Indices of Construction and Installation and Floor Space Newly Started. Negative relationships between these five economic indicators with Melbourne Metropolitan house prices demonstrated noteworthy relationships existed between these Chinese economic indicators and Melbourne Metropolitan house prices and further analysis was justified.

China Determinants Analysis

Among the leading indicators, two leading Chinese economic indicators were selected for the subsequent bivariate descriptive analysis based on their positive significant level and instant impact on Melbourne Metropolitan house prices (current or close to current lagged period). China GDP growth rate (CGDP) was statistically significantly correlated with the median house prices in Melbourne and produced a positive 0.591 r-value. The significant r-value of the China GDP growth rate was reflected in the 'current' period for the lagged data assessment. The other statistically significantly correlated Chinese leading factor was the Shanghai Stock Exchange Indices (SSE). The SPSS analysis produced a 0.566 r-value positively correlated for SSE with median house prices in Melbourne Metropolitan within the three month lag period. Figure 4.12 demonstrates the annualised movement analysis of CGDP, SSE and Melbourne Metropolitan house prices:

Figure 4.12: Annualised Movement of China GDP, SSE and Melbourne Metropolitan House Prices



Sources: REIV 2015, NBSC 2015, Yahoo Finance 2015

The quarterly movements of the two Chinese leading economic indicators and Melbourne median house prices were graphed to highlight the respective inclinations in Figure 4.12. There were clearly two significant growth periods for both of the indicators. The first significant growth period happened during 2006 to late 2007. The second growth period occurred from early 2009 to late 2011. As mentioned in Section 4.3, house prices in Australia suffered setbacks in a similar manner and time frames. Specific reference was made to the two infamous economic predicaments during GFC 2008 and European countries' sovereign debt crisis. SSE was believed to have suffered a similar fate during these two financial predicaments and the negative impacts were clearly shown in Figure 4.12. However, China GDP growth suffered a setback only during GFC 2008 and that was relatively muted compared to the European sovereign debt crisis. In 2008, China implemented a stimulus package for an estimated USD586 billion injection into China's economy or roughly 7% of its gross domestic product to construct new railways, subways and airports and to rebuild communities devastated by an earthquake in the southwest in the same year (Maidment, 2008). In the midst of world economies integration and liberation activities, Australia as a macroeconomic structure and Melbourne Metropolitan residential property markets as a major Australian economy component were increasingly affected and impacted by the world economy's performance.

4.6.1.2. Clayton Residential Property Market

Correlations were measured for Clayton house prices and the respective Chinese economic indicators listed in Table 4.39 as below:

Table 4.39: Correlation of China Leading Indicators with Clayton House Prices

Clayton	Lag (Months)								
	Current	3	6	9	12	15	18	21	24
Space Market									
Per Capita Disposable Income of urban Households, Accumulated(yuan)	0.07	0.02	-0.02	0.01	0.06	-0.01	-0.04	0.02	0.18
China GDP Growth Rate	0.43**	0.40*	0.14	-0.11	-0.26	-0.31	-0.23	-0.11	0.06
China CPI Inflation (All Items)	0.23	0.01	-0.16	-0.15	-0.30	-0.25	-0.22	-0.12	-0.07
China Outflow of FDI	0.19	0.14	0.00	-0.13	-0.10	-0.23	0.11	0.20	0.06
Price Index for Investment in Fixed Assets , Accumulated	0.06	-0.19	-0.47**	-0.52**	-0.33*	-0.20	0.07	0.23	0.21
Capital Market									
Shanghai Stock Market Index	0.51**	0.68**	0.64**	0.41*	0.17	-0.17	-0.27	-0.30	-0.18
China Foreign Currency Exchange Rates	0.01	0.16	0.21	0.12	-0.06	-0.21	-0.35*	-0.34*	-0.23
China Short Term Interest Rates	0.14	-0.16	-0.34*	-0.40*	-0.33*	-0.16	-0.10	0.02	0.05
China Balance of Payment(MEI)	0.00	-0.06	0.01	0.18	0.35*	0.32	0.34*	0.24	0.13
Property Market									
Price Indices of Construction and Installation , Accumulated	0.02	-0.23	-0.48**	-0.51**	-0.31	-0.16	0.09	0.22	0.21
China Residential Buildings Floor Space Completed	0.10	0.02	0.03	0.01	0.03	-0.11	-0.01	0.06	0.33
Floor Space Newly Started	0.31	0.08	-0.10	-0.32	-0.35	-0.27	-0.16	0.01	0.21
China Construction Output Value	0.07	-0.02	-0.08	-0.10	-0.04	-0.10	-0.05	-0.03	0.11

****** Correlation is significant at the 0.01 level (2-tailed)
***** Correlation is significant at the 0.05 level (2-tailed)

RED Most significantly correlated at the 0.01 level
BLUE Significantly correlated at the 0.01 level
GREEN Significantly correlated at the 0.05 level

Table 4.39 shows the summary of the SPSS's analysis for various leading Chinese indicators from Space, Capital and Property Markets that provided significant relationships between the selected economic factors and house prices in Clayton for the series of 2002-2013. Significant correlations between the Chinese economic indicators and Clayton house prices as r-value classified according to the lagged periods are summarized in Table 4.40 below:

Table 4.40: Pearson Correlation Coefficients, r values and the Lagged Periods For Clayton Housing Market

Clayton			
Leading Indicators	Market	r	Periods
The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):			
1 Shanghai Stock Market Index	Capital Market	0.68	3 months
2 Price Index for Investment in Fixed Assets , Accumulated	Space Market	-0.52	9 months
3 Price Indices of Construction and Installation , Accumulated	Property Market	-0.51	9 months
4 China GDP Growth Rate	Space Market	0.43	Current
The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):			
5 China Short Term Interest Rates	Capital Market	-0.40	9 months
6 China Balance of Payment(MEI)	Capital Market	0.35	12 months
7 China Foreign Currency Exchange Rates	Capital Market	-0.35	18 months
The correlation is statistically insignificant in:			
8 Floor Space Newly Started	Property Market	-0.35	12 months
9 China Residential Buildings Floor Space Completed	Property Market	0.31	24 months
10 China CPI Inflation (All Items)	Space Market	-0.30	12 months
11 China Outflow of FDI	Space Market	-0.23	15 months
12 Per Capita Disposable Income of urban Households, Accumulated(yuan)	Space Market	-0.18	24 months
13 China Construction Output Value	Property Market	0.11	24 months

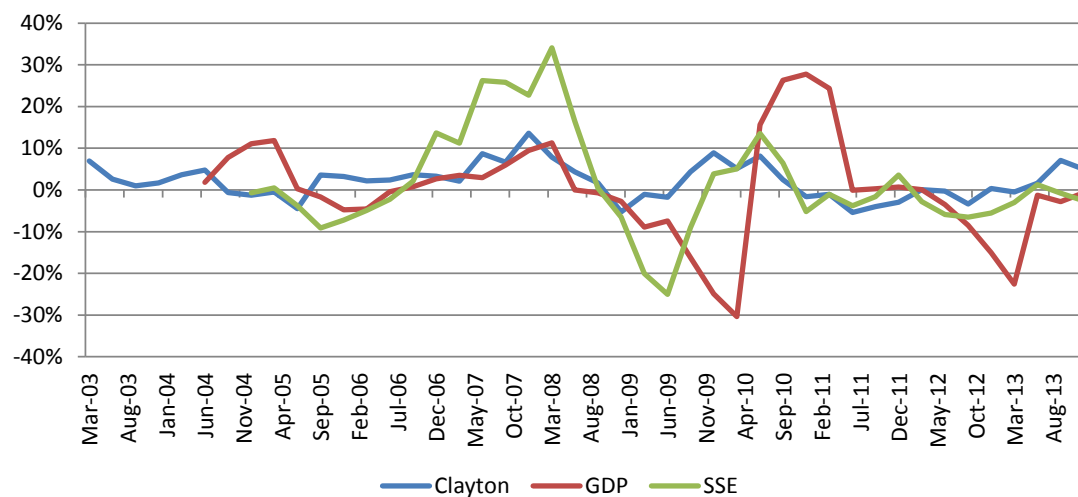
As shown in Table 4.40, Shanghai Stock Market Index and China GDP Growth Rate had again presented a statistically significant correlation at 0.01 level and impacted the Clayton house prices

at the current period (current and 3 month period) compared to other indicators. SSE Index ranked the highest in r-value and had a positive correlation with the house prices in Clayton within three month lagged period. Similar to Melbourne Metropolitan residential property market, China GDP growth rate and SSE index had again emerged as significantly correlated economic indicators in the most current period.

China Determinants Analysis

Bivariate descriptive analysis was performed on the two selected Chinese economic leading indicators, namely China GDP growth rate and SSE index. Figure 4.13 demonstrates the movement analysis:

Figure 4.13: Annualised Movement of China GDP Growth, SSE and Clayton House Prices



Sources: REIV 2015, NBSC 2015, Yahoo Finance 2015

There were clearly two significant growth patterns for both of the indicators. The first significant growth happened during the period of 2006 to late 2007. The second occurred from early 2009 to late 2011. As mention in Section 4.3 in this chapter, house prices in Australia suffered setbacks in the similar manner and time frames specifically GFC 2008 and European countries' sovereign debt crisis. SSE was believed to have suffered a similar fate during these two financial crisis and the negative impacts were clearly shown in Figure 4.15.

4.6.1.3. Doncaster Residential Property Market

Correlation analysis was repeated for the Doncaster house prices and the respective Chinese economic indicators with the resulted tabulated in Table 4.41:

Table 4.41: Correlation of Chinese Leading Indicators with Doncaster House Prices

Doncaster	Lag (Months)								
	Current	3	6	9	12	15	18	21	24
Space Market									
Per Capita Disposable Income of urban Households, Accumulated(yuan)	-0.08	-0.03	-0.05	-0.11	-0.09	-0.03	0.01	0.08	0.19
China GDP Growth Rate	0.55**	0.34*	0.06	-0.15	-0.31	-0.37*	-0.40*	-0.33*	-0.19
China CPI Inflation (All Items)	0.18	0.00	-0.07	-0.16	-0.13	-0.21	-0.33	-0.20	-0.23
China Outflow of FDI	0.28	-0.05	-0.14	-0.07	-0.24	-0.04	0.21	0.16	0.21
Price Index for Investment in Fixed Assets , Accumulated	-0.02	-0.41*	-0.60**	-0.49**	-0.40*	-0.17	-0.03	0.05	0.16
Capital Market									
Shanghai Stock Market Index	0.63**	0.76**	0.52**	0.18	-0.10	-0.35*	-0.43**	-0.33	-0.19
China Foreign Currency Exchange Rates	0.29	0.40*	0.33*	0.13	-0.12	-0.34*	-0.47**	-0.46**	-0.35*
China Short Term Interest Rates	0.08	-0.25	-0.43**	-0.50**	-0.40*	-0.31	-0.19	-0.11	-0.02
China Balance of Payment(MEI)	-0.05	-0.08	0.02	0.17	0.16	0.11	0.09	0.12	0.17
Property Market									
Price Indices of Construction and Installation , Accumulated	-0.01	-0.41*	-0.59**	-0.49**	-0.39*	-0.17	-0.02	0.06	0.16
China Residential Buildings Floor Space Completed	-0.02	0.08	0.02	-0.05	-0.08	-0.01	0.09	0.11	0.24
Floor Space Newly Started	0.20	0.03	-0.17	-0.39*	-0.43*	-0.31	-0.22	-0.08	0.06
China Construction Output Value	-0.01	-0.05	-0.09	-0.05	-0.18	-0.03	0.02	-0.01	-0.03
** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)									
RED Most significantly correlated at the 0.01 level BLUE Significantly correlated at the 0.01 level GREEN Significantly correlated at the 0.05 level									

Table 4.41 shows a summary of the SPSS's analysis for various leading Chinese indicators from Space, Capital and Property Markets that provide significant relationships between the selected Chinese economic factors and house prices in Doncaster for the series of 2002-2013. Significant correlations between the Chinese economic indicators and Doncaster house prices, as r-value, were further summarised according to the lagged periods in Table 4.42 below:

Table 4.42: Pearson Correlation Coefficients, r values and the Lagged Periods For Doncaster House Prices

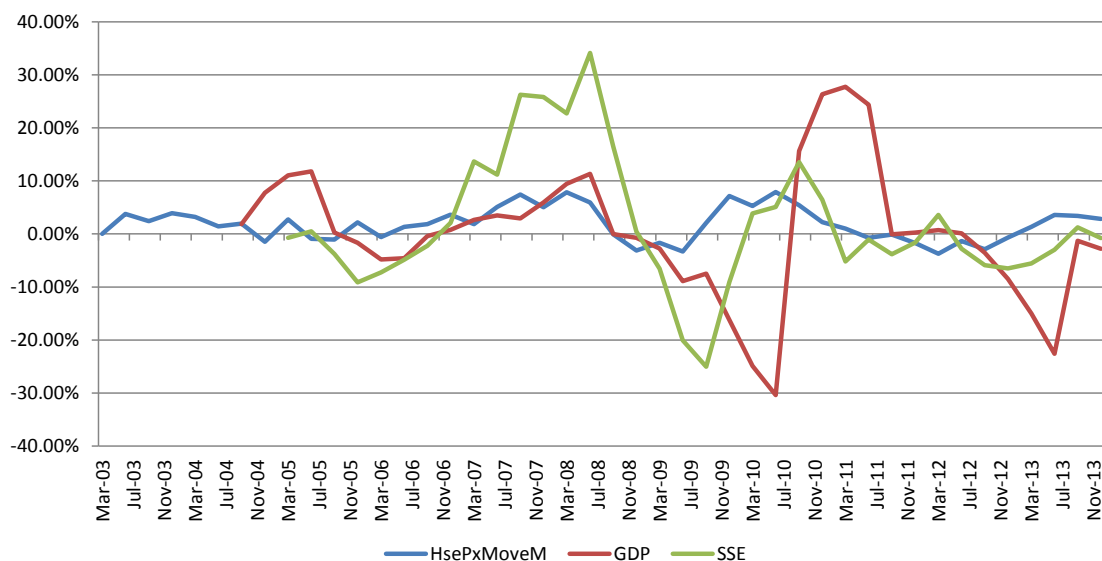
Doncaster	Market	r	Periods
Leading Indicators			
The correlation is statistically significant, $r \neq 0$, at the 0.01 level(2-tailed) with a 99% Confidence Interval(CI):			
1 Shanghai Stock Market Index	Capital Market	0.758	3 months
2 Price Index for Investment in Fixed Assets , Accumulated	Space Market	-0.590	6 months
3 Price Indices of Construction and Installation , Accumulated	Property Market	-0.585	6 months
4 China GDP Growth Rate	Space Market	0.548	Current
5 China Short Term Interest Rates	Capital Market	-0.495	9 months
6 China Foreign Currency Exchange Rates	Capital Market	-0.465	18 months
The correlation is statistically significant, $r \neq 0$, at the 0.05 level(2-tailed) with a 95% Confidence Interval(CI):			
7 Floor Space Newly Started	Property Market	-0.429	12 months
The correlation is statistically insignificant in:			
8 China CPI Inflation (All Items)	Space Market	-0.327	18 months
9 China Outflow of FDI	Space Market	0.278	Current
10 China Residential Buildings Floor Space Completed	Property Market	0.237	24 months
11 Per Capita Disposable Income of urban Households, Accumulated(yuan)	Space Market	0.193	24 months
12 China Construction Output Value	Property Market	-0.175	12 months
13 China Balance of Payment(MEI)	Capital Market	0.168	9 months

The leading Chinese economic indicators that were statistically significant at the 0.01 level had increased in number to six indicators as compared to four in Clayton (seven in Melbourne Metropolitan). Among all the Chinese economic indicators that are significantly correlated with the house prices in Doncaster, two of the leading indicators are positively correlated within the 3 months periods, namely China GDP growth rate and SSE index. Once again SSE Index ranked the highest in r-value and had a positive correlation with house prices in Doncaster within the three month lagged period. The other positively correlated indicator was China GDP Growth Rate (ranked fourth) for the current period.

China Determinants Analysis

Among the leading indicators, SSE index ranked the highest in r-value or the most statistically significant correlated Chinese economic leading indicator, with a positive 0.758 r-value; even higher than the r-value in Clayton market. The other statistically significant correlated China leading factor was again, the China GDP growth rate (CGDP) which demonstrates a significant current period correlation. Figure 4.14 demonstrates the movement analysis:

Figure 4.14: Annualised Movement of China GDP Growth, SSE and Doncaster House Prices



Sources: REIV 2015, NBSC 2015, Yahoo Finance 2015

Once again, the quarterly movements of the two Chinese leading economic indicators and Doncaster house prices demonstrated similar inclinations as the Clayton and Melbourne housing markets as depicted in Figure 4.17. There were clearly two significant growth periods for both of the indicators. The first happened during the period of 2006 to late 2007. The second occurred from early 2009 to late 2011. As mentioned in Section 4.3 in this chapter, house prices in Australia

suffered setbacks in a similar manner and time frame to two infamous economic predicaments, GFC 2008 and European countries' sovereign debt crisis.

4.7. Summary of Key Points

The aim for this study was to explore the existence of significant relationships between overseas investments and the residential housing markets performance in Melbourne Metropolitan, particularly in areas that had experienced significant growth subsequent to GFC2008. This quantitative phase of this study aimed to analyse the relationship and validity of various key determinants overseas investments had on house prices on the Melbourne Metropolitan and two selected Melbourne suburbs. This research phase involved collecting and analysing historical secondary data to identify the traditional leading economic indicators and new determinants that had impacted the Australian residential property market's performance. Once the significant correlated economic indicators and determinants were identified, this information formed the pillars for the subsequent qualitative investigation to help explain, or elaborate on, the quantitative results obtained. The findings of this 'QUAN' research phase provided the much needed rationales and directions for the subsequent selections of participants (QUAL) and semi-structured interviews questionnaires. The analysed data from both Quantitative and Qualitative analysis will assist in identifying the new drivers impacting overseas investors' property asset allocation strategies and decision-making.

The quantitative phase of this study incorporated probability samplings characterised by econometric equations and formulas. The result of the analysis of these samples, gathered through probability techniques, formed the background theories of how and what factors drive overseas investors into Melbourne's residential property market. Inferential statistics was applied in which the sample of Melbourne residential property markets constitute the smaller data set inferring the larger population of Australian residential property market.

This research falls into this classification of a "predictive" design method having house prices performance in the selected suburbs will be forecasted to predict the future trend and to ensure validity of the model. Three statistical tests were applied to analyse the strength of the relationships between the dependent variables (House Prices) and independent variables (Australian Leading Economic Indicators, Non-traditional factors and Chinese Leading Economic Indicators) to confirm the validity of the model, namely:

- i. Descriptive Analysis
- ii. Correlation Matrix Pearson Correlation Coefficient (R^2)
- iii. Multiple Linear Stepwise Regression

These techniques were used to first explore the existence of significant relationships between the Australian leading economic indicators and the median house prices in Melbourne Metropolitan and the 2 selected suburbs. Two non-traditional factors, namely Education (International Student Enrolments) and Residential Tourism (Long Term and Short Term Tourist Arrivals in Victoria) were introduced and the same methodology was applied to test their relationship significance with the median house prices of the selected suburbs. Finally, the existence of significant relationships between the Chinese leading economic indicators from the respective Space, Capital and Property Markets and the median house prices in Melbourne Metropolitan and the 2 selected suburbs was explored.

4.7.1. Overseas versus Local Determinants

Quantitative analysis on secondary data had successfully provided three regression equations modelling the house prices for Melbourne Metropolitan, Clayton and Doncaster. Based on the correlation matrix and the three regression equations, factors associated with offshore investments had predominantly shaped the models and emerged more significant among all the traditional economic indicators. For example, 10-year Government Bond Yields (10Bond), Foreign Currency Exchange (Forex) and Net Overseas Migration were significantly correlated and formed the crucial components of the regression equations and correlation matrix. They surpassed the importance of other traditional residential market determinants such as rent growth, GDP per capital growth and net saving rates.

According to Bowe (2012), Australia's second largest export was actually the Australian Commonwealth Government Bonds (ACGBs). In the 12 months until June 2012, Australia sold AUD58 billion worth of ACGBs to foreign investors, exceeding the AUD48 billion worth of coal exported, second only to the AUD85 billion of iron ore exports over the same period. As at June 2015, the Australian Office of Financial Management (AOFM, 2015) reported that approximately 65.2% of the Australian Government Securities (Treasury Bonds, Treasury Indexed Bonds, and Treasury Notes) were in the hands of foreign investors. As foreign investors keenly pursue an alternative asset class as part of their diversified portfolio, real estate had emerged as a crucial asset class alongside with ACGBs with similar investment trend observed.

Net Overseas Migration (NOM) was one of the major traditional drivers of Australian residential property markets in this study and is consistent with various empirical studies (for example Benson, 2009, Borjas, 1994). The significant negatively correlated relationship between the Foreign Exchange Rate (Forex) is consistent with the overseas investment stratagem. Australian assets

became more economically affordable when Australian currency was devalued against other foreign currencies. The foreign exchange factor is particularly relevant in terms of holding long terms assets such as properties from the investors' perspective.

4.7.2. Education

Correlation Coefficient analysis was performed to explore if International Student Enrolment in Victoria State (Education) was statistically significantly correlated to house prices in Melbourne Metropolitan, Clayton and Doncaster. The significance of this new determinant was further tested using Stepwise Multiple Linear Regression.

SPSS's Pearson Correlation Coefficient (R^2) statistical analysis revealed that there were statistically significant relationships between Education and house prices in Melbourne Metropolitan, Clayton and Doncaster residential property markets for 2002-2013. International Student Enrolments, a non-traditional socio-economic indicator, was proven significantly correlated with all the property markets tested at the 0.01 level (2-tailed) with the house prices in both Clayton and Doncaster and 0.05 level (2-tailed) with the house prices in Melbourne Metropolitan. In Clayton housing market, International Student Enrolment ranked high compared to other traditional economic indicators in terms of r-value or significance level. The validity of this model was well supported by the fact that Monash University and John Monash Science School are both located in Clayton. Monash University has continued its rise in international university rankings, according to results released by Times Higher Education (Williams, 2015). John Monash Science Scholl is the state's first specialist science secondary school and is a state government coeducational specialist selective school in Victoria.

Although Education failed to demonstrate itself to be an essential determinant affecting the house prices in in the Stepwise Multiple Linear Regression analysis, the validation of Education as a statistically significant correlated factor on Melbourne's housing market formed the basis for subsequent qualitative analysis and provided the rationale and directions for the subsequent selections of participants (QUAL) and semi-structured interview questionnaires.

4.7.3. Residential Tourism

The non-traditional factor RT was incorporated to assess its interaction with other traditional economic indicators using the Higgins (2010) three-market model. The correlations and regression equations were tested for statistical reliability and visually examined. Residential Tourism, represented by Long Term Visitor (LTVA) in Australia and Short Term Visitor Arrivals in Victoria (STVAV), were statistically significantly correlated to house prices in Melbourne Metropolitan, Clayton and Doncaster. The result of Stepwise Multiple Linear Regression analysis presented the

interaction of Residential Tourism, as a new determinant, with all other leading economic indicators in provision of an acceptable model representing future house prices in Melbourne Metropolitan, Clayton and Doncaster.

Correlation analysis revealed that there were statistically significant relationships between Residential Tourism and the house prices in all the housing markets for 2002-2013. Long Term Visitor Arrivals (LTVA) demonstrated significant positive correlations (at 0.01 level (2-tailed)) with the house prices in all the residential property markets. Short Term Visitor Arrivals in Victoria State (STVAV) demonstrated significantly positive correlations reaching the 0.01 level (2-tailed) significance level with Melbourne Metropolitan house prices and 0.05 level (2-tailed) with Doncaster house prices. As the collection and classification between STVA and STVAV were not mutually exclusive, stronger correlated STVAV is selected of the two as the potential factors for Melbourne housing markets analysis.

The Stepwise Multiple Linear Regression analysis had successfully provided three adequately fitted lines that possess high “R²” readings above 90% range for all three markets under the assessments. The summary results of the analysis for the three residential property markets were shown in Figures 4.9, 4.10 and 4.11. There were improvements in the “R²” readings across all the residential property markets subsequent to the incorporation of the non-traditional factors of RT. Visual representation and assessment of the graphs demonstrated better fitted regression lines across all markets under the assessment with the new variable of RT. The fitted regression line was further validated using the latest house prices in 2014. The difference between the actual index and the model predictions was not substantial confirming the regression equations had provided better prediction models compared to the model developed earlier without the Residential Tourism variable.

The effect of Residential Tourism, as a new determinant of house prices in Melbourne Metropolitan, improved the accuracy of the fitted regression line and its significance. This was particularly noticeable towards the latter part of the data series. The new fitted line had moved the fitted line closer to the actual house prices starting from year 2013 until the end of the time series. House price movement observed in Melbourne Metropolitan and Doncaster towards the latter part of the time series, which was unable to be modelled relying on traditional economic indicators, can be partly explained in this new equation by incorporating a new determinant of Residential Tourism.

In Clayton, the non-traditional socio-economic factor of Education, although reflected as a strongly correlated factor in the correlation analysis was not included in the prediction model. The final

regression equation provided a better prediction model compared to the earlier model by the incorporation of the Residential Tourism variable. The “R²” readings had improved from 93.8% to 94.8% in this predictive model with the addition of the non-traditional determinant RT. The effect of RT, as a new determinant of house prices in Clayton, had improved the accuracy of the fitted regression line moderately.

4.7.4 China Factors

The Higgins (2010) model, together with the “Push & Pull” model established in this study, were used to build an economic model showing the best inter-relationship of Chinese leading economic indicators to house prices. Chinese major economic and financial indicators formed the basis of assessment for this section and were analysed as the “Push” factors originating from China’s Government policies impacting on Australian Space and Capital Markets.

The planned research implementation in this phase was proven unsuccessful due to the limited availability of Chinese statistical data. The collection of Chinese statistical data proved to be a challenging exercise. Leading Chinese Economic indicators were intended to be collected from OECD and NBSC to form the ‘unobtrusive measure’ (Teddle and Tashakkori, 2009) of the independent variables of the model. However, the forecasting model was unable to be executed due to limited data series from both OECD and NBSC. Quantitative analysis needs more data points because of the presence of seasonality in the data. The annualised OECD Chinese leading economic data was proven inadequate and the NBSC database did not capture some of the leading economic data. For example, rent growth does not exist in the NBSC database although it is a crucial traditional economic indicator for both correlation and regression analysis.

As a result, only 522 data points were collected for 13 datasets of Chinese leading economic data as compared to the minimum 624 data points needed to proceed with statistical analysis. The data points were further reduced subsequent to the applications of data smoothing and lagging of eight periods, making the regression analysis impossible. Due to the limited time series and the limited data availability, the multiple regression analysis was replaced by descriptive analysis in this part of the research. The final stage of the research predominantly involved bivariate statistical analysis to test the model. SPSS software was used to compute both the Pearson Correlation Coefficients, *r*-value, along with the significance levels.

Among all the statistically significant correlated variables, China GDP growth rate and Shanghai Stock Exchange Index (SSE) consistently emerged as the two most significant positively correlated economic indicators with their impacts noticeable in a short term lagged period. They were

incorporated in the descriptive bivariate analysis. The visual representation revealed that China GDP growth exceeded all other Indices, consistent with the widely reported significant growth in China's economy during the assessment period. SSE enjoyed two periods of significant increases spanning across year 2007 until the beginning of 2009 and for most of year 2010. These periods coincided with the two peaks in Australian median house prices although not in the similar magnitude. The first significant growth period happened during 2006 to late 2007. The second growth period occurred from early 2009 to late 2011. House prices in Australia suffered setbacks in the similar manner and time frames to the two infamous economic predicaments during GFC 2008 and European countries' sovereign debt crisis. SSE was believed to have suffered a similar fate during these two financial events. In the midst of world economies' integration and liberation, Australia as a macroeconomic structure and Melbourne Metropolitan residential property markets as a major Australian economy component were increasingly affected and impacted by world economies' performance.

It is certainly neither a new theory nor new knowledge that China's economic growth for the past decade has impacted the global economies, evidenced by numerous and significant China FDI and private investments in overseas markets. In the course of investigating the emerging drivers of overseas private investment in the Australian residential property market subsequent to GFC 2008, this research established that Chinese's investments into cross border property markets is a function of China's recent economic growth, impacting Australian residential property market performance along the way.

Chapter 5: Qualitative Research

5.1 Introduction

Real estate industry experts' opinions and insights form the key primary data for this phase of research. This qualitative research is aimed to support, validate and seek insights subsequent to the study conducted in the first phase Quantitative Research in Chapter Four. A semi-structured interview research technique was selected in this phase of qualitative assessment. The evaluation of new determinants in Australian residential property market was through feedback and discussions with the relevant stakeholders. This method allowed for a focus on a particular unit of analysis rather than the collection and analysis of data (Willig, 2013, Yin, 2013). The objective was to see the research topic from the perspective of the interviewee, and to understand how and why the individual came to their particular perspective (King et al., 1994). The qualitative semi-structured interview in this study carried with the following aims:

- i. To identify factors from both local and offshore parties, modelled around the Space/Capital/Property Markets, causing or influencing overseas investors' decisions regarding acquiring Australian residential property.
- ii. To identify and understand the government policies from both a local and offshore perspective, the rationales and extent of such government policies causing offshore investments in Australian residential property.
- iii. To evaluate the impact non-traditional factors have had on overseas investors' decision making.

Judgements of the researcher with regard to professional knowledge can provide the best information to achieve the objective of the study and represented the key feature of this research phase (Teddlie and Yu, 2007). Key stakeholders in the Australian property professions of consultants and researchers were targeted as interviewees for the study to ensure adequate coverage and references. The selection of interviewees was based upon their involvement in the residential property industry and seniority in their respective organisation's decision making process. Most participants selected were either senior executive or owners of their respective firms.

Teddlie and Tashakkori (2009) explained that there were no rules for sample size in qualitative studies and typically purposive samples were small. In this study, the intended sample size was 15 participants, eight from Melbourne and seven from China, comprised of a wide range of experts

from both overseas (China) property market and the local (Melbourne) property market including Property Consultants, Agencies, Developers and Legal and Financial Advisors. They are the key players in the property industry who play the role as vital information providers to the investors. Figure 5.1 illustrates the interview approaches adopted in this study to ensure adequate and strategic coverage of key players in the property industry.

Figure 5.1 Semi-structured Interview Plan

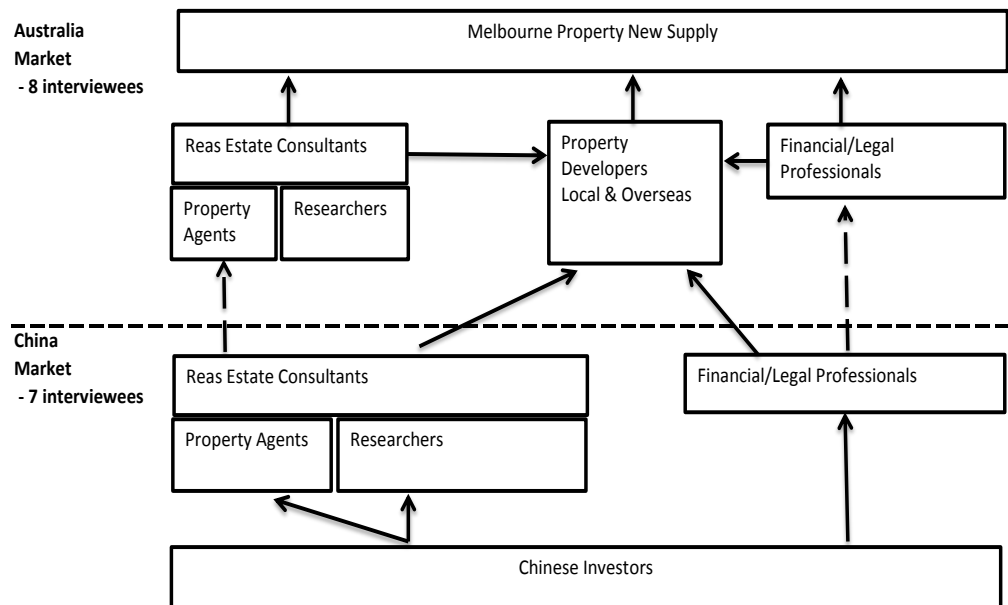


Figure 5.1 depicts the identified four key stakeholders in the residential housing market representing four different professional sectors. Two stakeholders from each category were interviewed to provide a range of opinions and experiences were included in the analysis. The interview exercise was expanded to interviews conducted in China to address the “push” factors of the research. Two versions of the questionnaire were formulated specifically for China and Australian interviewees (Appendices II & III) involving a total of 12 interview questions for each segment. Codes were assigned to each interviewee (Appendix IV) to ensure the responses were de-identified, providing anonymity for the participants. These codes were used to report interview responses.

Consequently, eight interviews were successfully conducted in Australia (Melbourne) and seven in China (Shanghai) making a total of 15 interviews with the property key stakeholders in two countries. The interviews were undertaken in June and August 2015 at the interviewee’s place of work, lasting approximately 30-60 minutes covering government policies, information on foreign investors, property market conditions, tourist and international student enrolments information.

Interview participants were identified through the authors' and RMIT University's networks. The qualitative data collected (descriptive and narrative) were audio recorded and transcribed.

The transcripts were thematically coded using the qualitative analysis software, NVivo. Relevant and significant data collected from the semi-structured interview are gathered, analysed and arranged thematically in accordance with the issue discussed. In the subsequent sections of Chapter Five, the findings and analysis of the interviews are tabulated and discussed accordance with the topic as stipulated in Appendix II and III. All the findings are supported and substantiated by the thematically arranged actual quotes from the interview participants.

This Chapter has 5 sections. Subsequent to Section 5.1 introduction, Section 5.2 outlines the investment in Australian residential property from the perspective of offshore investors and determinants. New market determinants and drivers were tabled in Section 5.3 major government policies from both China and Australia impacting Australian residential property market were discussed in Section 5.4 and Section 5.5 summarises the qualitative research outcomes.

5.2 Offshore Investments In Australian Residential Property

5.2.1 Offshore Investors – Large Scale Projects and Private Investments

Mega residential property development projects in Australia and their macroeconomic implications were addressed by the interview participants from Australian global firms, providing the factual aspect of residential property development in Australia. Recently Australian residential property development projects had successfully attracted foreign investments funds. Residential property development projects were no longer a domestic affair reserved solely for the Australian developers. Competition is from foreign fund participations taking advantage of the strong Australian residential property market. Beside the large overseas property development firms, private wealth funds and HWNIs from Asia Pacific (including China, Singapore and Malaysia) were actively involved in procuring central development sites, construction and selling residential properties, specifically located in Sydney and Melbourne. Significant residential project development initiatives were noticeable originating from Asia Pacific countries including China, Singapore and Malaysia. Contrary to the most of the media reports that investors from China were dominating the property market, Singapore had emerged as the biggest international property buyer from the Asia Pacific in Australia towards the end of 2014. According to Chong (2014), more capital flowed out of Singapore to global real estate than from China or Japan and about USD6.7 billion was spent in Australia by buyers from Singapore, compared with USD2.7 billion by Chinese group. This was evident in the interviewee's feedback.

Quotes from Australian participants:

“So starting with the Chinese, obviously there’s a strong motivation from them to diversity their portfolio of money/assets into places outside of China the one thing that nobody predicted was in 2012 the Singaporean and Malaysian developers embarked on acquiring development sites in Melbourne.” (Australia-Global-Real-Estate-Agent)

“High nets are through family office funds so they’re either investing through their office fund in taking mass or equity stakes in projects or they are just high net individuals who are just looking for passive active development”(Australia-Global-Consultant).

Interview participants from China provided the macroeconomic rationales of outward FDI from China to other parts of the world, including Australia. The reasons provided by the interview participants, particularly from China, constitute the “Push Factors” for this study in accordance with the “Push & Pull” model stipulated in Chapter 3.2.2. These push factors include underperformance of Chinese residential property, China’s relaxation of capital outflow restrictions, higher investment returns in overseas markets, China’s stimulus package, diversification, maintaining property development margin. Among the rationales mentioned on China’s aggressive outward FDI, three of these rationales were deemed the major “push” factors:

- i. Underperformance of domestic residential property market
- ii. Relaxation of China’s restriction on investments outflowing to overseas
- iii. Diversification to overseas assets

Quotes from Chinese participants:

“Three reason...Firstly is diversification...Secondly is the China property market is not so well at the moment...Chinese property market are not going well, very well.....recent year is not well as before. So there is Chinese Government now is not so strict (on offshore investments). Sometimes they encouraging.”(China-Local-Agent)

“purely from an investment standpoint, because over the last two to three years we’ve seen the sort of underperformance of the China residential market because of the not so restricted, restrictive government policies put in place..... they’ve seen maybe better performance in other markets like certain cities in Australia.”(China-Global-Property-Researcher2)

“A: because it was just part of maturing their business, to diversity their assets overseas, and a lot of them weren’t getting the returns that they once were in China. Obviously there’s a slow-down in the economy here, there was a real estate, a perceived real estate housing bubble that

had the brakes put on it by the government with their measures, so that drove them to go overseas and explore other options.....B: maintain their development margins that they'd seen in China, over sort of the previous decade..... They want us investing overseas..... the third thing is China Government not encourage but they are not stopping as before. So people can send their money to overseas. "(China-Global-Researcher-1)

5.2.2 Local versus Foreign Buyers and The Australian International Brand Presence

Interview participants, particularly the Australian property professionals, asserted that retail consumers from both domestic and international communities had fuelled the demand for Melbourne residential property. China investors were singled out by market reports as the main reason for the recent price escalation in Australian house prices particularly in Sydney and Melbourne. The above misconception was rebutted in the semi-structured interview exercise and participants attributed the recent improved market performance to the Australia's increasing relevance in worldwide cross-border business in the midst of global liberalisation. Results of interviews revealed that there was also a huge misconception between "local buyer" and "overseas Investors" by the market observers. The general public had conveniently concluded that successful buyers who do not have a Caucasian appearance were deemed overseas buyer without a proper understanding. Many of these buyers were actually migrants who have resided in Australia for a long period of time. At this juncture, Australian citizenship categorisation is loosely defined and this has partly resulted in confusion in terms of residential property buyers. With respect to Australia becoming increasingly multicultural, a descriptive categorization similar to those used in the United States for its citizens is recommended for future research purposes; i.e. Australian-Chinese, Australian-Italian, Australian-Indian etc.

Quotes from Australian Participants:

"Every Asian that turns up, apparently is a foreign investor. That's nonsense, it's just not true..... But the press whip it up into a frenzy..."(Australia-Global-Property-Researcher)

"I couldn't say whether they're Chinese or Malaysian or, but they're Asian-based hubs. But that's makes common sense. It just so happens that they like buying property, and they might have been here, they just don't look Caucasian if you like, there's no difference...It's just because they might look Asian, they might have been here for 20 or 30 (years) or more... I would've thought they would get to probably 40% overseas investors..... I would've said 40 to 50% would

be local, if you like, migrants, most likely of Asian descent. Then you'll get the balance, which I think's about 20%, of, if you like, local, of local investors....."(Australia-Local-Property-Developer)

"The media has portrayed this, oh China's taking over the world, we're selling off all our land and, well it's not the case.....As I said, we get a quite few from Malaysia, Singapore. We've got people from yeah, the UK, parts of Europe that have bought in Australia.....I'd have to say most, 70 to, probably 80% of our clients come from somewhere in Southeast Asia. If you, compared to other areas of the world."(Australia-Local-Property-Researcher)

"(Buyers are) local Chinese...that's the strongest theme, but if you looked at our project out at Knox, well there you could say that that's local Indian and local Chinese. If you went to Waverley Park (development), you would say it's local Chinese and local Caucasians. There's always a mix of the two...the kind of like the strong ethnic themes through the different developments, especially in the suburbs...they're not FIRB."(Australia-Global-Property-Developer)

Australian interview participants validated that foreign investors are restricted to purchase only the newly developed residential properties which observed many of them purchased off-the-plan properties. Conducting regular road shows launching or promoting their residential projects in Asia Pacific countries seems to be a common trend by the these property development companies, both local and foreign institutions. Among the reasons for active foreign participations in these promotion exercises, foreign investors perceived Australian properties positively in terms of cost of acquisition. They were subjected to lessor foreign buying restrictions in Australia compared to other world cities and countries like Singapore. As long as rental yield and the potential capital appreciations were perceived favourable, these foreign investors would not hesitate to purchase off-the-plan properties. Another positive factor was that foreign investors were given an official freehold title for the properties they purchased in Australian residential properties. This factor was described by some participants as one of the main drivers for investors from China due to the fact that residents in China were precluded from this privilege and their properties were all in leasehold titles. Many of these foreign investors were perceived favouring residential property in the major cities in Australia such as Melbourne and in Central Business District (CBD) locations. Convenience seems to be the main reason for this group of investors. They preferred to acquire property close to work, schools, health care facilities, public transport and food. For those who acquired residential properties in the suburbs, cultural familiarity was their main objective, resembling "Visiting-Friends-Relatives" (VFR) in the study conducted by (Williams and Hall, 2000). Many of these investors bought into these locations based on kinship whereby their friends and relatives had been the main pulling factor.

Quotes from Australian participants:

“They (overseas investors) bought newly developed properties.....this whole phenomenon that we’re talking about is less than five years. In 2010 we started doing some sales (in overseas), but we were doing them maybe because we need one or two and it just helped. When we realised that hey, this is a meaningful part of our distribution channels it changed the way that we went about things, it changes the way we sell, it changes the way we market” (Australia-Global-Property-Developer)

“If they need to pay, they just need to pay a dollar more than the local buyer, to purchase. They don’t have to pay much more, they don’t have to pay double. There’s no special taxes, or prohibitions, there’s no stamp duty penalties, or anything like that. They just have to pay a dollar more. For overseas buyers, it looks particularly attractive”. (Australia-Global-Property-Researcher)

“Asian buyers typically like buying a lot of land and they love freehold, they love freehold title, and so, and Doncaster is a good location close to shopping, schools, transport, you know so, so is Box Hill and so is North Melbourne.”(Australia-Global-Consultant)

“..I think the other big thing with Sydney and Melbourne is, there’s a lot more interest from Malaysian and Singaporean people in Melbourne, and there’s probably a lot more interest in Sydney property from mainland Chinese people... we would rather live in the CBD than drive to Geelong, because to commute to Geelong (along) the Westgate Freeway takes two hours for something that should take thirty minutes, or forty minute.”(Australia-Global-Real-Estate-Agent)

“CBD location, this is very important, because their equivalent CBD location, very hard to buy, very limited supply. CBD location.....Close to jobs, close to education, close to health, safety, security. This is very important to them...Clayton, Box Hill and Doncaster..... It’s the conglomeration of likeminded people, a cultural familiarity.....”(Australia-Global-Property-Researcher)

Due mainly to the open-ended approach adopted in the conduct of semi-structured interview, a simple questionnaire of “who are these investors” triggered vigorous discussions among the interview participants. Noteworthy that the same question had attracted two different perspectives with regards to who these private individual investors would be.

Whilst in Australia the debates are ongoing with regards to who are these foreigners (foreigners or migrants), the Chinese participants provided an entirely different perspective or response when

they were asked “who are these overseas investors”. They began by describing the emergence of affluent Chinese and engaged in discussion on various macro and micro economic conditions in China that drove them to invest in overseas residential properties.

Decades of substantial economic growth in China raised China’s income per capita significantly. High saving rates among all the China’s residents had produced a significant amount of monetary resources in China. However, investment options in China were limited. Stock Exchanges in China had not been performing well and returns from commercial properties were subjected to high capital gain taxes. All these factors had forced China residents to invest money into the local residential property markets which observed prices of residential properties’ increase substantially in all major cities in China. Although the potential capital gain of residential properties in China could be substantial, the rental yield was merely two to three per cent per annum whilst the cost of borrowing stood firm around six per cent per annum. Some had claimed that residential property prices were overvalued and Chinese residents were not sure about value appreciation going forward. These factors had driven Chinese residents to search for investment alternatives overseas and potential diversification.

Quotes from Chinese Participants:

“In China you’ve had the stimulus package, that really invigorated the economy. You’ve had fairly good salary rises, generally in China” (China-Global-Property-Researcher2)

“Because why...China last 14 years accumulate lots of money. People accumulate, because this last very long, from 2000 to 2015 (economic growth), very long. So people accumulate a lot of money.”(China-Local-Real-Estate-Agent)

“Chinese people, you know, they have only two choices for investment: One, house; one stock market.....so you can see the past three or four years the stock market is very low... Chinese house, the price already too high.....compared with properties in US, Australia or some UK houseit’s good and cheap.”(China-Local-Property-Consultant)

“One of the key things is just that it’s quite hard to get a good return on capital in the China market, the investment channels are relatively limited.....you’ve got obviously the stock market, which for a long time hasn’t been performing, you can’t – interest rates or deposit – deposit rates which are relatively low, and historically they’ve just been just above inflation. And real estate investment has probably been one of the best ones, where there’s actually been good values increasing.....so I think it’s saying, ‘I’ve got this capital, I don’t know where to put it. I can’t find anywhere in China that, sort of, meets my needs in terms of my risk profile or my

returns on trying to generate,’ so sometimes they look at overseas markets” (China-Global-Real-Estate-Agent)

Participants from both Australia and China were in the opinion that Australia had emerged internationally relevance in many aspects and was highly regarded in terms of stability and liveability. The favourable branding messages of Australia as a country were well received by the world community. These successful branding messages had attracted attention from foreign investors who were assessing options of which country in the world would they invest, children’s education or even retire eventually. The favourable branding image of Australia in terms of stability and liveability was not limited to China but attracted the attention from the world community at large.

It was perceived that as long as Australia continues its favourable brand image in the world, it is anticipated that foreign investors from all over the world, not limited to China, will continue to invest in Australian real estate. At this juncture, Chinese wealth accumulation due to China’s substantial economic growth for the past decades and China’s “going out” policy since 1999 had undoubtedly positioned the Chinese as the major foreign investors in Australia and the world cross-border real estate transactions.

Quotes from Australian Participants:

“No, just the liveability, brand, what I would call Brand Melbourne. Melbourne has a very strong brand, like Melbourne is recognised as being one of the most liveable cities in the world by the economists and “Monocle Magazine”, anywhere. It’s like always number one, two, three, most liveable in the world; top five, always.....But the brand bit, it’s safe also...I think they come together, but I think the liveability is number one.”(Australia-Global-Property-Developer)

“...what do you get in Melbourne that you don’t get in Shanghai? Alright, you get title, freehold. You get rule of law. You get free education, free healthcare, no pollution, free, this is all free. This is not built into a rate per square metre or anything. That makes for a very compelling investment condition....””(Australia-Global-Property-Researcher)

“ So Australia nowadays, we respond to world markets. We are now of international relevance, and I think you can see that through the vast amount of capital that only comes from Asia, but comes from other countries around the world, such as Canada, Germany, Korea.....Canadian Pension Funds are one of the largest groups that own Australian agricultural assets.” (Australia-Global-Real-Estate-Agent)

5.2.3. Local Determinants and Overseas Drivers

Based on the interviewees' responses, the performance of Australian residential properties, especially places which experienced major capital appreciation, were increasingly influenced by drivers associated with offshore investments. Foreign direct investment money brought into Australia by offshore investors forms an additional source of capital and injection of funds into the Australian residential property market. This research finding has validated the phase Two quantitative research result that traditional leading economic factors that were relied upon heavily in the historical assessment on property market performance such as local mortgage rate, rental yield and Australian income per capita are becoming of diminishing significance in the Australian residential property market. In the past, real estate market performance was shaped by domestic wage conditions, saving rate, rental rate, tax obligation etc. Such constraints or determinants became less relevant in the current Australian residential property market due to foreign real estate investments. Furthermore, these foreign sources of funds invested in Australian residential property market were structured heavily based on equity rather than debt financing and as such, were constrained by neither overseas nor Australia domestic conditions.

Quotes from Australian participants:

".....last year I dealt with 100% overseas buyers, I didn't had one local purchaser" (Australia-Local-Property-Consultant)

"...they'll sell as much overseas, and then they'll basically release the rest to Australia. So some of them will take it overseas first, sell what they can, and then release it to the Melbourne market. Because they believe that obviously their demand, higher demand is coming from overseas....."(Australia-Local-Property-Researcher)

"Have they impacted on the residential property market in Australia? Yes, of course. They are external buyers. So, it adds to the domestic buyers, so it competes, clearly. They're not filling a void.....they add to the buying pressure.....in the past, domestic buyers were constrained by domestic wage conditions, and domestic savings conditions, and domestic tax conditions.....When you bring in an external influence that has a different wage, savings, and tax regime, they can pay more.....local and domestic factors especially economic facts from the space market has little impact, or little influence on the positions to buy."(Australia-Global-Property-Researcher)

“... if you look at it and go you only need, if you’ve got one percent of that (China) market, you go oh my God. We can’t build enough housing for that in 10 years. So it’s, that’s the sort of thing that you forget about.”(Australia-Local-Property-Developer)

Contrary to the traditional debt financing, interview participants perceived that residential properties in Australia were transacted in the hands of offshore investors predominantly based on equity financing. Some properties were in fact purchased using cash entirely and references were made to offshore investors from China in this study. China has the highest savings rate in the world. Lacking alternative investment options in China has pushed Chinese to explore overseas markets seeking diversification and better investment returns. As a result, residential transactions executed by foreign investors in Australia seldom went into default position. Historically foreign sources of funds were predominantly heavily debt financed from the source countries and if the credit position in the source countries suffered setbacks, these foreign funds would have exited and created significant instability in the host market. This constituted one of the major concerns for the current Australian residential property market and there were strong arguments that the credit crunch would not occur due to strong equity position of these foreign funds in the Australian residential property market.

Quotes from Australian participants:

“.....there are areas where, whilst the prices are escalating very steeply, it’s, that’s not of major concern to some Chinese. ‘Cause the money is not the issue, it’s where they want to be. They would pay twice the price just if they get the right property in the right location.”(Australia-Local-Property-Researcher)

“In the past when foreigners have come here, they’ve been borrowing money, cheap money at home and just splashing it around. When the cheap money dries up at home, that money, that debt finance money, retreats dramatically, from all around the world, and goes home...the Chinese are not debt funded, they’re equity, 100%. There is possibly an event that could cause the withdrawal of the capital. So it could happen, but it’s unlikely to be a debt event.”(Australia-Global-Property-Researcher)

“But I’ve never heard of anyone have an Asian-based buyer not settle. I’d love to see some analytical evidence to suggest that the Asian buyers are more likely to run away from a settlement..... a lot of them form syndicates as well. And they get family members together to pool together to go, they’re the ones who go and buy these huge, they spend AUD10, AUD20 million buying properties.” (Australia-Local-Property-Developer)

Quotes from Chinese Participants:

"I think a lot of them may be paying cash... I mean, some of them are senior executives and they received jobs bonuses, things like that...certainly some of them may be SMEs which have, sort of, built up, and then sold out or they're listed or things like that. There'd be different sources..."(China-Global-Property-Agent)

"My understanding is there's (in China) very little household debt, there's very little credit card debt, there's very little financing debt on items like cars, and there's a bond and equity...my assumption's always been a lot of equity's going in...they've got to diversity the assets...So they're typically, you know, super safe, long term, secure cash flow to an A-grade tenant. You know, they don't want any more risk than what they're exposed to by the insurance plans, which makes sense."(China-Global-Property-Researcher1)

"So far we (China), local bank have no such kind of a policy to say, "You can borrow in RMB, purchase overseas property." I don't think so. So that's why you can say a lot of Chinese people, they purchase a property by cash.....also for the overseas bank, they probably have some kind of requirement; you have to qualify something and then they can pay, they can provide you the mortgage, local mortgage.....so most of them prefer to pay cash. That's what they do in Australia. I think a lot of Chinese people, they are paying cash" (China-Local-Property-Consultant)

5.3 New Determinants

5.3.1 Education

All participants in the semi-structured interview from both international and local firms concurred that Education in Australia played a vital role in feeding the source of foreign money purchasing Australian residential properties. The awareness of Education as an important determinant was common among all the participants. Reference was made to the Temporary Graduate Visa – subclass 485 issued by the Australian Government that allows students to remain in the country after completing an Australian degree under the General Skilled Migration Programme. Hawthorne (2010) termed this a "two-step migration" reflecting the situation that all international graduates utilised the temporary graduate visa as a transition to be eventually qualified for a permanent residency. The pathway of enrolling as a student in Australia to eventually being granted the temporary graduate visa had allowed an international student remain in Australia for an extended period of time after their graduation. Purchasing a residential property was a natural path during

this period for the original international students with the long term perspective a becoming a permanent resident in Australia.

Quotes from Australian Participants:

"...the significance of Australian education system in overseas investment decisions... Massive, probably the number one." (Australia-Global-Real-Estate-Agent)

"(In Australia...) there is short term student, health care, significant investment visa, short term, four years usually. Welcome! They can, at the end of that, apply for citizenship. Stay or go." (Australia-Global-Property-Researcher)

"Very high, very high significance.... A part of it is a foreign education is perceived as better than a domestic education. I don't know why, because I have no knowledge of the domestic education offering (in foreign countries).But this certainly, if you go home with a degree from an Australian University or an American University, well, that's a big deal" (Australia-Global-Property-Researcher).

"I think education..... I think that's probably the largest driver. I think also because it was, economically it was probably cheapest (compared to other countries' tuition fees)." (Local-Property-Developer)

"...and the CBD's(residential property market) probably driven initially off the back of that education being RMIT, Melbourne Uni." (Australia-Local-Property-Researcher)

"...people know Melbourne is the most liveable city in the world. That's one reason. The education here sort of gives them the confidence that they can trust, they can have their kids live here for many years and it's worthy, it's better to buy property rather than renting.." (Australia-Local-Property-Consultant)

"Balwyn in where it's surrounded by very good schools, or Glen Waverley, you know, not a high socio-economic area but has very good public schools and private schools around it, the effect of Chinese investment into those areas is obvious." (Australia-Global-Property-Developer)

Quotes from Chinese Participants:

"They are big attractions to Chinese students and parents would like to buy one or two (residential properties), one for stay one for rent....when they have kids, they focus on the education." (China-Local-Property-Consultant).

“.....from my experience with my friends, most of them chose to migrate because they want their kids to have a different type of education..”(China-Global-Consultant)

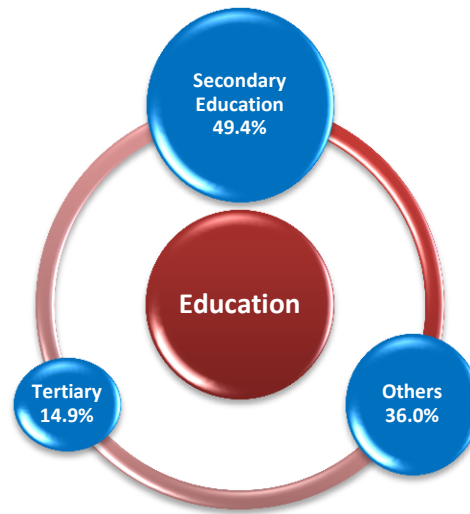
“One is to get an international background, you know, international experience and that’s couple in with language communication. Two, is you know, if it’s a specialist course, you know, and it’s like MIT or Harvard or whatever, you know, that’s also a motivator. And three, maybe they were aiming their kid to get in to ChinHua, or Fudan or wherever, but the kid doesn’t have quite that ability. They will then, you know, some of them will often sort of choose to then educate their kid abroad”(China-Global-Property-Researcher).

“.....I think China is more and more open and they realise that they can learn a lot of things from the world..... If they have enough financial support they want their kids go abroad for study” (China-Local-Property-Consultant)

Education - Insights

High awareness among all the participants on Education as a determinant in Australian residential property market was consistent with the empirical evidence. Whilst the empirical reviews had centred on studies in migration trends in relation to higher education, this study discovered that higher risk appetite from overseas investors recently had resulted in an emerging trend of overseas parents sending their children to Australia in their early years for Education. This research revealed that residential properties surrounding university, higher ranked secondary and primary school zones in Melbourne were experiencing significant international student enrolments. This emerging trend was validated in the semi-structured interviews conducted with Australian real estate professionals and the factors driving Chinese parents to send children to Australia in their earlier years were solicited in the semi-structured interviews conducted in China. Figure 5.2 demonstrates the NVivo coverage analysis on interviewees’ responses:

Figure 5.2: Education – NVivo Coverage Analysis



Source: Author

Based on NVivo coverage analysis, 49.4% of the interview discussions were centred on “Education” as a driver from the perspective of Secondary Education in Australia. A further 36% was about other education formats (for example primary education and short term courses) and approximately 14.9% of the interview coverage included discussion about tertiary education as the main driver. This study revealed the insights that instead of the normal duration of tertiary courses enrolment historically, international students were residing in Australia for a much longer period and this trend had further incentivised overseas parents to purchase residential properties in Australia.

Quotes from Australian Participants:

“...again the same thing happens with Balwyn. And again, isn’t it interesting it’s so driven around education. They’re all in Balwyn because it means they get to the (secondary) school zones, either they go to, they can get into good public schools or it’s the accessibility to good private schools, that they’re driven” (Australia-Local-Property-Developer).

“Schooling is really important, parks, greenery...predominantly school zones (secondary), for example Balwyn High, Glen Waverly High, Doncaster East Secondary Colleges... they are coming for the (secondary) schools” (Australia-Local-Real-Estate-Agent).

“I think for family homes secondary (China) is number one, but for tertiary, I think by the time children get to tertiary age, well, if you’re living in inner Melbourne you can get to pretty much anything, can’t you?” (Australia-Global-Property-Developer)

Quotes from Chinese Participants:

“...I’m talking about preliminary and high schools. Here we go out to about competition, compete with lot of guys, a lot of children.” (China-Global-Real-Estate-Agent)

“their kids enrolled in primary schools, some even go to kindergarten or day-care centres.....” (China-Global-Investment-Consultant).

Chinese parents were more inclined to send their children to Australia in their earlier years for the following reasons:

- i. China’s education system was perceived to be rigid and lacked innovation. Students’ results were based heavily on their capability to memorise and answer standardised examination questions. Chinese parents were more inclined to provide a conducive learning environment for their children and not purely based on examinations results

Quotes from Chinese Participants:

“Most of them chose to migrate because they want their kids to have a different type of education.....I believe the Chinese education is more like – more on examination practice focusthey perceived the education style in maybe US or in Australia or Canada or Europe are geared to encourage kids to learn and to develop their own way of thinking...” (China-Global-Investment-Consultant).

“And it’s not good for the children in terms of independent thinking. They are trying to get passed the test. So the parents are quite worried about that. And the other friend of mine, I help him to go abroad, he go to Paraguay, close to the U.S. to invest in”(China-Local-Property-Researcher).

- ii. Education institutions in China were highly competitive and held the reputation of focusing on students’ academic performance. Chinese parents were increasingly reluctant to subject their children to the highly pressurised competitive environment and perceived that western education provides a better learning environment. Decades of “single-child” policies in China had created a high degree of protectionism among parents to shelter their children against a competitive study environment. This trend did not only occur among the high net worth individuals or Chinese resides in the major cities. The middle class of China and some from the western part of the country had emerged as a force to be reckoned with.

Quotes from Australian Participants:

“Now, the single child policy has focused an awful lot of energy and money and resources into the prospects of that one. The whole family is relying on that, for their future. Because the earnings of that one is going to come back and support the parents in old age. So there’s a big onus on the one, to do their very best. In order to do that, they need to receive the very best, the very best education”(Australia-Global-Property-Researcher).

“(Investors from China) Normal families....They don’t have a lot but they’re willing to provide, offer, whatever they can (education)....”(Australia-Local-Property-Consultant)

Quotes from Chinese Participants:

“And you also have to understand the number of kids which go through education system in China and the fierceness in terms of competitive environment is extreme here. It’s extreme.”
(China-Global-Real-Estate-Agent)

“I mean you know, the standard of education, well education in China, as you know, it’s hugely competitive.....mathematics in Shanghai is top around the world..... So to get away from that sort of, I mean there’s just huge pressure, I mean it’s pressure anywhere in terms of exams, but in China it’s like huge pressure, especially at the end of high school exams, getting in to university. Because there’s pressure from parents, there’s pressure from peers and some people who are caught in that system, you know, it’s viewed as a make or break.”
(China-Global-Property-Researcher)

“There’s a big emphasis in terms of trying to give your kids the best in life. Not necessarily through emotional connection, but by getting them the best school or getting the best this or the best that...I don’t know if they’re a feeling a little bit guilty about not spending the time, but they’ll spend the money if they want to give their kids the best chance in life.”(China-Global-Real-Estate-Agent)

- iii. Australia emerged as a strong contender in primary and secondary school education compared to other strong education providers like the United Kingdom and the United States of America due to restrictions imposed by those countries. The United Kingdom, as an example, does not allow foreign nationals to enrol in public secondary schools whilst Australia allows international student enrolment in public secondary schools. Chinese parents view Australia as part of Asia with the same time zone, the proximity factor which gives it the edge over other locations such as the United Kingdom.

Quotes from Australian Participants:

"Australian is the only one that you can send your kids to here at quite a young age for education... compared to Canada, America.....they require minimum age of 16 or so ..."(Australia-Local-Property-Consultant).

"why are the big developers coming to Australia.....it's got education, and the Chinese talk about their first generation, so their first generation are their kids. So their first generation are the ones now that are making money and they are looking at securing sites overseas for their kids, for their child, and they see Australia as a good place to do that."(Australia-Global-Property-Consultant)

"It's basically the same time zone, two to three hours difference, it's one flight out of Shanghai, Hong Kong, you know Beijing, Shandu"(Australia-Global-Property-Consultant).

5.3.2. Residential Tourism

5.3.2.1. The Emerging Driver – Residential Tourism

Having established Education as one the factors driving foreign investment in Australian residential property market, a more in-depth exploration was conducted in this study into other unknown factors causing the surge of housing demand in Australia cities. The Economist magazine ranked Melbourne the world's most liveable city in 2015 for the fifth consecutive time (ABCNews, 2015, Lucas, 2015). According to Lucas (2015), Australian cities were found to be "a relative picture of stability" compared to other world cities surveyed by The Economist's Intelligence Unit over the past year. After Melbourne, Adelaide ranked fifth, Sydney seventh, Perth eighth and Brisbane 18th. The rankings were the result of "lifestyle challenges" scores in 140 cities worldwide. This report was used by multinational companies to determine the pay differences for employees who travel or move overseas due to work obligations. World cities chosen were assigned a rating of "relative comfort" for 30 factors across five categories: stability; healthcare; culture and environment; education; and infrastructure. Lord Mayor of Melbourne, Robert Doyle proclaimed that the favourable ranking for Melbourne has a huge impact on Australian tourism and education and is a very "important sale point" for Melbourne to the world community (Lucas, 2015).

Research shows that all interview participants agreed that Australian cities carry a strong brand name internationally in terms of being a tourist destination and their liveability. This brand message and presence contributed favourably to the tourism industry in Australia. Australia enjoyed high profile international approval ratings as a tourist destination, having hosted some of the world's major international sporting events such as the Formula 1 Grand Prix, Australian Grand Slam Open

tennis tournament and boasting ample renowned tourist attractions. Liveability was another major aspect that caught the attention of the world community and Australian cities enjoyed high ratings in the five categories stipulated by The Economist's Intelligence Unit i.e. stability; healthcare; culture and environment; education; and infrastructure. Foreigners who visited Australia were impressed by the social, security and liveability the Australian citizens are enjoying including but not limited to world class education, healthcare, social security and admirable living standards. Compared to other world major gateway cities such as Singapore and London, this very much sought after liveability status not only positioned Australia as a world tourist destination in the short term basis, it had undoubtedly placed Australia as a strong contender for the world community's choice of a place to live and retire in the long run.

Quotes from Australian Participants:

"Australia has such strong branding internationally..... I think Lloyd Williams and the Crown Casino was extremely visionary, I think Geoff Kenneth and what he did with the Grand Prix was visionary. I think what major projects do, and Advance Victoria is visionary....I think that there's a big attraction to the way that we live our lives, there's a big attraction to our culture, our cultural backbone, our sporting culture, obviously or culinary...there's many world class aspects to Melbourne"(Australia-Global-Real-Estate-Agent)

"Chinese people feel comfortable in Australia, they're attracted to our lifestyle, they're attracted to our education system, they're attracted to our political system, and they're attracted to the clean environment in which we all, you know, enjoy every day. So they're very comfortable to invest in Australia, and in Melbourne in particular, and there's a very strong affinity that's been built up over a long period of time between China as a country and Melbourne as a capital city within Australia."(Australia-Global-Real-Estate-Agent).

"...relationship between Melbourne as the world's most liveable city and a tourist destination, a direct correlation"(Australia-Local-Property-Developer)

"parks, greenery, the leafy streets. I think they feel it's safe (in Melbourne)....you know Melbourne is again number one, the most liveable city. This gives them confidence to say, "Well, we can come here and we're staying, you know, everything's around us, transport, the schools, parks."(Australia-Local-Real-Estate-Agent).

"Well that living standard.....They get an awful lot for just, if they get citizenship here, they get that property, what they get with that is far more valuable than what they would get at home..... If you want first world education, first world health, and you can't get no pollution, you can't get

freehold. There's stuff that they can't get, even if they had the money, they couldn't buy it. These are the things that are highly sought after by foreigners.”(Australia-Global-Property-Researcher)

“Melbourne's always been a city that's attracted big events. It probably, it started in 1956 when we had the Melbourne Olympics. And it's been a city that's been very much up there in terms of sport. And as a consequence, I think there are some, over the years, we've done a very good job in selling Victoria and Melbourne as a tourist location”(Australia-Local-Property-Researcher)

Quotes from Chinese Participants:

“...for Australia....It's about the society, it's about the weather, it's about access to different sports and the seaside, and that type of stuff..... I mean, when you talk about Australia, it's about the Australian lifestyle, it's about the great outback.... Think Australia's much more about the lifestyle, I would say” (China-Global-Real-Estate-Agent).

“(The world) major gateway cities, which are the safe, more well-known, more liquid, also – and this goes back to the sales networks here – where are Chinese tourists going?.....So the drivers for, say, residential development are, what market are you going to get returns, considering everything going in, sitting on the platform, taxation, currency, all of those normal things; but then the broader drivers are, is it hot for Chinese tourism, is it hot for Chinese immigration, is it hot for Chinese education immigration?”(China-Global-Property-Researcher)

“..why do we want to go and migrate to overseas? ..Pollution... in China is severe problem compared to Australia.....and the society is corrupted..... the society (in China) is not stable...”(China-Local-Property-Researcher)

“People think Australia more safe....America has more employment opportunity and universities. Australia are more safe, and maybe better environment, better, because less people. Good lifestyle... Australia.....most of the Chinese people they prefer Sydney, Melbourne city, city life..... people seeing clean and good education, good health, government social benefit and safe.” (China-Local-Real-Estate-Agent)

“But if, just say we, if you want to purchase property, you will consider living environments, climate, you know, something like that for Australia.” (China-Local-Property-Consultant)

“.....and another of the key reasons for going overseas, obviously lifestyle, food quality, air quality, education, health care, all these other things. ”(China-Global-Real-Estate-Agent)

Residential Tourism (RT) was not a mainstream subject for property market research compared to other determinants such as Education and Migration. According to O'Reilly (2007), it had always been difficult to have separate discussions distinctly around migration and tourism. A similar challenge was again observed in this research. As a result of these literature reviews, the need to strategize an effective interview approach had thus become more apparent. An added element of an "open-ended" approach was incorporated outside the scope of pre-determined questionnaires to solicit hidden observations and information surrounding the subject matter of tourism and residential property markets in Australia. Most of the time, it was only after some in depth discussions that the participants would come to appreciate the importance of residential tourism. Figure 5.3 shows the NVivo coverage analysis on the significance level of RT as the key driver for offshore investment in Australian housing market:

Figure 5.3: Residential Tourism – Nvivo Coverage Analysis



Source: Author

Figure 5.3 shows that 57.3% of the interview discussions mentioned RT as an emerging driver of the Australian residential property market. A further 14.6% of coverage classified RT as a major determinant and 8.2% perceived RT as having no impact on Australian residential property market. The balance of the coverage (19.9%) did not mention or not aware of RT as a potential driver.

Contrary to the common perception that Residential Tourists only visit Australia frequently after they have purchased a property in Australia, studies conducted revealed that Residential Tourists,

who were not Australian residents but owned residential properties in Australia, visited frequently even before they purchased the property. Due to a relatively simple visitor visa application process and long permitted duration of stay (maximum of three months' stay per entry) granted under the tourist visa, there was neither the urgency nor the incentive for Residential Tourist to apply for long term visa that would normally involve a more complex application and qualification process. A substantially long duration of stay granted under the visitor visa enabled one to "live" much like the locals in the world class and liveable cities, here being Melbourne and Sydney. From a Chinese national's perspective, visiting Australia was viewed very much like visiting to another "Asian country". Australia was not perceived as long distance travel due to its proximity to Asia. Some even considered Australia as part of Asia, unlike other western countries such as the United States of America or Europe which is on "the other side of the globe".

Quotes from Australian Participants:

"They generally tend to come on look see two or three times...Generally they come out for 12 months, they have a look around, they come and do a couple of trips, build relationships and then they buy"(Australia-Global-Property-Consultant)

"They'll be led around by like a tour leader...because they don't know their way around. So someone will take them in a minivan, there might be 10 of them.....And they will go and look at specific properties.....sometimes they realise they've got X amount of dollars to spend, they'll fly out here and they'll go yep I'll buy this"(Australia-Local-Property-Developer).

"You go for the visa that requires the least amount of effort. A tourist visa is an easy one, it's just, stamp, pay your money...Why apply for a different visa with all the hassle and paperwork and uncertainty, when you can get a visa that meets your needs.....you can leave for three months in the school holidays and come back again"(Australia-Global-Property-Researcher)

Quotes from Chinese Participants:

"...what we're trying to do is, we'll organize tourism for foreigners. Of course, we'll help them to choose several options that you can buy, meeting their criteria. So they have some material in hand, study it a bit. And if they like, want to organize a trip, want to meet our people there, and sign an exclusive agreement."(China-Local-Property-Researcher)

"Normally, they want to be there. They kind of have something in mind with their previous choice. We give them materials for their choice. They say, Okay, this one I'm familiar with, and I want to go there.....this is if they want to help organize a tour for their kids, because normally if

they buy, they kind of prepare for future education for their kids”(China-Local-Property-Researcher)

“I think it’s still very positive for all of those drivers (RT). I mean, if you look on, if we start down at the.....individual investor or buying a home down there (in Australia), it’s a quality of living that’s quite obvious, there’s.... an investment drivers because it’s relatively close to China”(China-Global-Real-Estate-Agent)

Contrary to the market commentaries, an important finding in this study was that these RTs possess a similar behaviour to an “owner-occupier” and they purchased houses in Australia with the long term perspective of living in the property at some stage in the future. They were not the speculators whose sole purpose is profiting from buying and selling properties ruthlessly. Frequent visits with a long stay pattern were observed from these overseas investors; many acquiring property for the purpose of housing children in order to attend educational facilities while others leased out their property in the conventional fashion. Their behaviours were perceived no differently from interstate migrants to Melbourne. Perhaps the sole difference was that these RTs did not occupy the property as long as interstate migrants.

Quotes from Australian Participants:

“You know, these people, and we call them investors, but they are no different to owner-occupiers and so forth as well. They’re not speculators.....and also they’re not buying it just to leave it unoccupied, which is what the kind of myth is. Often they will buy with a view to living in it at some stage, or their children living in it at some stage, or they will put a tenant in it, in the traditional sense. So they are very similar to the local buyer.....it’s a relatively new phenomenon.”(Australia-Global-Property-Developer)

“We don’t find that we have buildings full of no lights turned on at night for the whole year; they’re used from time to time during the year and maybe they put a tenant in them sometimes, and maybe they do sit vacant for part of the year as well...at some point they might come out here and live, or their kids might come out and study or come out and live.”(Australia-Global-Property-Developer)

5.3.2.2 Residential Tourists’ Characteristics

In the context of what are the unique characteristics of these RTs, two major categorisations were identified. These were consistent with the literature review conducted in *Chapter 1.1.2. Sources of Fund and Residential Property Market* and *Chapter 2.2.1. i.e. High Net Worth Individuals (HNWIs)*

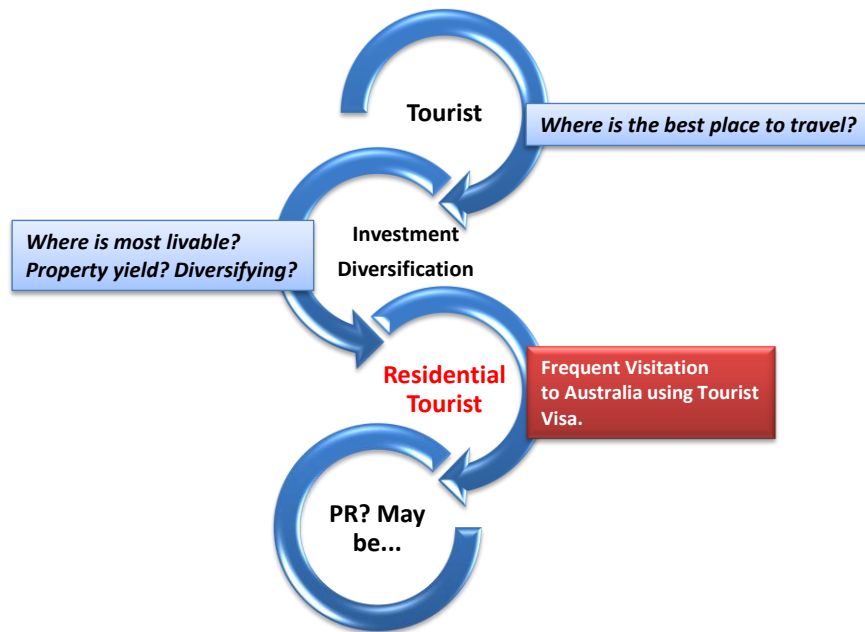
and Middle Class. In this phase of qualitative analysis on RT, similar groupings were applied as below:

i. High Net Worth Individuals (HNWIs)

Obtaining a permanent residency status in Australia was not always the top priority for the HNWIs compared the Middle Class, although some might eventually retire in Australia. In most circumstances they were best described, as O'Reilly (2007) put it, the affluent group that turn tourism into a way of life and construct fluid, leisure lifestyles between places. They purchased residential properties predominantly in areas surrounding the Australia leading cities. There was a tendency for this group of individuals to impute business sense into the residential property they purchased in terms of both rent yield and capital appreciation; alongside with the intention of diversification from their existing world property portfolios. This group of investors predominantly adopted a long term view of more than 10 years, sometimes up to 30 or 40 years on the property they purchased. They had friends and relatives who bought residential properties in Australia and kinship with similar culture background assisted their decision of investing in Australia. From the perspective of Chinese investors, Chinese association with Australia dates back to the 1890s gold rush period. Evidently Melbourne's China Town is the second oldest China Town in the Southern hemisphere.

They purchased new properties (foreigners were only allowed to purchase newly built residential properties in Australia) in Australia's leading cities and adopted a "care free" attitude towards this investment by either renting it out or engaging a regular caretaker to maintain the property during their absence. As one of the interview participants put it, "Fire and Forget" type of properties will best suit this group of investors. Some of this group emphasised wealth preservation for their next generation by taking the approach of securing sites in overseas major gateways for their children, most of the time it's their only child. Figure 5.4 illustrates the phases of how HNWIs came to be in Australia:

Figure 5.4: HNWIs and Residential Tourism



Source: Author

HNWIs travelled as tourists around the world cities including Melbourne and Sydney. Their visitations became frequent subsequent to acquisition of a property or properties in Australia. As a result, they become RTs until one day they may become a permanent resident of Australia.

Quotes from Australian Participants:

"If you're really looking for a really high net worth individual, you know, they could, they could quite happily purchase a house just by, with a nice bay view in Sydney.....they would be happy to purchase an apartment that, okay, they've got to pay the property management fees, but knowing that it's almost like it can be like a fire and forget type of investment.....they don't have to worry about maintenance or gardening or anything like that, they can always come back to a decent home when they're visiting or staying in Australia."(Australia-Global-Property-Researcher)

"Well I think there's the education, and then there's the ability to use the apartment as a form of holiday or recreation accommodation, and then there's the view that long term, they would like to retire here. So I think it's a thirty or forty year cycle, you know, and that's the way that property investment should be looked upon."(Australia-Global-Real-Estate-Agent)

"Melbourne is attractive to Chinese principally because it is affordable relative to Sydney, it has good education, and there is a very strong cultural link to Melbourne.....because we had a lot of

Chinese immigration for the Gold Rush, so Melbourne Chinatown's one of them..... so there's a very strong and long cultural connection there as well.”(Australia-Global-Property-Developer)

Quotes from Chinese Participants:

“As society gets richer, then you could have this kind of, is it, in the States they call it snow geese.....where you've got the rich Jews from New York buying up property in Florida.....maybe Chinese New Year period or sort of November/December time, if they decide it's a bit too cold in China, why not take a sort of two week break down to Australia, it being obviously summer time down there? That could be an increasing phenomenon going forward.....”(China-Global-Property-Researcher)

“Obviously people that travelled relatively well, maybe people that have relatives already living in overseas markets or business ties in overseas markets, so that they understand those areas, or they've got relatives or friends who have already bought in that market, and so they're following what they.....only a million Australian dollars, you can buy this nice little place out in the suburbs”(China-Global-Real-Estate-Agent).

“They're thinking about it for 'my' kid 10 years for now, and about is it a good investment in that 10 year period.....maybe stay there once or twice a year or be a holiday home, then of course you'll have a familiarity with that location, you may go visit it prior to actually purchasing.....I think it's not just Chinese Nationals, but I'm sure a lot of high net worth individuals”(China-Global-Real-Estate-Agent)

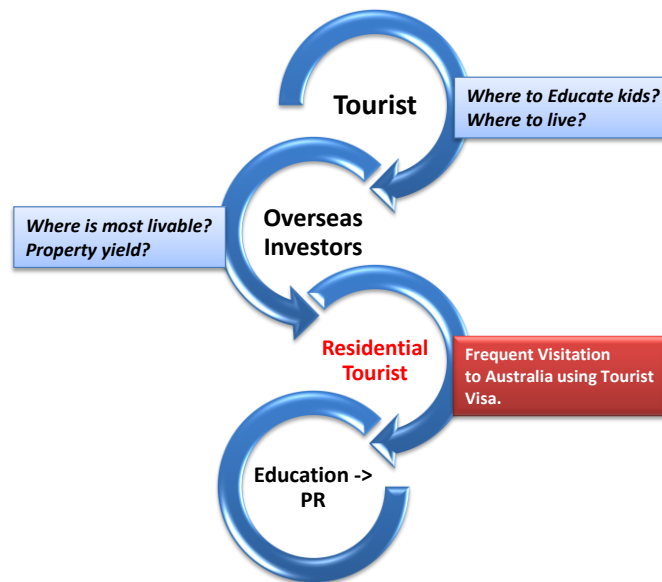
“Over the last 10 years or so we've seen more Chinese people travel abroad, so they've been exposed to the life overseas, and they've got a better impression of the quality of life that they can have in certain markets and certain regions. So that's also stimulated investment abroad”(China-Global-Property-Researcher)

ii. Middle Class

Unlike HNWI, obtaining a permanent resident status and reaping the benefits of the education system, good living conditions were the main drivers for the Middle Class to buy into the Australian residential property market. They had the same investment perspective as the HNWI in terms of projecting the potential rental yield and capital appreciation of the property they purchased, but perhaps in a smaller degree of emphasis. In most cases they had a longer investment perspective of 30 to 40 years mainly attributable to the fact that the buying exercise was to a certain extent emotionally motivated with the objectives of putting their children in a better environment to grow

up and be educated. Possibilities were that in the long run they might eventually retire and live in Australia with their children who would most probably have graduated from the University and settled down in Australia by then. There were undoubtedly challenges in obtaining Australian Citizenships on an immediate basis, nevertheless, it did not seem to deter this group of individuals from uprooting most of their wealth to Australia, for what was perceived to be a better future for their children. During the course of their children's education in Australia, this group typically bought a house and became a form of Residential Tourists by using the residential property as a base for them to visit their children frequently in Australia until one day they themselves became Australian permanent residents, perhaps through their children's citizenship status in Australia eventually. Figure 5.5 illustrates the stages involved for Middle Class's evolvement in RT:

Figure 5.5: Middle Class and Residential Tourism



Source: Author

The chain processes of how Middle Class evolved into Residential Tourist was similar to the HNWIs, except most probably they had made up their mind with their ultimate intentions of migrating to Australia from the beginning. Middle Class typically travelled to Australia as a tourist at the beginning. Their visitations became more frequent subsequent to the acquisition of a property or properties in Australia. As a result, they become RTs until one day they became a permanent resident of Australia.

Quotes from Australian Participants:

"...Normal families. They don't have a lot but they're willing to provide, offer, whatever they can.....they are really not those billionaires or millionaires....they are working in China and sent the kids to overseas....."(Australia-Local-Property-Consultant).

"it's purely (tourist) visit, like a tourist visa....three months but if they are that kind of visa holder they are not allowed to buy any second hand properties. They stay(in Australia) even only for three months visa but they have their plan already.....they offered to provide all they can to the kids. They are truly owner occupiers..... (they are from the) normal families, they don't have a lot but they're willing to provide.....but they are really not those billionaires."(Australia-Local-Property-Consultant).

"I think Chinese people are looking thirty to forty years ahead of where they are now. So it's an education for their children and somewhere to stay, it's a holiday destination because they like Australia, they've got family, friends and business associates here, and then one day they might actually use it as a place to retire." (Australia-Global-Real-Estate-Agent).

"So when they turn fifty or sixty, they'll still own the apartment in the city, and they'll actually retire out in Australia, as opposed to staying in China... you don't have to be hugely affluent, but you've got to be comfortable to be able to pay for an apartment."(Australia-Global-Real-Estate-Agent).

Quotes from Chinese Participants:

"I mean, there's also some people that perhaps are from middle income or upper middle income, they don't have to necessarily be high net worth individuals.....Some of them can be looking at migration, in which case, they don't necessarily need to high net worth individuals at all, they could just be scraping in to get enough money to be able to buy a property in the overseas market."(China-Global-Real-Estate-Agent)

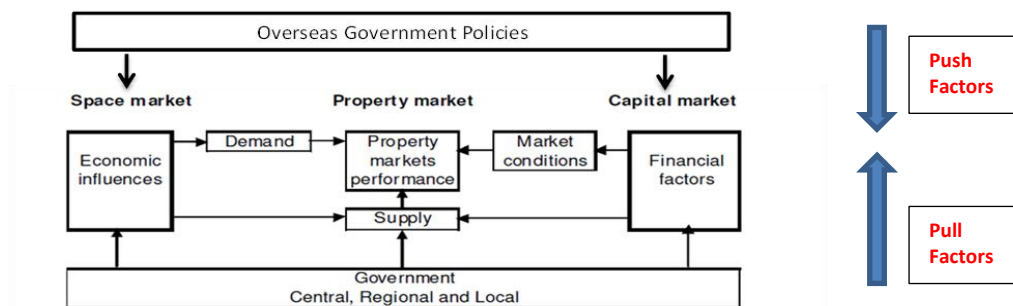
"Chinese cultural (regardless of wealthy or poor families)..... about the house, it's a very key thing in your family. If you move the family you have to own a local house. So if you move to overseas, emigrate to Australia, Canada or something, you have to own a house there.....The Chinese, you know, they not get used to rent a house for long time; maybe in the first, well, two years when they come to the new country they rent a house.....when they decide to live there for a long time, maybe for several generations, they want to own their own house."(China-Local-Property-Consultant)

5.4 Government Policies

5.4.1 Push Factors – China Government Policies

A “Push & Pull” Property Market model was established in this study to facilitate a structural approach to assess the interactions and dynamic among the important drivers in property market. Based mainly on the three market model adapted from Higgins (2010), “push factors” originated from overseas depicted as “Overseas Government Policies” was added to incorporate potential additional interactions exerted from overseas into Australian property market performance. As per Figure 3.2 in Chapter Three, the model is tabulated below once again for ease of reference:

Figure 3.2: The “Push & Pull” Property Market Model



Source: Author

Relying on this model, potential push factors exerted from overseas were explored from the semi-structured interviews conducted in China having established investors from China who had emerged as key players in the Australian residential property market. The semi-structured interviews adopted an “open-ended” approach, at times casual in the discussions on Government policies to facilitate effective information collection yet shunned away from potentially sensitive issues in China. With this incitement, research on the offshore investors (particularly China) in this research had adopted the “looking from outside” strategy reviewing the various China Governmental policies that had resulted in large outward investments from China into overseas real estate markets.

From the interview participants’ feedback, it was unveiled that rationales behind foreign investments of large corporations and private funds investing in Australia’s property market varied across Asia Pacific countries but were all well positioned to withstand various tightening measures and a credit crunch involving Australian financial institutions on local property development projects. Various forms of “instability”, political or economic uncertainties from Asia Pacific

countries had directly contributed to the outflow of foreign real estate direct investments. Chinese investors emphasised portfolio diversification out of China's domestic property market due to China's government new "going out" policy since 1999 (Economist, 2009) and an underperforming domestic residential property market.

Offshore investments in Australian property markets were not precluded to investors from China. Singapore's property market had weakened substantially recently. This was attributable to the "cooling measures" imposed by Singapore's Government on the residential property market. Virtually all the listed property companies in Singapore had reported lower profits and shrinking margins, due to high land costs, rising labour costs, falling demand, pushing many developers offshore. Chong (2014) reported that more capital flowed out of Singapore to global real estate than from China or Japan and about USD6.7 billion was spent in Australia by Singapore buyers, compared with USD2.7 billion by China in 2014. Riding on the favourable exchange rates, investors from Singapore had directed their investments into Australia's residential property markets. Singapore property developers were actively looking for alternatives to maintain their income stream by investing in overseas markets such as Australia according to the interviewees. For example, in Melbourne, Southbank tower, Australia 108 hotel and apartment complex were acquired by Aspiat Corporation Singapore in 2014 and 555 Collins Street was sold to Fragrance Group Singapore.

There was a significant push factor for developers coming out of Malaysia due to the severe political instabilities relating to corruption charges against the prevailing Prime Minister, his family and many in the Government's cabinet. A recent surge in activity observed from Malaysian investors in the Australian residential property market was attributable mainly to racial tension, political instability and corruption claims on the Malaysian Prime Minister and family.

(Note: As the discussion of Government policies will be best presented concurrently on both onshore and offshore perspective, quotes from participants are separated into Australia and China as per previous sections.)

Quotes from Participants:

"The majority of our overseas clients are coming from China, Singapore, Malaysia and Hong Kong. They're probably the major ones... I'd have to say most, 70 to, probably 80% of our clients come from somewhere in Southeast Asia if you compared to other areas of the world."(Australia-Local-Property-Researcher)

"In Singapore the cooling measures that were implied or applied to development in Singapore, from 2012 until recently, and that really slowed the market down and made it difficult for

developers to do new projects, they were looking for alternatives, such as Australia 108 project..... 555 Collins Street that we sold to Fragrance Group we saw a huge level of interest spike from Singaporean developers.”(Australia-Global-Real-Estate-Agent)

“in the same year we saw the emergence of groups like UEM, who are a Malaysian developer. There was a big push for developers coming out of Malaysia because of corruption claims with the government, and political instability.....there’s actually a common theme in all three of those countries, and that common theme is instability.”(Australia-Global-Real-Estate-Agent)

5.4.1.1 Sources of “Push” Factors – Wealth Accumulation and China “One-Child” Policy

The following Sections strive to provide the insights from the data gathered from the interview participants in relation to major determinants that drove Chinese investment outwards to the rest of the world. Although the primary data (interview transcripts) gathered from the participants serves well as the lead to major “push” factors, “interview data” gathered are lacking in depth especially in terms of the relevant background information and fundamentals evolving around their exertions. In order to provide a better understanding of the China “push” factors, this section is supported with an additional literature review and fact finding including the recent political and economic developments in China.

Two decades of substantial economic growth had undoubtedly contributed to the massive wealth creation in China as a country and in its population at large. Recent economic stimulus measures reacting to GFC 2008 had further fuelled the already heated market. According to the participants, as a result of the economic growth and economic stimulus packages China State Owned Enterprises, corporate entities down to individuals were financially benefited and approximately 10 million millionaires were reported created as a result of this economic event. Corporate entities and individual residents in China were hungry for investment options either for wealth preservation or mere diversification. This investment sentiment had emerged as a common theme across the entire country as their wealth continues to escalate.

Quotes from Participants:

“Because why...China last 14 years accumulate lots of money. People accumulate, because this last very long, from 2000 to 2015, very long. So people accumulate a lot of money.”(China-Local-Real-Estate-Agent)

“In China you’ve had the stimulus package, that really invigorated the economy.....that has been sort of pushed actually by State owned enterprises out to wider parts of the economy because

they probably felt that they had a better investment return investing in other parts of the economy, rather than investing in their own business.”.(China-Global-Property-Researcher1)

“Some of that money has, you know, gone, found its way in to the pockets of individuals.....Now before they put it in to residential housing in China, because it was a performing market. But over the last two years, because of the cooling measures, it hasn’t been a performing market so they looked at other markets elsewhere. And you know, they’ve decided on markets like Australia.”(China-Global-Property-Researcher1)

“if you look at the insurance companies since 2002, they’ve essentially been let off the leash to invest up to 15% of their assets in overseas real estate.”(China-Global-Property-Researcher)

Among the investment options available for China investors, the residential property market had always been the favourite according to the interview participants. Insights were provided by the interviewees that due to a relatively low rental yield and high mortgage rates, local Chinese invested in residential property set capital gains as the main objective. Equity markets in China did not receive much attention from the investment community due to their muted performance compared to property markets. Commercial properties attracted significantly higher capital gain taxes at approximately 50% compared to residential properties at 10%. Only a handful of offices and retail properties provided a satisfactory yield compared to the mortgage rate of approximately 6% towards the middle of year 2015. These factors had contributed to the significant increase in residential property prices in the major cities. Until recently Chinese authorities sanctioned various cooling measures targeted at tempering the overheating residential property market. Naturally, Chinese looked abroad for viable investment opportunities. This constitutes the “creation phase” of the sources of push factor i.e. wealth creation in China.

Quotes from Participants:

“There is also a problem in commercial, retail and office property, the tax. If you buy them, say residential property, you go one hundred percent appreciation and sell it. Then the tax will be like ten percent, maybe ten percent, raw. If that situation applies to office or retail, then it goes to fifty percent of your added value.”(China-Local-Property-Researcher)

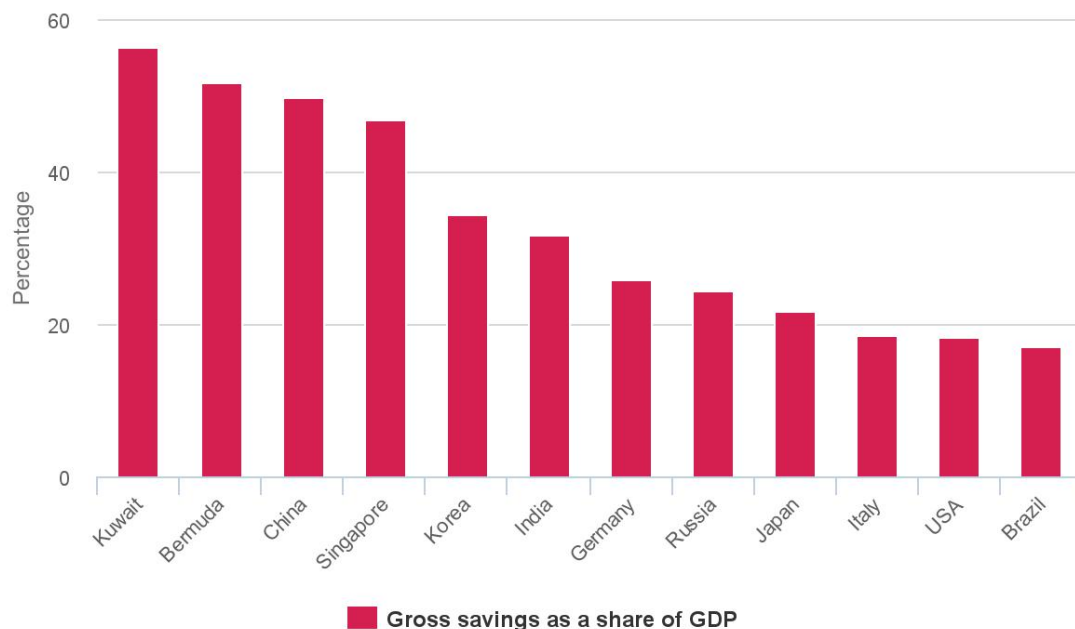
“.....(rental return) around two, two percent.....two is only a rental and the Chinese borrowing rate is around six to seven....yes, residential. In Shanghai, the land is quite limited.because they rely on (residential property) capital gain....five hundred percent (growth in Shanghai).”(China-Local-Property-Researcher)

“.....first stage definitely buy residential. Maybe second stage, third stage, I don’t know, but first stage is definitely buying residential.”(China-Real-Estate-Agent)

“So there’s those more technical investors who will go to a market where they can get the returns, and then there’s those who, again, simply want to diversity and they want to see trophy assets in gateway cities.”(China-Global-Researcher2)

Chaturvedi (2015) explained Chinese households tend to save more cash and potentially earning higher interest rates on their deposits compared to the western world. Figure 5.6 compares China’s gross saving rate as a share of GDP with the rest of the world:

Figure 5.6: **Gross Saving Rate as A Share Of GDP**



Source: World Bank 2013

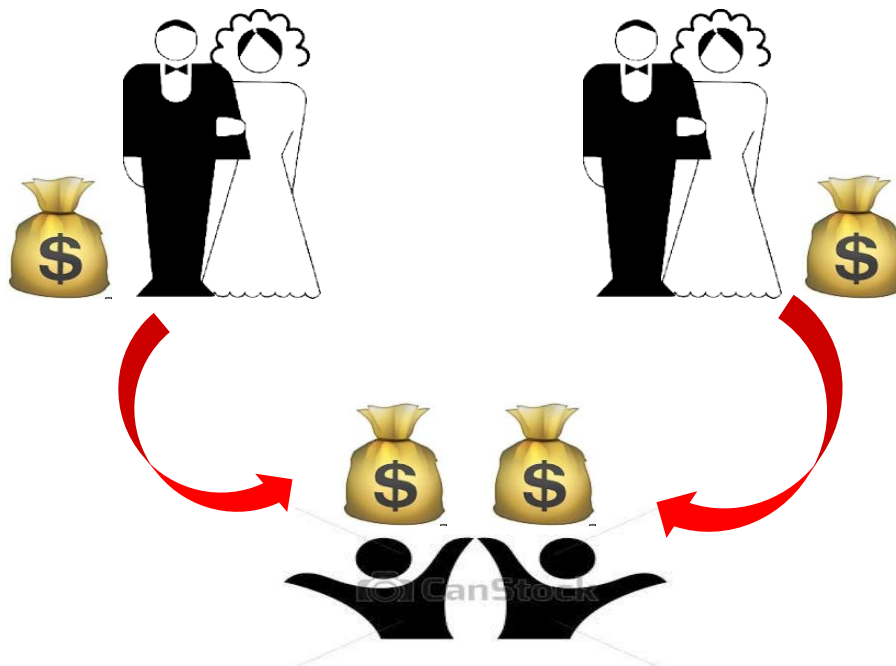
Figure 5.6 shows China’s saving rate according to World Bank data 2013 was only behind Kuwait and Bermuda. Savings rates are higher in Asia (with the exception of Japan) relative to Europe. The U.S. and Brazil have the lowest savings rates among major economies.

Chinese residents purchasing residential properties had gone beyond sole purpose of acquiring shelter. It was a norm in China that instead of saving money in the banks earning interest, of which China saving rate is currently one of the highest in the world, the resident treated investment in residential properties as part of their traditional saving plan. Subsequent to a revolutionary law enactment in 2007 strengthening private property rights for individuals and companies, purchasing

additional residential properties became a commonly accepted “habit” of Chinese residents (The Economist, 2007).

Adjunct to the investment world, there lies the unique past “one-child” policy in China. The “one-child” policy had impacted the social fabric and economics of China. It was believed that this policy had contributed significantly to the wealth creation in China in the 21st century. Figure 5.7 illustrates the wealth accumulation “1 + 1 = 2” phenomenon in China:

Figure 5.7: China “1 + 1 = 2” Wealth Accumulation Phenomenon



Source: Author

A new event had emerged in this decade that had accelerated the wealth creation in Chinese society. Insights provided by the interview process had shed light onto a major socio-economic event in China, i.e. wealth transfer to the “one-child” policy generation. Accumulation of wealth had moved onto a level not seen before as Chinese residents became more affluent due to decades of economic growth. The “one-child” policy had shaped the community towards focusing resources and energy into the prospects of the “one-child” in the family. Subsequent to the “one-child” policy was enforced in 1980s, decades of hard work and wealth accumulations from the first generation of these “single-children” were commonly observed in China. Currently China is filled with the second generation of “one-child”. When these second generation of “one-child” were married; the accumulated wealth of these two first generation of “one-child” families were naturally passed down and merged in the hands of these second generation “one-child” married couple. With the

fact the China is currently the most populated nation in the world, the impact of this wealth creation is simply remarkable. As at October 2015 this “one-child” policy has officially ended in China. It is noteworthy that this study records this historical wealth creation event in China as the **“1 + 1 = 2” phenomenon**.

Quotes from Participants:

“Now, the single child policy has focused an awful lot of energy and money and resources into the prospects of that one. The whole family is relying on that, for their future. Because the earnings of that one are going to come back and support the parents in old age. Well, the greatest transfer of wealth in the history of mankind happened when the Chinese government gave everybody their house, 1996”(Australia-Global-Property-Researcher)

“So you invest a lot into your kids (in China).....there's a big emphasis in terms of trying to give your kids the best in life. Not necessarily through emotional connection, but by getting them the best school or getting the best this or the best that.”(China-Global-Property-Agent).

“.....the way that the whole family is actually, sort of, structured in China is the kids should be looked after by their grandparents.....they'll spend the money if they want to give their kids the best chance in life..”(China-Global-Property-Agent)

“.....their kids for their study plus in China the parents want to bring the best of things to their kids...So if they realise, okay, the education or the environment or something there, overseas better than China, they want to bring, send their children overseas.”(China-Local-Property-Consultant)

“Australia’s lean, it’s green, it’s clean, it’s got food security, it’s got education, and the Chinese talk about their first generation, so their first generation are their kids. So their first generation are the ones now that are making money and they are looking at securing sites overseas for their kids.....and they see Australia as a good place to do that.” (Australia-Global-Property-Consultant).

5.4.1.2 Primary Push Factors and China “Going-Out” Policy

Due to the substantial economic growth and the economic stimulus packages, house prices in China especially in the major cities, experienced significant price increases until recently when Chinese authorities sanctioned various cooling measures targeted at the overheating residential property market. One of the cooling measures involved restricting the number of residential properties one can purchase in China especially in the major cities, to only one. In places where Chinese residents

were permitted to purchase more than one residential property, restrictions were imposed on the second and third houses by increased stamp duties, increased lending costs and reduced lending margins. Already faced with limited investment options in China, wealthy Chinese were seeking alternative investments as part of their on-going “savings plan” due to the perceived underperformed local residential property markets. Alongside with the world greatest liberalization era and transparent information technology age, Chinese residents were exposed to the international arena as never before. Investing in overseas residential property markets had emerged as a viable option.

Quotes from Participants:

“Now, if you’ve got your house unencumbered, and you’ve been busy saving for a rainy day, then you’re sitting there saying, ‘well, I’m restricted in what I can purchase here.....can’t buy more than three.....won’t put it into the share market, can’t buy bonds. I’m not going to put it in the bank. So, what does my advisor say? Oh, an apartment in Melbourne.”(Australia-Global-Property-Consultant)

“.....in Shanghai, Beijing... and even within larger cities, you can buy one but no more.”(China-Local-Property-Researcher)

“Oh yeah, number one son, University.....because it (China residential property market) was heated and the Government put restrictions on second housing and third housing, increased stamp duty, increased loan costs and things like that. All they’ve got to do is ease it a little bit and then that creates more demand.”(Australia-Global-Property-Consultant)

“....secondly is the China property market is not so well at the moment. For us... Chinese property market are not going well...That is like five years ago (performing well), okay. Recent year is not well as before.”(China-Local-Real-Estate-Agent)

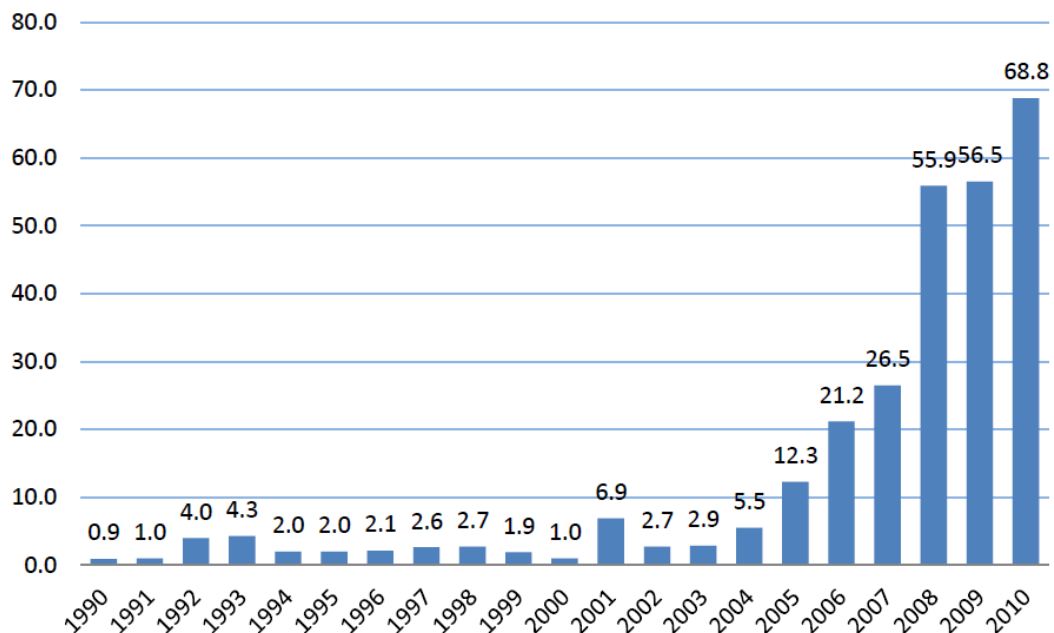
“One other motivation for that is you know, over the last 10 years or so we’ve seen more Chinese people travel abroad, so they’ve been exposed to the life overseas.....So that’s also stimulated investment abroad.....and you’ve got all these property websites that advertise residential housing, so you don’t need to actually go to Australia.”(China-Global-Property-Researcher1)

“Yeah, the (first) house you purchased (in Shanghai), you probably could get 70% mortgage, but the second only 15%. But they still allow you to purchase, but the third house you have to pay fully (in cash).”(China-Local-Property-Consultant)

“In Shanghai, you buy residential house, it’s very limited. You can buy one or two, you couldn’t buy more. But in the other situation you need help and they move out from there”(Australia-Global-Property-Researcher)

One of the major “push” factors identified was Chinese investors had emphasized portfolio diversification out of China’s domestic property market due to China government new “going-out” policy since 1999. The “going-out” policy had successfully accelerated China’s Outward FDI and the country was ranked as one of the world’s largest exporters of capital (Davies, 2013). Figure 5.9 illustrates China’s Outward FDI for the period 1990 to 2010:

Figure 5.8: **China Outward Foreign Direct Investment (USD Billion)**



Source: OECD 2013

Outward FDI flows had grown steadily since 2002, and then more than doubling between 2007 and 2008 when Chinese investors took advantage of their superior financial position during GFC 2008 to seize competitive advantages against business competitors in developed nations. China (including Hong Kong) ranked second in largest Outward FDI source in 2010 with 10% of the world total and fourth in 2011, with 7%. In December 2012, in spite of ongoing assumptions of a Chinese economic slowdown, China recorded its highest levels of outward FDI ever at USD77.2 billion, up 28.5% from USD60.1 billion in 2011. The figure for non-financial outward investment was estimated to reach USD1 trillion by 2020. According to estimates given by the Ministry of Commerce China, by 2010, in excess of 13,000 Chinese investing entities had set-up around 16,000 enterprises abroad in 178 countries and regions (Maxxelli Consulting, 2013).

Investment outflow resulting from the “Going-out” policy were sectorally and geographically diversified. Outward FDI was no longer limited to state-owned enterprises but extended to the private sector. The level of non-financial (assets with physical value such as real estate or equipment) investment abroad generally remained steady at roughly USD2 billion per year throughout the 1990s. It was not until 1999 that the “going out” policy was officially adopted after which the level of external Chinese investment grew substantially. The main reasons cited for the “going-out” policy are:

- i. Due to a significant amount of foreign currency reserves accumulated for the past decades, China needed to alleviate this upward pressure against the exchange rate of the Renminbi (RMB). Potential threats were envisaged to China’s share market and real estate in terms of speculation due to excessive liquidity. The Chinese government redirected the excess capital away by offering incentives (such as preferential tax policies) to domestic companies who invested abroad.
- ii. In order to equip Chinese companies and investors with the required expertise and technology comparable with advanced countries, the Chinese government encouraged its citizens and companies to engage in business operations in advanced nations. Business competitiveness in China had escalated and labour costs continued to rise, there was a need to ensure domestic companies possessed adequate knowledge to remain competitive.
- iii. Ownership in businesses abroad would help promote China’s products to a large world consumer base as a long term strategy to increase China’s economic and cultural impact across the globe.
- iv. Growing internal pressure from wealthy (and powerful) Chinese investors had played a role in influencing the decision to approve international asset diversification. In an age where China’s upper class was growing and the income inequality is decreasing, many of the wealthy Chinese elite were sceptical as to whether they would continue to accumulate wealth purely from investing in their own country.

Source: Maxxelli 2013

The “going out” policies were the major contributor to “push” factors on China’s aggressive outward foreign investments since 2000. Previous Chinese law allowed Chinese residents to convert USD50,000 worth of Renminbi to foreign currency annually although in reality investors had exploited various loopholes to move money offshore. In May 2015, Wildau (2015) reported that China was finalising plans to allow individuals to invest directly in overseas financial assets, further loosening capital controls as it sought official reserve currency status for the RMB. The latest move

would enable Chinese individuals to buy overseas stocks, bonds and real estate directly rather than pick from a handful of Government-approved foreign mutual funds as they were obliged to. An economist from China International Capital Corp estimated that if this Qualified Domestic Individual Investor programme, or QDII2, were expanded nationwide, it would theoretically free up about RMB41 trillion (or USD 6.5 trillion) in domestic wealth for overseas investment. Easing controls on outbound financial investment will help the RMB meet International Monetary Fund requirements that any official reserve currency be “freely” usable.

Quotes from Participants:

“The government policy.....encourage the people to invest in overseas. Chinese Shanghai city governor a few days (ago) announced a new policy to try to encourage people to invest overseas...Why?Chinese currency should become global currency.....the China government encourage people to invest overseas”(China-Local-Property-Researcher)

“If the money stays(in China), and is forced to stay, then it just keeps fuelling higher prices, because it can’t get out.....if you’re going to restrict what people can invest in, you create imbalances, those imbalances are not healthy. That means that no one can afford to live in Shanghai, they can’t get workers in there, because they can’t live there. They need workers, so they need to provide enough accommodation...Again, they’ve got their own problems with demand exceeding supply in their first-tier cities. The issue is, ‘okay, we’ve got to take some of that money that would be going into those first-tier cities and let it out into the world.”(Australia-Global-Property-Researcher)

“Now is, I won’t say (China Government) encourage but they are quite comfortable in people invest money overseas...They want us investing overseas....China Government not encourage but they are not strict as before. Okay. So people can send their money to overseas.”(China-Local-Real-Estate-Agent)

“that has been sort of pushed actually by State owned enterprises out to wider parts of the economy because they probably felt that they had a better investment return investing in other parts of the economy, rather than investing in their own business.”(China-Global-Property-Researcher1)

“So if you look at the insurance companies since 2002, they’ve essentially been let off the leash to invest up to 15% of their assets in overseas... and you’re talking 800 million dollars, 800 million pounds in London – Ping An Real Estate...they’re (China Authority) supportive, yeah, absolutely.”(China-Global-Property-Researcher2)

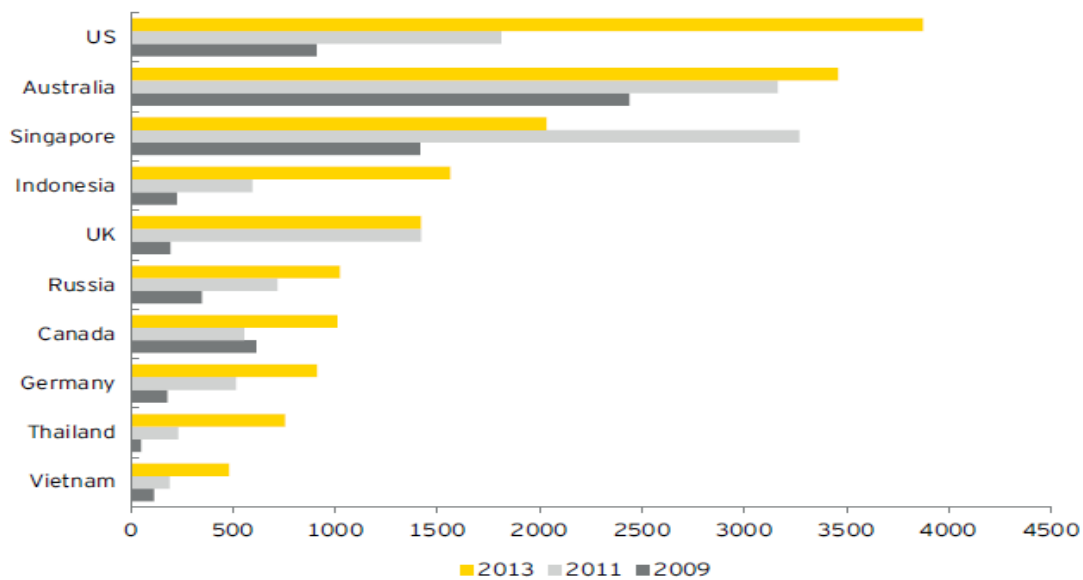
"I think money is too much; they want to change it, US dollar or something like that. So that's why you can see a lot of Chinese company going overseas. That's actually the government encourage to do some overseas investment, to transfer the RMB to overseas. That's why they say in recent years that Chinese government will study when and how the RMB relationship to international currency. "(China-Local-Property-Consultant)

"We're also seeing some Chinese buyers actually moving to peripheral markets as well. I mean take Europe for example.....because of the global financial crisis, you've seen some property markets really plunge, like Spain, Greece, and Portugal."(China-Global-Property-Researcher1)

5.4.1.3 Secondary Push Factors – The Major “Capital Deflector” Trend

Choices of overseas investments from China Outward FDI were not limited to Australia. According to Ernst & Young China (2015), in 2014 Chinese investors invested in 6,128 overseas companies across 156 countries and regions. China's outward FDI outflow was ranked third in the world for the third consecutive year with a total of USD116 billion in 2014 and USD 100 billion in 2013, up 15.5% on a year-on-year basis. Out of the total Outward FDI from China, 58% went to Hong Kong China and 12.8% went to Virgin Island and Cayman Island. Hong Kong China is part of China with a different administrative system, and the Outward FDI to Virgin Islands and Cayman Islands had discoloured China Outward FDI to a certain degree, according to the OECD. Out of the total USD116 billion Outward FDI from China in 2013, approximately USD 33.9 billion (or 29.2%) went to other parts of the world which was still considered sizable and significant. Figure 5.10 shows China Outward FDI top destinations from 2009 to 2013 that excludes Hong Kong, Cayman Island and Virgin Islands:

Figure 5.9: China Outward FDI Top Destinations (USD million)



Source: Ministry of Commerce China; adopted by Ernst & Young

Excluding Hong Kong, Cayman Islands and Virgin Islands, Australia ranked the second highest beneficiary of China outward FDI after United States received more than USD 35 billion in 2013. Singapore descended from the top recipient in 2011 to the third position in 2013. The main attractions cited for these top destinations includes stable political and social environments, sound legal and regulatory systems, successful market system, and leading competence in science and technology and education. China's investments in Australian fixed assets and real estate contributed to more than 10% of the total China Outward FDI in 2013 and undeniably Australia was one of the favourite destinations for China's money. In reality, the total China Outward FDI to Australia could have been larger if not for exploitation by some investors on various loopholes to move money offshore from China. Based on these official statistics and projections, strong basis was established for the projection that Chinese will invest approximately AUD 44 billion into Australian residential property market over next seven years (Janda, 2014) and more than a projected AUD 5 billion a year (Mason, 2014).

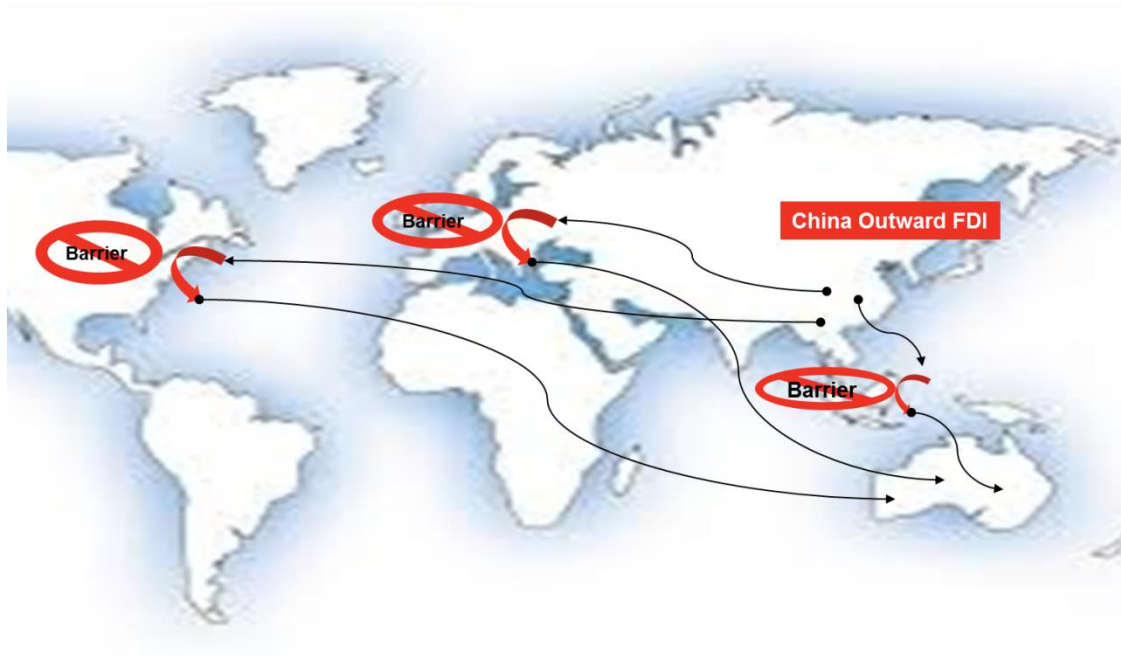
With the transformation and strengthening of the Chinese economy and the development of Chinese enterprises, the objective of investment had shifted from acquiring production factors such as resources to acquiring advanced technology and brands. This shift in focus was aimed at increasing the international competitiveness of Chinese companies and meeting the changing domestic consumption behaviour. Driven by this shift, the investment destinations for China are becoming increasingly diversified, as Chinese companies are expanding into the developed countries

in Europe and America rather than the resource-based economies in Asia, Africa and Latin America (Ernst & YoungChina, 2015).

Australia falls into the category of resource commodity base countries. China Outward FDI to Australia was not heavily reported in the form of major merger and acquisition exercises as in United States. Some of the high profile merger and acquisition exercises reported by media were Lenovo's acquisition of IBM's x86 server business, Motorola's mobility business at USD2.1 billion and USD2.91 billion respectively. Alibaba Group listed on the NYSE and set the record as the largest IPO ever in the US stock markets In September 2014. The most recent reported China Outward FDI activities in Australia includes the AUD463 million deal Sheraton On the Park Hotel Sydney by Sunshine Insurance China and Wanda Group purchased Gold Fields House in Sydney for AUD415 million. Evidently Australia did not attract China Outward FDI in the area of major mergers and acquisitions of high profile advanced technology and brands, the real estate sector had instead attracted substantial interest from China investors.

Having established that majority of the China Outward FDI in Australia was vested in real estate, reasons for China investors selected Australia instead of other part of the world were further explored in the semi-structured interviews. The semi-structured interviews conducted had provided some insights as to the choices of investing in Australia over other countries. The main reason seems to be very much related to some unfavourable Government policies imposed by competitor countries. It was concluded that although the original investment destinations were in other countries and not in Australia, due to their unfavourable Government policies on foreign investments, Chinese investors had chosen to invest in Australia eventually. This second wave of offshore investments in Australia was a "deflection" effect of capital flow originally targeted not for Australia, however at end landed in Australia. It was believed that this "capital deflection" effect had contributed to Australia's emergence as the second largest beneficiary country, even though Australia did not feature the much sought after advanced technology and brands like United States. This significant global effect on capital flow from China is termed as "The Capital Deflector" effect reflecting a new market trend that might had just resulted in one of the biggest capital divergence in the world real estate cross-border transactions. The significance of this "Capital Deflector" effect had potentially resulted in residential property in Sydney and Melbourne experienced the largest price escalation ever in the history of Australia. Figure 5.10 illustrates some examples of the "Capital Deflector Effect" of China Outward FDI:

Figure 5.10: Capital Deflector Effect



Source: Author

Figure 5.10 illustrates the “Deflector Effect” that resulted in Australia’s emergence as the second largest recipient of China Outward FDI after United States. Money from China was “deflected” away due to the Government policies of:

- i. Canada: In February 2014 Canada abolished their Immigrant Investor Scheme. This investor scheme originally granted citizenship to the applicants who had a net worth of CAD1.6 million and invested CAD400,000 in Canada. Towards the end of 2014, the original Immigrant Investor Scheme was replaced by a new immigrant scheme allowing applicants who demonstrate a legally obtained net worth of at least CAD10 million derived from lawful, profit-making business activities, which will be verified by a designated due diligence service provider. Only applicants selected for processing will be required to obtain a due diligence report from a designated service provider. The applicants have to make a CAD2 million non-guaranteed investment for 15 years into the Immigrant Investor Venture Capital fund. These funds will be invested in innovative Canadian-based start-ups with high growth potential. The new measure involved elimination of the long-standing backlog of applications amounting to more than 65,000 people, most of whom are Chinese resulted in negative impression on Canada government trustworthiness (Watt, 2014).
- ii. Singapore: Singapore’s property market had weakened substantially recently attributable to the “cooling measures” imposed by Singapore government on residential property market.

The cooling measures include lower Loan-To-Value for borrowings and higher buyer and seller stamp duties (15%). Many China investors were affected by the downturn on the residential property market and shied away from the restrictions imposed against foreign buyers in the republic's residential properties.

- iii. United Kingdom: A mansion tax was originally proposed in 2009 and subsequently in 2012 as a common name for an annual property tax on high value homes. The most commonly cited trigger point would be a property value of £2 million. Introduction of the Mansion Tax had undoubtedly increased the cost of owning a property in United Kingdom.

The total quantum of the “Deflector Effect” is not known and it will be challenging to ascertain how much China money had been deflected to Australia out of the total China Outward FDI. It was through the interview process structured based on the “Push & Pull” Property Market model that this “deflector effect” was discovered as a major “push” factor for China Outward FDI in Australian real estate market.

Quotes from Participants:

“It (China outward FDI) goes to Hong Kong and Singapore...Hong Kong, the people in Hong Kong are going, ‘oh my god, there’s not enough apartments for us all, we can’t live here anymore.’ ‘we’ve got to stop the Chinese.’ So they stopped them, they’ve put barriers in place.” (Australia-Global-Property-Researcher)

“Singaporeans did the same. And so have other places around the world. We call it Mercantilism, it’s just putting up barriers to trade...The Canadians, they were letting them in, hand over fist, and then all of a sudden said, ‘oh, oh, oh, no, no, no, that’s enough. The UK were looking at a mansion tax...there are barriers being put up, all around the world to this flow of capital.”(Australia-Global-Property-Researcher)

“.....Singapore, I think in 2010 they put down some restrictions on foreign buyers, raising the stamp duty to about 15 percent, so that sort of kind of pushed out some of those foreign buyers.It hasn’t, but if those restrictive policies weren’t put in place, I think you would get a lot more Chinese buyers going in to the Singaporean market.”(China-Global-Property-Researcher2)

“Sometimes they apply everything (permanent residency) together but actually Australia is a little bit easier than Canada...US.....but the hardest is in Europe. If you want to immigrate to UK, it will be very difficult... Because for some of our friends that went to Canada and because they have experience and they sometimes measure, that now Canada is very hard, almost impossible. But Australia has some possibility.”(China-Global-Investment-Consultant)

“Like Hong Kong Shanghai Bank, for example, the money never leaves China, it stays in China. But Hong Kong Shanghai Bank will give you a mortgage on that deposit in any currency you like anywhere else in the world. The money stays in China. So, from the Chinese point of view, the money’s stayed, it hasn’t left.”(Australia-Global-Property-Researcher)

5.4.2 Pull Factors – Australian Government Policies

In the eyes of global real estate investors, Australia stood out as one of the most investor friendly nations with the Government policies not as stringent or restrictive as other developed nations. Favourable Australian Government policies and the resultant conducive investing environment were extensively discussed among the interviewees as below:

- i. **Favourable Residential Real Estate Market Conditions:** It is the Government's policy that foreign investment in Residential Real Estate should increase Australia's housing stock. That is, the policy seeks to channel foreign investment in the housing sector into activity that directly increases the supply of new housing (such as new developments of house and land, home units and townhouses) and brings benefits to the local building industry and its suppliers. All Residential Real Estate applications are considered in light of this overarching principle. Although there were some restrictions on foreign buying, compared to other developed western nations these restrictions were considered friendly. Overseas investors were allowed to purchase both new and existing residential properties, provided the latter obtained an approval from FIRB. One major favourite feature was the foreigners were allowed to possess freehold title on the residential property they purchased, contrary to no freehold title for all residential properties in China.

Quotes from Participants:

“If they (foreign investors) need to pay, they just need to pay a dollar more than the local buyer, to purchase (residential property). They don’t have to pay much more, they don’t have to pay double. There’s no special taxes, or prohibitions, there’s no stamp duty penalties, or anything like that. They just have to pay a dollar more. For overseas buyers, it looks particularly attractive....”(Australia-Global-Property-Researcher)

“Some of them will have an appetite to buy Australian property because they, one they can own it. They actually have a tittle to the property...Whereas I understand in the likes of China you don’t actually get a title, yeah. You get the right to use it but you actually don’t own it.”(Australia-Local-Property-Researcher)

- ii. **Immigration Policies.** Australia has one of the most comprehensive immigration policies among the developed nations. Decades of immigration friendly policies had successfully boosted, sustained and fostered Australian social and economy conditions as it is today. Among the favourable immigration policies, three major immigration policies stood out in the eyes of the overseas investors:
- a. **Graduate Visas:** The Temporary Graduate visa (subclass 485) lets an applicant live, study and work in Australia temporarily after finishing studies. Graduate Work stream is for international students with an eligible qualification who graduate with skills and qualifications that relate to an occupation on the Skilled Occupation List (SOL). A visa in this stream is granted for 18 months from the date of grant. Post Study Work stream – for international students who graduate with a higher education degree from an Australian education provider, regardless of their field of study. This stream is only available to students who applied for, and were granted, their first student visa to Australia on or after 5 November 2011. A visa in this stream can be granted for up to four years from the date the visa is granted, depending on the visa applicant's qualification.
 - b. **Skilled Migrants:** The skill stream of Australia's Migration Programme is specifically designed to target migrants who have skills or outstanding abilities that will contribute to the Australian economy. The migration to Australia of skilled people with the qualifications and attributes to succeed helps address specific skill shortages in Australia and enhances the size and skill level of the Australian labour force. The 2010–11 skill stream outcome of 113,725 places accounted for 67 per cent of the total Migration Programme. The planning level for the skill stream Migration Programme was set at 125,850 or 68 per cent of the total 2011–2012 Migration Programme. The planning level for the skill stream of the 2012-2013 Migration Programme is 129,250 places, which also represents 68 per cent of the total Migration Programme.
 - c. **Business Innovation and Significant Investor Stream (Visa subclass 188 and 888):** Similar to Canada's Immigrant Investor Scheme, Visa subclass 188 and 888 allow high net worth individuals to become a permanent resident in Australia by owning and managing a new or existing business in Australia, or to invest in Australia (AUD1.5million, AUD5million and AUD15million) in the form of designated investment in a state or territory government security using unencumbered fund.

Source: Department of Immigration and Citizenship Australia 2015

Quotes from Participants:

“they’d be coming here with visas to live here, and they’re buying, buy the land to build or old homes to knock down and build within two years, or they’re buying new property. But the visa was the 188 visa or something; there’s a lot of that coming in.”(Australia-Local-Real-Estate-Agent)

“Three types. Three types of buyer. Residents, coming here to live. Have successfully applied, and received migration status, that’s it. They come here, buy a house, live like the rest of us...There is short term student, health care, significant investment visa. Short term, four years, usually. Welcome. They can, at the end of that, apply for citizenship.”(Australia-Global-Property-Researcher)

“Migrants who had studied here, had a degree who can, you know, eligible to apply visa, do PR, like young professionals, accountants or yeah young professionals, I’d say yeah they will invest on our kind of product or even an investment, it could their first home and stay in smaller kind of properties because what they can, yeah that’s just a start.”(Australia-Local-Property-Consultant)

- iii. **Social Security and Liveability:** One of the main attractions for overseas investors investing in Australia was due to its stability and social liveability. Outward investments, for example, were due to existence of “instabilities” in China in living conditions and social instabilities. These favourable branding messages of Australia as a country were well received by the world community and this constitute on the main focus in this study. It was perceived that as long as Australia continues its favourable brand presence, it is anticipated that foreign investors from all over the world, not limited to China, will continue to invest in Australia real estate market.

Quotes from Participants:

“I think what the Melbourne City Council have done in terms of addressing crime in the CBD and making it a safer place for people to walk the streets, the installation of CCTV, the regulation of drunkenness behaviour, the introduction of more police style people on our train system at night – I think that’s gone a long way to restore confidence, and really has lifted Melbourne to an elite city within Australia.”(Australian-Global-Property-Agent)

“if China, for some reason or other says, or implements policies that make it, people more nervous about a government may be changing some rules and regulations, they might say I want

to push some of my money offshore so they can't get it from me...I think they love the fact that there's no corruption here."(Australian-Local-Property-Developer)

"It's about the society, it's about the weather, it's about access to different sports and the seaside, and that type of stuff. There's always some people that go there for the education.....when you talk about Australia, it's about the Australian lifestyle, it's about the great outback - the message that you get - it's about that."(China-Global-Real-Estate-Agent)

5.5 Discussion and Summary

The objective of qualitative research executed was to solicit validations and in-sights on the new determinants discovered in the quantitative research phase. A series of semi-structured interviews were conducted both locally and overseas to seek the latest market information and conditions to justify the findings that Australian residential property market was increasingly influenced by overseas conditions and Residential Tourism had emerged as a new driver that should be taken into account for future evaluation of Australian residential property market.

Australian property as an investment portfolio is becoming increasingly visible to the world investment community. Although the focus on this study was on Chinese investors, all participants agreed that investors from other Asia Pacific countries were equally interested in Australia's real estate. Australia had emerged internationally relevant in many aspects and highly ranked in terms of stability and liveability. The brand presence of Australia as a safe and liveable country was to a large extent, similar to big international brands like Apple or Mercedes, in that it commanded high respect and premium status compared to other parts of the world. It was believed that as long as Australia continues its favourable brand image internationally, foreign investors from all over the world, not just China, will continue to invest in Australian residential property market. Traditional leading economic factors such as saving rates, income per capita and local mortgage rates had become less significant in determining the performance of Australian residential property market now that foreign source of funds as another key determinant were structured not based on local factors. This certainly had established a new dimension to the property market.

In order to enable a comprehensive coverage of the interviews, major determinant like Education would need to be included as part of the interview questionnaires together with other factors. Education had been classified as one of the main driver for Australian property market in past empirical studies and it was again validated in this study with all the participants agreed that Education remained a major driver for Australian residential property market. Similar to (Hawthorne, 2010)'s two-step migration, Australian immigration policies played a significant role in

boosting the attractiveness of Education among international students by allowing them to remain in Australia after graduating from their tertiary education in Australia.

In the qualitative study phase, a new trend was discovered in the aspect of Education as a historical key driver. Students with the family originated offshore were found enrolling in the earlier years of education in Australia, namely into the primary and secondary school levels compared to the traditionally practice of enrolling only at tertiary stage. As a result, residential properties surrounding higher ranked secondary and primary school zones in Australia experienced substantial growth recently.

Residential Tourism, as a new driver in Australian residential property market, was overwhelmingly validated in the semi-structured interviews conducted. As mentioned in earlier Sections, Australian cities were internationally renowned for its “relative picture of stability” in terms of society, healthcare, culture and environment, education and infrastructure. The Residential Tourists in Australia demonstrated unique characteristics and were identifiable by two major groupings:

- i. High Net Worth Individuals (HNWIs) – this group of foreign investors may not position permanent residency as their top priority. They consist of affluent foreign investors who turned tourism into a way of life and live a fluid, leisure lifestyle between major gateway cities in the world. They purchased residential properties in Australia with the objective of enjoying Australia’s favourable living conditions as tourists and imputed business sense in the assets they purchased by earning the rental yield and capital returns.
- ii. Middle class – contrary to the HNWIs, reaping the benefit of a good education, securing good living conditions for their children and eventually obtaining permanent residency status were among the top priorities of this group of investors. There existed a special emotional value in their investment in Australian residential property market with the objective of placing their children in a better environment to grow and be educated. With the ultimate intention of getting a permanent residency in Australia, this group of investors began by travelling to Australia as tourists and then their visitations to Australia became a repetitive affair after their children’s enrolment into Australia colleges.

Assessment on Government policies, both onshore and offshore, was proven a challenging phase of the research both in terms of sensitivity and complexity nature of the topic. Guided by the “Push & pull” model of this study, an open-ended approach was adopted in the interviews to solicit an in-depth coverage of the issues while carefully avoiding any potentially sensitive elements.

In studies conducted in China, it was observed that significant wealth was created and accumulated among the Chinese due to both substantial economic growth and the social economic impact of the “one-child” policy. Though the “one-child” policy has officially ended recently and since been replaced by a “two-child” policy in China, this study presented the unique “1 + 1 = 2” phenomenon in China that had impacted all aspects of the Chinese society for the past decades. Wealth experienced a “doubled-up” effect due to both the creation and accumulation in the first generations which was then passed down to the second generations of the “one-child” policy, merging into high wealth liquidity among the Chinese families, ready to be invested both locally and internationally.

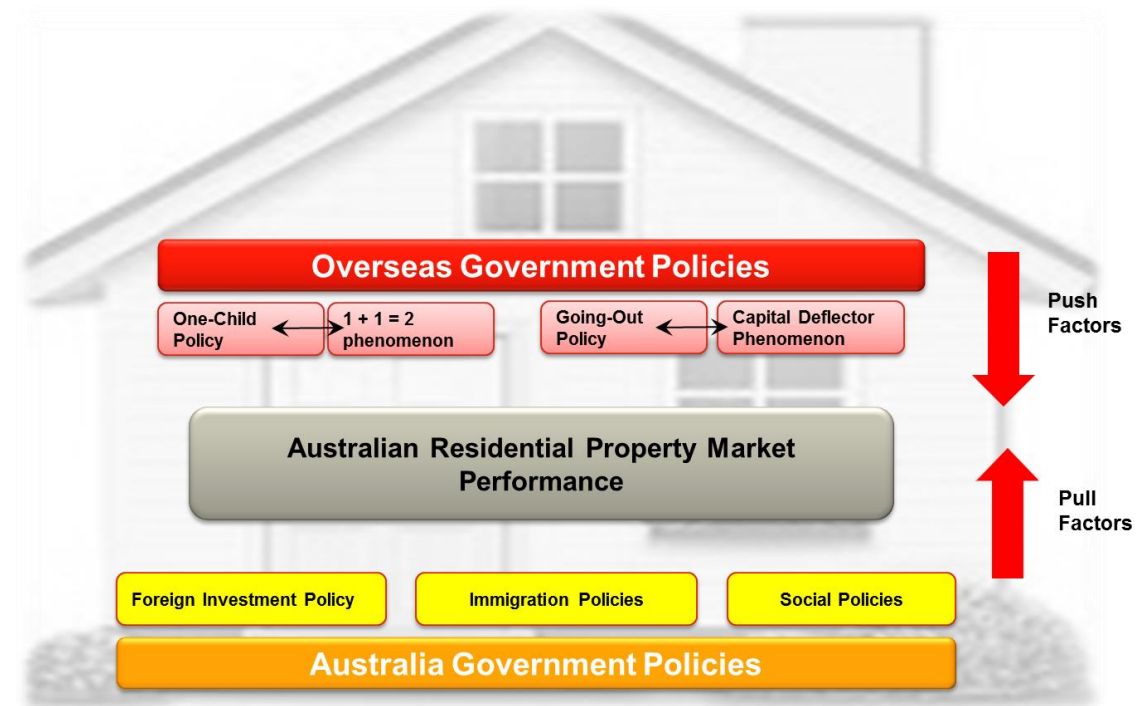
As the Chinese residential property market was underperforming due to the various cooling measures implemented by its Government, wealthy Chinese were constrained in the investment options locally and looked for viable assets overseas. China “going-out” policy since 1999 had further fuelled the momentum for Chinese to invest in overseas markets. Whilst the State Owned Enterprises and private entities from China were actively engaged in international merger and acquisition exercises, wealthy Chinese private investors pursued the world property market. In the wave of China substantial investment in offshore market, Australia emerged as the second highest recipients of this Outward FDI in 2014.

Venturing into offshore investments by these China private investors was not entirely a smooth sailing affair. Chinese investors faced “investment barriers”, as some interviewees proclaimed, from the intended investment destinations and as a result, Chinese investors channelled their money away from these destinations. It was due to some unfavourable Government policies on foreign investments in some of these initially targeted destinations that China investors had later chosen to invest in Australia instead. This second wave of offshore investments in Australia constituted the “deflection” effects of capital flow originally not targeted for Australia, but eventually landed in Australia. It was believed that this “capital deflection” effect had contributed to Australia’s emergence as the second largest beneficiary country. This significant global effect on capital flow from China is termed as “The Capital Deflector” effect reflecting a new market trend that might have just resulted in one of the biggest capital divergences in the world real estate cross-border transactions.

Although Australia was regarded more of a commodity based nation and less known in the field of advanced technology and brand names compared to the United States and Europe, Australia must be credited with its investors’ friendly policies and its high standards of living over many developed nations. Among all other drivers, these were the major “pull” factors that attracted overseas

Chinese investors besides the primary push factor or the “Deflector Effect”. Among the favourable Australian government policies that were perceived positively by foreign investors were the proactive immigration policies. Figure 5.11 shows the pictorial representation of Australian residential property market model simulated based on the major “push” factors from offshore Government policies, coupled with the significant “pull” factors from Australian Government policies and the resultant interactions of Property, Space and Capital Market determinants:

Figure 5.11: **New Australian Residential Property Market Model**



Source: Author

Current Australian residential property market performance is uniquely shaped by both foreign Government policies and Australian Government policies as depicted in Figure 5.11. Current evaluation measures on Australian residential property market performance are perceived inadequate being based primarily upon domestic conditions and drivers. It was undoubtedly Australian Government policies in the area of foreign investment, immigration and social security benefits which had provided the much needed foundation for a favourable investing environment. As the world is becoming increasingly transparent fuelled with globalisation and advancement in information technologies, these favourable drivers were fast acted upon by global real estate investors sweeping on cross border real estate transactions in Australia. China’s investors were the subject of a case study in this assessment which saw the impacts of “one-child” social policy and “going-out” policy that had pushed China investors actively pursuing cross border real estate

investments. The global “Deflector Effect” had further encouraged the flow of China investors’ money into the Australian residential property market.

Chapter 6: Summary, Conclusions and Recommendations

6.1 Introduction

The purpose of this research was to explore and identify emerging drivers that impacted the AUD5.7 trillion Australian residential property markets. This research aimed to investigate the rationales behind the recent active offshore private investment in Australian residential property market subsequent to GFC 2008, even though the conventional economic indicators in Australia remained stalled (for example the mining industry). Much was reported that foreign investors were the key reason fuelling demand pressures in Australia cities' residential property markets; in fact they were, in a way, blamed for causing the declining housing affordability in Australia's major cities. In order to assess the extent to which this external pressure exerted from foreign investors had on Australia's residential property market, conventional economic indicators were compared with indicators associated with overseas investments. Apart from the traditional economic indicators, new emerging determinants that had driven the recent robust performance were identified. The research attempted an in depth approach based on a "Push & Pull" model formulated in this study to assess the impact of Government policies stemming from both onshore and offshore factors on Australian residential property markets. Phase one was a literature review. Phases two and three involved data collection and analysis. Phase four unveiled the key onshore and offshore government policies that impacted the Australian residential property market performance. This chapter summarised the key findings from the literature review, quantitative analysis and the results of qualitative semi-structured interviews.

The entire research was executed based on the research design tabulated in Chapter Three, Table 3.1 Research Design Model and hereby retabulated as below:

Table 3.1 Research Objectives and Approaches

	• Research Objectives	Approaches
I	<ul style="list-style-type: none"> To identify the major determinants, both historical and emerging, in the Australian residential property market 	Stage One: Introduction Literature Review
II	<ul style="list-style-type: none"> To explore the fundamentals of foreign cross-border real estate investment and the related influential Government policies, both onshore and offshore To identify and design assessment models that facilitates 	
		Stage Two:

	the research execution and analysis	Modelling
III	<ul style="list-style-type: none"> To reveal the dynamics of Overseas Real Estate Investments in Australia and the significance of these offshore investments shaping the local housing market 	Stage Three: Quantitative Analysis of Secondary Data
	<ul style="list-style-type: none"> To validate and provide insights on the relationship and validity of the new market determinants have on Australian residential property markets 	Stage Four: Qualitative Analysis of Structured Interviews Data
IV	<ul style="list-style-type: none"> To reveal the key government policies, both onshore and offshore, that had driven foreign investors into Australian residential property markets. 	
Final	<ul style="list-style-type: none"> Research outcomes discussion and conclusion 	Stage Five: Discussion and Implementation

Source: Author

Chapter One introduced the research by detailing information on international cross-border real estate transactions. A research background was established with the research objectives, scope and limitations of the research identified. In Chapter Two, the research reviewed the empirical studies on the history of the intertwined relationship between migration, foreign Investment and residential property market performance in Australia. An existing major driver of migration, i.e. Education was evaluated and a new determinant, Residential Tourism was identified. The latest migration trends were studied as the backdrop of the emergence of High Net Worth Individuals (HNWIs) and Middle Class and their increasing influence over world real estate market transactions. All these were reviewed alongside both onshore and offshore Government policies and their roles in influencing the influx of foreign money into the Australian residential property market. Chapter Three outlined the research approach and design. Chapter Four provided the analysis and results of the quantitative research. Qualitative research analysis and results were tabulated in Chapter Five. The objective of qualitative research was to solicit validations and in-sights on the new determinants discovered in the quantitative research phase.

The remaining sections in this chapter provide summary, conclusions for the research aims and objectives, contributions to the body of knowledge and recommendations for future study areas.

6.2 Summary

As illustrated in Table 3.1, the research design intended to address four broad research objectives and one final discussion executed in five stages of research operation. The associated methods of investigation were tabulated according to the stages of execution. As per research questions established in Chapter 1 section 1.3, the conclusions of the research would directly reflect the objectives achieved, or otherwise, and be summarized as follows:

6.2.1 Objectives I and II: Historical and Emerging Determinants

- *To identify the major determinants, both historical and emerging, in the Australian residential property market*
- *To explore the fundamentals of foreign cross-border real estate investment and the related influential Government policies, both onshore and offshore.*

Savills (2014) estimated that direct-owned residential properties contributed a total of USD180 trillion or approximately 72% of the world properties' value, of which only approximately 17% belonged to commercial properties. The residential property market in Australia was valued at AUD5.7 trillion with the housing mortgage market stood at AUD1.4 trillion in 2015 (CoreLogic, 2015). In 2014, the issuance of RMBS (Residential Mortgage Backed Securities) hit AUD32 billion, its highest level since GFC 2008. In the midst of the significant growth in the residential property market in Australia, house prices in both Sydney and Melbourne continued to escalate and rose by 12.2% and 4.5% respectively in 2014. More often than not, media blamed foreign investors, especially individual investors from China for driving the house prices out of local home owners' reach.

Australia continued to be in the spot light among the international investment community and ranked seventh in 2012 and ninth in 2013 as the world top Foreign Direct Investment (FDI) destination country; attracting USD57 billion in 2012 and USD50 billion in 2013. As per Chapter 1 Section 1.1.3, active participation of foreign investors in Australian residential property market was a common sight subsequent to GFC 2008. According to a survey conducted by National Australia Bank in 2015, foreign buyers were active in Australian new housing markets with 15.6% of all sales transacted into the hands of foreign buyers. Foreign buyers' involvement reached the height of 21% in NSW and 20.7% in Victoria (NAB, 2015). Janda (2014) predicted that Chinese investors and newly arrived migrants would be investing approximately AUD44 billion into Australia's residential real estate market over the next seven years. The Credit Suisse report noted that buying is concentrated in Australia's two largest cities, namely Sydney and Melbourne.

World Subsequent to GFC 2008

Subsequent to GFC 2008, there were four emerging trends that might have changed the world of real estate investments:

- i. Funds emanating from the Asia Pacific region were actively pursuing world cross border real estate transactions and this was on a rising trend (Capgemini, 2015a).
- ii. Asia Pacific private funds from High Net Worth Individuals (HNWIs) seeking residential property investments in major world gateway cities (Savills, 2014)
- iii. The global income distribution gaps were narrowing due to the emergence of the Expanding Middle Class (Ernst&Young, 2013, Kharas, 2010, TheEconomist, 2011, Wilson, 2008). Expanding Middle Class from Asia Pacific countries was believed to have impacted global spending patterns in a significant manner and potentially played a significant role in foreign real estate investments (FREI) (Wilson, 2008)
- iv. The institutional real estate transactions had never really recovered since 2008 due to the credit crunch (Savills, 2014)

The emergence of the HNWIs and Middle Class from Asia Pacific had shifted the world real estate market into an entirely new paradigm. According to Savills (2014), Capgemini (2015b), (Wilson, 2008), affluent and middle class private investors from Asia would soon replace the United States as the largest investor group in global consumption and investment. This newly emerged group of investors is expected to exert impact on the global real estate market in both corporate and private segments significantly. This latest development was believed to have given birth to a structural change in the world real estate market, i.e. private individuals had emerged as a force to be reckoned with in the world gateway cities' residential properties.

Traditional and Emerging Determinants

Previous built environment literature examined various factors driving the residential property market in Australia. The relationship between population, migration and demand of housing was much discussed in the context of acquisitions by new migrants for owner occupying purposes. Literature reviews had provided empirical evidence on Australia's population being affected by immigration programmes historically and immigration had always been the major source of Australia's population growth since the era of white settlement (Burnley et al., 1998, Collins, 2008, Department of Immigration and Citizenship, 2009-2010, Jupp, 1995, Wilson, 1998). The increase in immigration activities in the host countries had also directly impacted real estate market from a macroeconomic perspective (Borjas, 1994, Collins, 2008, Wilson, 1998). For example, studies by

Borjas (1994) and Ley and Tutchener (2001) had established that immigrations played a significant role in lifting the host countries' FDI. Both Farrell (1997) and Murphy and Watson (1994) revealed that among all the properties purchased by the offshore investors, residential housing had attracted much attention and constituted an important element in shaping Australian overall real estate market development. In recent studies, (Commonwealth Bank, 2014) reported that the population growth in Australia was mainly attributable to the increased level of skilled migrant intake who were typically cash rich when they arrived and their contribution to the housing market was sooner than many unskilled migrants.

Review of literatures revealed the apparent lacking of empirical studies on migrants' objective of buying residential houses for purpose other than owner's occupation. Studies had not addressed some of the complexities that had arisen over the past couple of decades. The majority of the discovered evidence had made a common presumption, i.e. that the immigrants had been purchasing residential properties for owner occupation purposes without further exploring other aspects such as investment, life style, tourism or education. Thus a potential knowledge gap arises.

One of these complexities had been the rapid expansion of Australia's international student population. This trend was in its infancy during the early 1990s, but by 2010, Australia had emerged as a leading exporter of education services. As at June 2014, Australia was host to over 500,000 international students, with a significant proportion of these students contemplating migration at the conclusion of their studies. Some offshore investors had come to Australia as students but carrying with them the primary intention of attaining permanent residency status. It was envisaged that this emerging trend would develop into a vital element that would shape Australia's relationships with emerging countries within the Asia-Pacific region, in particular with the populous nations of China and India (Dwyer et al., 2010). Education, as a major component of the Australian service industry, had overtaken iron ore as Australia biggest foreign exchange income source. Its role in the current Australian economic environment was becoming even more important in the midst of the Government's effort of moving away from heavy reliance on resources based development (Creswell and Clark, 2007).

There were clearly some unidentified and unusual factors at work which contributed to the increase in housing demand in Australia in relation to foreign investors (Commonwealth Bank, 2014). The conventional investment theory and law of demand and supply was perceived inadequate to substantiate the reasons for offshore investors' preference in Australia residential properties over other parts of the world. Having established that Education was one of the factors driving foreign

investment in Australian residential property market, the desire for a more extensive research into other possibly yet to be identified factors causing the surge of housing demand in Australia cities had gained momentum.

Though tourism and migration relationships were extensively documented in the earlier reports, the studies did not explore further some of the complexities that have arisen over the past couple of decades. This thesis investigated an existing European tourism migration trend that closely resembled the social development in Australia. This unique social development in Europe posted a direct resemblance to Australia's current tourism migration patterns. The definition of residential tourists specifically distinguished this group as the affluent residential property investors. This group was able to treat tourism as a way of life and to construct fluid, leisure lifestyles between places. They were also being characterised as tourists who had ostensibly tried to settle in, but remained in some ways outside or away from the community they moved into. An observation by O'Reilly (2007) was similar to that of Savills (2014) who reported that among the cross-border transactions, private capital played a major role which observed Chinese buyers seeking property for their offspring (often bases for students/children to study), or to ultimately attain permanent residency. According to O'Reilly (2007), it had always been difficult to disentangle migration and tourism in Europe. The unique interaction between tourism and migration was defined as "Residential Tourism".

Review of literatures underscored tourism activity as a stimulus for migration and migration as an inducement to tourism flows (Williams and Hall, 2000). A model proposed by Williams and Hall (2002) depicting such relationships was explored in the context of a geographical extension of friendship, ethnic and kinship networks. Empirical studies had identified the strong link between VFR traffic and migration. Be it domestic or international, migration was a precondition for VFR tourism, although the connection may be indirect when the sense of dependence is based on the migration behaviour of prior generations (Dwyer et al., 1993, Dwyer, 2010, King, 1994, Williams and Hall, 2002). Dwyer et al. (1993) suggested that VFR tourism was an important element of what they called "chain migration". A review of the literature validated that permanent migration and tourism were connected and that the links extend from both directions. Tourism could generate permanent migration, and in turn, permanent migration could generate a demand for tourism, particularly for the purpose of visiting friends and relatives (Burnley et al., 1998, King, 1994, Dwyer et al., 1993, Dwyer, 2010, Huong and King, 2002, Murphy and Watson, 1994, O'Reilly, 2007, Wilson, 1998). Whilst such interdependencies were not new, their scale, intensity and geographical scope had significantly expanded over recent decades.

Complexity was further escalated when considering the various motives for short-term travel (including visiting friends and relatives, leisure and business travel) and long-term migration. This was further complicated by the addition of new sources of migration including that from the troubled areas or countries such as the Horn of Africa, Afghanistan and Iraq (Boyne et al., 2002). According to Michael Pezzullo, Secretary of the Department of Immigration, as many as 1.9 million foreigners would likely to be in the country at any one time over the period 2015. In terms of new migrants to Australia, the number of Chinese born Australians had more than tripled to almost 450,000 in the space of two decades. Those born in India had risen more than fourfold to almost 400,000. The findings are consistent with Capgemini (2015), Kharas (2010) and Wilson (2008) claims that countries from Asia Pacific, particularly China and India, would contribute significantly to the world middle class and HNWIs.

Building on the literature, the focus of this study was to determine whether there is historical evidence, in a world cities context, to support the existence of a direct relationship between overseas private investors and the residential housing market's performance. The research selected Chinese investors for case studies due to the significance of funds flowing from China. A detailed analysis of recent Australian immigration policies was essential to examine the impacts these policies had on the Chinese investors and the resultant determinants of Australian residential housing performance. The empirical evidence developed from this study will assist policy makers in making informed decisions to promote FDI in the real estate market yet maintain the affordability of housing in Australia for local residents. The aim of this study is also to yield findings that can assist property market operators and investors in their evaluation of the Australian residential housing market and be better informed in their decision making process.

World Real Estate Market

According to Palin (2014) the traditional investment portfolios of a mixture of equity and fixed interest were either too volatile or providing too low a return with much weighting towards bonds. In the midst of an era of world trade and economic globalisation and liberalisation, the trend was that many governments offered quantitative easing (QE) policies after the shock of the GFC 2008 and these scenarios were ascribed the responsibility for the volatility in equity and the low yield in bond investments. Global investors were then seeking alternative investments as a replacement or hedge against their existing portfolios in equity and bond markets. As a result, global real estate markets gained significant attention from the world investment community due to their relatively stable risk profile and quality returns (McDermott, 2013). D'Arcy (2009), Topintzi et al. (2008) and

UNCTAD (2011) reported that foreign direct investment in real estate markets had experienced significant growth in many countries. Evidently, cross border foreign real estate Investments was on the rise in this global liberalization era (D'Arcy, 2009, Topintzi et al., 2008, UNCTAD, 2009, UNCTAD, 2013).

Real estate assets offer an investment category to investors with opportunities for diversification in this world of uncertainty. Following the growth of real estate in global investment portfolios, many real estate options including listed real estate securities had been made available to investors. These are listed vehicles which can be publicly traded and have real estate as the underlying asset. While real estate investment activities gained momentum and cross border foreign real estate investments were being well supported by easily accessible information attributed to the advancement in information technologies, there had been an apparent surge in Foreign Real Estate Investment (FREI) in many countries in recent years.

At the time when international investment communities were hungry for alternatives, real estate assets emerged as a strong contender providing an apparent option for portfolio diversification, its increasing level of liquidity and superior return relative to Bonds. Of all available real estate asset sub-classes, residential property was undeniably the largest according to Savills (2014). In more recent research, real estate assets were added to a mixture of asset portfolios comprising shares and bonds. An improvement in the risk-adjusted performance of the portfolio was observed as a consequence of the addition of real estate to the portfolio (Hoesli et al., 2004), (Moshirian and Pham, 1999, Sirmans and Worzala, 2003).

Although there had been numerous economic reports (for example: Ross (2011), Bourassa and Hendershott (1995)) on the impact of offshore investors on the local real estate market, a literature review showed that there had not been real tangible studies conducted on the factors that resulted in an increasing offshore investments in the Australian residential property market. The recent offshore investors' substantial investments in both Melbourne and Sydney residential housing markets certainly signalled an imminent need to investigate the causes of these Chinese cross border investment influxes. Limited and dated information was identified by Commonwealth Bank (2014) as a real concern. Information seemed limited with regard to the relationship between overseas investors and the dynamics of the Australian housing market.

Government Policies

Many Governments in developed countries have new regulations to attract offshore capital. This has increased the participation from both institutions and private entities adding momentum to global

investment activities for those investors seeking better returns offshore than those which can be achieved locally. As Fereidouni and Tajul Ariffin (2013) explained, the world Governments' economic and financial policies cover interest rates, physical infrastructure, FDI in other sectors, labour costs, exchange rate risks, property prices and tourism agglomeration were all relevant in the assessment of cross border investments in the real estate markets of host economies. It is a challenging task for any Government to balance its effort to attract FREI while maintaining the affordability of residential properties, particularly in the capital cities. A paper entitled "Determinants of US Investment in Real Estate Abroad" by Moshirian and Pham (1999) presented the opposite perspective of foreign investments in a real estate market by analysing factors which were contributing to the outward investments of US FDI in real estate overseas. They conducted study on various attributes that caused US investors to invest money into real estate market overseas. As a result of US fiscal and monetary policies, there was an increase in real estate investment abroad as a substitute for investing in US financial assets when US foreign financial liabilities increase. The empirical results indicated that as returns from the US stock market declined, there were more incentives for US investors to invest in foreign real estate.

Factors attributable to China investing in overseas included: a highly competitive domestic market; declining corporate revenues; government policies and financial support for enterprises venturing into new overseas markets; securing raw material supplies; and acquiring advanced technology and global brands (Cheng and Ma, 2010). Deng (2004) revealed that with China's sustainable high economic rate of growth, China not only had substantial foreign capital inflows but also a big current account surplus, huge foreign reserves, and a high level of domestic savings. The large FDI outflows were primarily a function of macroeconomic factors and economic development in its stages, the world would continue to see ever increasing FDI from Chinese multinational corporations in the foreseeable future.

Australia's migrant intake policies changed after the recession in the early 1990s. In recent decades, immigration has been somewhat less sensitive to the business cycle (as evidenced by increasing numbers even during the Global Financial Crisis) and more responsive to economic restructuring. Evidently the long migration boom from the mid-1990s was caused by the relaxation of migration quotas, as a result of various government policies restructuring. Australian migration policies had increasingly favoured younger applicants with tertiary qualifications and strong language skills purportedly to satisfy the demand in the labour market. Skilled migration has increased relative to family-based migration. The share of family intakes fell from 47.2% in 1998–99 to 40.1% in 2001–02 while the skilled intake rose from 51.5% to 57.5% (DIAC, 2004).

The growth of migration was symptomatic of the Howard Coalition Government's attempt to extract greater economic benefit from migration to garner public support for the programme. A trend had emerged whereby the investor's friendly migration scheme was put in place to attract significant foreign capital into the local real estate market in Australia. Burnley et al. (1998) presented his study on various Governmental policy implications on urban outcomes in relation to Australia's immigration programme. Australian policy makers recognized the divergent views on the costs and benefits to the nation's major cities such as Sydney and Melbourne of large scale immigration; and responses had since intensified and sharpened.

Higgins (2010) demonstrated the extent of Government policies' impacts on the Australian housing market by examining the structure of the property market. In another study, Archer and Ling (1997) adopted a three-market model which was based upon exemplifying the critical relationships between Property, Space and Capital Markets and to assess the extent of the influence Australian government policies had over the house prices (Higgins, 2010). Based on the literature review of potential influences of both local and offshore Government policies had over the investment climate, it was believed that an additional platform should be introduced into the Higgins model to enable an in depth review of FDI (real estate) determinants. This new model would allow a more comprehensive coverage on how both overseas and local Government policies were impacting the host country's real estate market as shown in Figure 3.2, the proposed "Push & Pull" model in this study.

6.2.2 Objective III: Dynamics of Overseas Investments

- ***To reveal the dynamics of Overseas Real Estate Investments in Australia and the significance of these offshore investments shaping the local housing market.***
- ***To validate and provide insights that the relationship and validity of the new market determinants have on Australian residential property markets***

Quantitative Analysis

In the Quantitative phase of the research, analysis was performed on the Melbourne Metropolitan residential property market and two suburbs in Melbourne that had successfully attracted the largest or most significant number of overseas settlers historically by comparing a decade of ABS census data between 2001 and 2011. Three statistical analysis were applied to analyse the strength of the relationship between the DV (House Prices) and IV (Australian Leading Economic Indicators, Non-traditional factor) to confirm the validity of the model, namely:

- i. **Correlation Matrix Pearson Correlation Coefficient (R^2)** – this methodology was applied to analyse the nature and relationship between the key economic factors of Australia (IV) and the house prices of the selected area of interest (DV). To determine whether individual correlation coefficients are significantly different from zero, a ‘t’ test at the 95% and 99% confidence level was applied to the correlation results.
- ii. **Multiple Linear Stepwise Regression** - to fit a linear regression line using ordinary least squares method. This method is used to model the relationship between the predictor (House Prices) and dependant variables (indicators from Space, Capital and Property Markets), explained by a linear, or straight line, relationship. The single regression equation to assess the correlations between the house prices and various independent variables can be expressed as:

Regression Model	Equations
<i>(MELBOURNE METROPOLITAN HOUSE PRICE MOVEMENT)_t</i>	$= f(\text{Space datasets } t...t-2,...) + (\text{Capital datasets } t... t-2, ...) + (\text{Property datasets } t... t-2,...)$
<i>(SELECTED SUBURBS' HOUSE PRICE MOVEMENT)_t</i>	$= f(\text{Space datasets } t...t-2,...) + (\text{Capital datasets } t... t-2,...) + (\text{Property datasets } t... t-2,...)$

- iii. **Descriptive Analysis** – to provide summaries on the secondary data collected from various sources with with simple graphics analysis. This analysis forms the essential basis of the quantitative research in this study.

The economic indicators were re-entered using lagged data methodology depicted as **Lagged Economic Indicators**. As changes in macroeconomic activity may take time to affect residential property market performance, the two-year lag provides sufficient time for the assumed property and macroeconomic activity to flow onto the residential property performance.

The above quantitative techniques were used to first explore the existence of significant relationship between the Australian leading economic indicators and the median house prices in Melbourne Metropolitan, Clayton and Doncaster. Two non-traditional factors, namely Residential Tourism (RT) and International Student Enrolments (Education) were introduced to explore their respective interaction with traditional leading economic indicators in property investment (Property Market) and funding risk components (Space Market) from the general capital market (Capital Market) based on the Higgins (2010) three-market model. The correlation and regression equations were tested for statistical reliability and visually examined for projection of actual performance.

The final results of Correlation analysis were tabulated in *Figure 4.29. Economic Indicators Ranking According to r-value (Including RT)*. Economic indicators associated with overseas investors namely 10-Year Government Bond Yield and Foreign Exchange Rate ranked the highest at above 0.6 r-value in Clayton, above 0.7 r-value in Melbourne Metropolitan, above 0.6 for Doncaster, surpassing the significance level of traditional indicators such as mortgage rates, GDP per capita and rent yield. Net Overseas Migration (NOM) had emerged as the third most significantly correlated indicator in the Clayton property market. (This was consistent with the finding that Clayton attracted the most overseas settlers in Victoria (ABS 2014)).

International Student Enrolments in Victoria ranked high in Clayton, with moderate significance level in Melbourne Metropolitan and Doncaster. Residential Tourism (RT) represented by Long Term Visitor Arrivals (LTVA) and Short Term Visitor Arrivals in Victoria (STVAV), was statistically significantly correlated in all residential property markets at the 0.01 level (2-tailed); suggesting RT was a relatively strong social economic indicator in all property markets. RT ranked higher than some traditional indicators such as GDP per Capita, Population Growth, Net Saving and Rent Growth in terms of significance level in the three property markets.

Stepwise multiple regression analysis was employed to present the complex interactions among all the leading economic variables in an effort to provide an acceptable econometric model representing future house prices in all three locations. The application of stepwise multiple regressions on the lagged significant leading economic variables against the house prices incorporated the non-traditional social economic factor i.e. RT and Education in the second model simulation for comparison. The fitted regression equations were presented in *Table 4.30, Table 4.32 and Table 4.34*. The validated forecasting models were graphed in *Figure 4.9 Models Comparison with the Actual Melbourne House Prices, Figure 4.10 Models Comparison with the Actual Clayton House Prices and Figure 4.11 Models Comparison with the Actual Doncaster House Prices*.

The adequacy of the equations was reflected in the high “R²” readings (above 90%) and the significant t-values for every economic variable. Notably there had been an improvement in the R² readings in the second model for all the property markets after the inclusion of the non-traditional factors of Residential Tourism (RT). The effect of RT, as a new determinant of house prices, had improved the accuracy of the fitted regression line and its significance was particularly noticeable towards the latter part of the data series. The new fitted line with the RT element had moved the fitted line closer to the actual house price Indices starting from year 2013 till the end of the time series. The house prices surge observed towards the latter part of the time series, which was unable to be modeled relying on traditional economic indicators, was partly explained in this new equation by incorporating a new determinant of RT. Although International Student Enrolments was reflected

as significant in the correlation analysis, it failed to qualify as a major determinant in the forecasting models.

Quantitative analysis of secondary data had successfully provided three forecasting models for Melbourne Metropolitan, Clayton and Doncaster residential property markets. Among the traditional economic indicators, factors associated with offshore investments had shown sign of surpassing factors associated with domestic economic factors. For example, 10-year Government Bond Yields (10Bond), Foreign Currency Exchange (Forex) and Net Overseas Migrations were significantly correlated and formed the crucial components of the regression equations and correlation matrix; surpassed the importance of other traditional residential market determinants such as rent growth, GDP per capital growth and net saving rates. RT was established as a new key driver and the inclusion of this new determinant in the regression equations improved the forecast accuracy of the house prices in Melbourne Metropolitan and Clayton subsequent to the GFC 2008.

Qualitative Analysis

The objective of qualitative research executed was to solicit validations and in-sights on the new determinants discovered in the quantitative research phase. A series of semi-structured interviews was conducted both locally and overseas (China) to seek the latest market information and conditions to justify the findings that Australian residential property markets were increasingly influenced by overseas conditions and that Residential Tourism had emerged as a new driver that should be taken into account for future evaluation of the Australian residential property market.

Validation 1: Drivers from Overseas Market

All participants agreed that investors from other Asia Pacific countries were largely interested in Australian real estate. Australia had emerged internationally relevant in many aspects and highly ranked in terms of stability and liveability. The brand presence of Australia as a safe and liveable country was to a certain extent, similar to big international brands like Apple or Mercedes, that command high respect and a premium compared to other parts of the world. It was believed that as long as Australia continued its favourable brand image internationally, foreign investors from all over the world, not just China, would continue to invest in the Australian residential property market. Traditional leading economic indicators such as savings rate, income per capita and local mortgage rate were becoming less significant in determining the performance of residential properties in some locations in Australia, especially those which experienced a significant price increase since GFC 2008. These local factors had little, if any influence over the structure of foreign source of funds which had exerted a new dimension to the property market.

Validation 2: International Student Enrolments (Education)

Education had been classified as one of the main drivers of Australian property market in past empirical studies and it was again validated in this study with all the participants agreeing that Education remained a major driver for the Australian residential property market. Similar to Hawthorne (2010)'s two-step migration, Australian immigration policies played a significant role in boosting Education attractiveness among the international students by allowing students to remain in Australia after their graduation from higher Tertiary education in Australia.

Validation 3: Residential Tourism

Residential Tourism, as a new driver in the Australian residential property market, was overwhelmingly validated in the semi-structured interviews conducted. Australian cities were internationally renowned for their "relative picture of stability" in terms of security, healthcare, culture and environment, education and infrastructure. The Economist's Intelligence Unit ranked Melbourne the world most liveable city in 2015 for the fifth consecutive time (ABCNews, 2015, Lucas, 2015). Research showed that all interview participants agreed that Australian cities carried a strong brand name internationally as a tourist destination as well as in terms of their liveability status. Foreigners who visited Australia were impressed by the quality of life that the Australian citizens were enjoying including but not limited to world class education, healthcare, security and admirable living standards. Compared to other world major gateway cities such as Singapore and London, this very much sought after liveability status had not only positioned Australia as the world tourist destination in the short term basis, it had undoubtedly placed Australia as a strong contender for the world community's choice of a place to live and retire in the long run.

Insight 1: Early Education In Australia

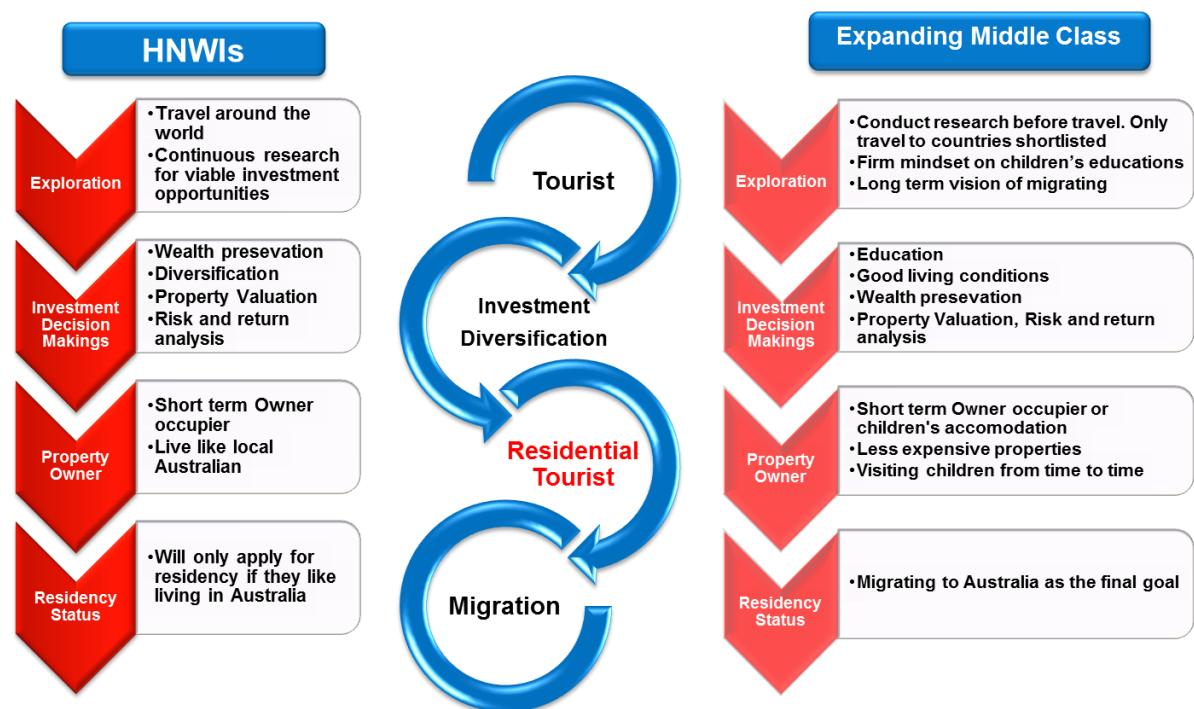
A new trend was discovered with regards to Education as a crucial driver. Non-domestic families with younger children were found to be starting their earlier years of education in Australia, by enrolling into primary and secondary school compared to the traditional practice of coming to Australia for tertiary education. As a result, residential properties surrounding higher ranked secondary and primary school zones in Australia have experienced above-trend growth.

Insight 2: Residential Tourists' Characteristics

The Residential Tourists in Australia demonstrated unique characteristics and are categorized by two major groupings:

- i. **High Net Worth Individuals (HNWIs)** – this group of foreign investors did not position permanent residency as their top priority. They consisted of affluent foreign investors who treated tourism as a way of life and conducted a fluid, leisure lifestyle between major gateway cities in the world. They purchased residential properties in Australia with the primary objective of enjoying Australia’s favourable living conditions as tourists and along the way, leasing out their assets in a conventional manner, reaping both rental yield and capital returns.
- ii. **Middle class** – contrary to the HNWIs, enjoying the benefit of a good education, securing favourable living conditions for their children and eventually obtaining permanent residency status were the top priorities of this group of investors. There existed a special emotional value underlying their investment in Australian residential property which stemmed from the objective of placing their kids in a better environment to grow and be educated. With the ultimate intention of attaining permanent residency in Australia, this group of investors would travel to Australia as tourists in the beginning and soon after, their visitations would become more frequent as their children attended Australian educational facilities. Figure 6.1 illustrates the characteristics and decision making process for both HNWIs and Expanding Middle Residential Tourists:

Figure 6.1: Residential Tourist Characteristics and Decision Making Process



Source: Author

Figure 6.1 demonstrates the different characteristics and decision making processes of HNWI and the Expanding Middle Class. HNWI emphasized investment diversification and wealth preservation for their investment in overseas markets. More likely than not those in the Middle Class would have made up their mind to eventually migrate to Australia if they purchased an overseas property for their children's education at the outset.

6.2.3 Objective IV: Key Onshore and Offshore Government Policies

- *To reveal the key Government policies, both onshore and offshore, that had driven foreign investors into the Australian residential property market.*

Assessment of Government policies, both onshore and offshore, was proving to be a challenging phase of the research both in terms of the sensitivity and complexity surrounding the issue. Guided by the "Push & pull" model of this study, an open-ended approach was adopted in the interview process to solicit in-depth coverage of the subject, yet tactfully avoid the sensitive elements.

Push Factors

Various forms of "instability" mainly from the aspect of political or economic uncertainties from Asia Pacific countries had directly contributed to the outflow of foreign real estate direct investments. Investors from China are not the only offshore investors in the Australian property markets. Chong (2014) reported that more capital exited Singapore to global real estate than that from China or Japan. An estimated USD6.7bn was spent in Australia by buyers from Singapore in 2014, compared to USD2.7bn from China, attributable to the "cooling measures" imposed by the Singapore Government on its residential property market resulting in the weakening of its residential property market performance. Another observation was the recent surge in activities from Malaysian investors in the Australian residential property market attributable to the country's escalating racial tension and political instability following the corruption claims against the Malaysia Prime Minister and its Government at large.

Insights 1: China "1 + 1 = 2" Phenomenon

Significant wealth was created among Chinese residents due to both the country's substantial economic growth and the implementation of its socio-economic "one-child" policy. As the "one-child" policy had been recently officially ended and was being replaced by a "two-child" policy in China, this study presented the unique "1 + 1 = 2" phenomenon in China that had impacted the fundamentals of both the social fabric and the economy of China for the past decades. Wealth creation and accumulation experienced a "doubled-up" effect in the second generation of China's

one-child policy, mainly due to the wealth created in the first generation having flowed down to the second generation when they setup their own households. This trend had led to enormous wealth liquidity among young Chinese families, available to be invested both locally and internationally.

Insight 2: China “going-out” Policy

China’s “going-out” policy since 1999 had further fuelled the momentum for Chinese to invest in overseas markets. Whilst the State Owned Enterprises and private entities from China were actively engaged in international merger and acquisition exercises, wealthy Chinese private investors pursued the world property market. In the wave of Chinese substantial investment in offshore markets, Australia emerged as the second highest recipient of this Outward FDI in 2014.

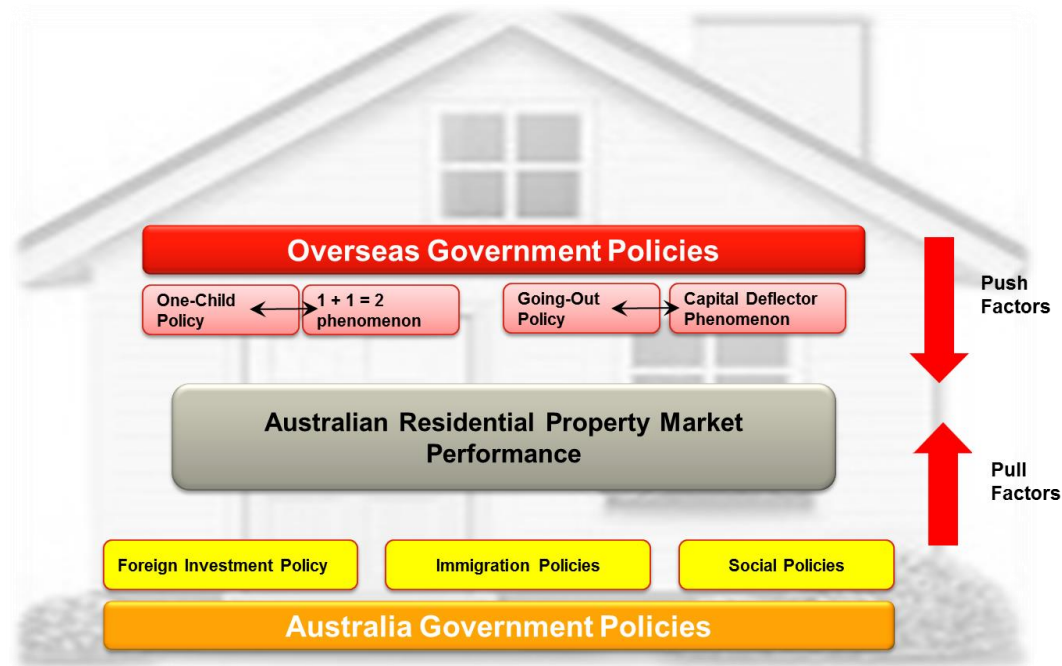
Insight 3: Secondary Push Factor: “Capital Deflector” Trend

Chinese investors faced “investment barriers”, as some interviewees proclaimed, from the originally intended investment destinations and as a result, they channelled their money away from these destinations. It was due to some unfavourable Government policies on foreign investment in these destinations that China investors had chosen to invest in Australia instead. This second wave of offshore investments in Australia constituted the “deflection” effects of capital flow that may have originally been targeted elsewhere, but landed in Australia instead. It was believed that this “capital deflection” effect had contributed to Australia’s emergence as the second largest beneficiary country. This significant global effect on capital flow from China is termed “*Capital Deflector*” effect, reflecting a new market trend that might have just become one of the biggest capital divergence scenarios in the in the history of world real estate cross-border transactions.

Pull Factor

Although Australia was regarded more as commodity based nation and less known in the field of advanced technology and branding compared to the United States and Europe, the country’s benefits lay in its investor friendly policies and world leading standard of living. Among all other drivers, these were the major “pull” factors that attracted overseas Chinese investors. Among some of the favourable Australian government policies, the qualities that stood out in the eyes of foreign investors were the proactive immigration policy coupled with all the positive social factors and admirable living conditions. Figure 6.2 shows the pictorial representation of Australian residential property market model simulated based on the major “push” factors from offshore government policies, major “pull” factors from Australian government policies and the resultant interactions of Property, Space and Capital Market determinants:

Figure 6.2: Australian Residential Property Market Model



Source: Author

The evaluation of current Australian residential property market performance is based upon both foreign government policies and Australian government policies as depicted in Figure 6.2. Australian residential property market performance would not have been as it is today if performance evaluation was entirely based upon domestic conditions and drivers. It was undoubtedly the existence of Government policies in areas such as foreign investment, immigration and social security benefits that had provided the much needed foundation for a favourable investing environment. As the world is becoming more transparent in the era of globalisation and advanced information technologies, these favourable drivers were fast realised and grasped by global real estate investors who then acted upon them with their active engagement in the cross border real estate transactions in Australia. Chinese investors were case studied in this assessment from which it was further revealed that the country's "one-child" policy and "going-out" policy had pushed China investors towards the pursuit of cross border real estate investments. Last but not least, the global "Deflector Effect" further amplified the flow of Chinese investors' money into Australian residential property market.

6.3 Conclusion and Contribution to Body of Knowledge

World economies were subjected to one of the most severe impacts in history as a result of GFC 2008, both in terms of financial disasters and the change in economic structures of world nations.

World nations scrambled into Quantitative Easing measures (QE) subsequent to GFC 2008 giving rise to widespread low interest rates regime, low returns on equity and bonds market, cheap and fluid cross border money. Australia was not spared which saw the Reserve Bank of Australia reducing its cash rate to the lowest recorded in Australian history at 2% in 2015. The underlying monetary policies had significantly impacted the world real estate markets. In the Australia context, this thesis contributes to the knowledge of Australian real estate markets' emerging conditions by bringing into perspective the latest trends and characteristics of world cross border real estate investment subsequent to GFC 2008.

The findings from this research form an important insight into the new frontier of world cross border real estate transactions in Australia. In view of the widespread of impacts foreign influences had on the present housing market, the research outcomes of this study can result in changes in the manner in which Australian residential property markets are valued and assessed. This study shed light on the underlying characteristics of overseas investments and their unique diversification strategies into Australian residential property markets.

Through merging both the new overseas investments' patterns and the domestic conventional determinants of Australian residential property markets, proper evaluation on the residential property market is enabled. The conceptual framework and models developed from this research serve to help enhance the academic theory and understanding of the Australian residential property market, thus facilitating future research to enrich the body of knowledge in relation to foreign investments in the Australia property market. Palin (2014) reported the emergence of global property investors who looked beyond the traditional valuation methods, such as, the ratio of house price to local income which were deemed obsolete. Empirical evidence was established in this thesis that the assessment and valuation of the Australian residential property market had become increasingly complex due to the uprising influences of various offshore variables. These factors must not be overlooked and should be added to the traditional valuation method so as to enhance the relevance of related research.

This research is the first to surface a tourism trend that had previously impacted the residential property market in Europe and now in the Asia Pacific region. As Asia Pacific nations and their citizens are getting more affluent and enjoying life styles previously deemed not possible, history repeats itself that these affluent Asia Pacific citizens are now embracing the lifestyles previously found exclusive in the rich western nations. One of these lifestyle trends is Residential Tourism. In this study, although it was validated that the manner and characteristics of Residential Tourism had remained mostly unchanged, it was now being repeated in the opposite side of the globe i.e. the

Asia Pacific region. Rich Asia Pacific investors are investing substantially into Australia residential property market, as foreigners and tourists, due to the renowned favourable living conditions and standards of education in Australia. Not only has this finding addressed one of the major market concerns as to who these overseas investors were, it also provided a renewed platform on which to base future valuation and research conduct.

The understanding of these drivers' role play in offshore investment in Australian residential properties is essential in drawing propositions that aim to benefit the Australian economy on a macro perspective, and the Australian residential housing market on a micro perspective. This is particularly important, if Australia intended to continue to enjoy the capital flow from foreign direct investments into the country. Knowledge about residential property market dynamics needs to be constantly improved and evolved in line with the emerging trend and amidst the increasingly significant roles the overseas investors have in the structure of specific residential property markets in major Australian cities. The findings of this study are set to provide empirical validations on factors that are useful and relevant for decision making by both Australian policy makers and industry players.

This thesis is the first to take the research "cross-border" in which interviews were conducted with the high ranking real estate professionals in both Australia and China. Evidently the Chinese are one of the most significant overseas investors in Australia's residential property market. The research approach had made a breakthrough in identifying the latest investment decision making processes undertaken by both the Chinese HNWI's and the expanding Middle Class. Important insights on major investment determinants such as China's "1 + 1 = 2" phenomenon, China's "going-out" policy and "Capital Deflator" effect were uncovered. These findings established empirical validations on offshore investments in the Australian residential property market and provided much in-depth understanding of the matter to form the basis for effective decision making by policy makers and the wider business communities in Australia. It is no doubt that a better understanding of the relationship between the various economies and financial policies, both locally and abroad, and the residential housing market will help to identify and address issues that were attributable as factors giving rise to the overheating of the residential property market and at the same time, striving to maintain a steady flow of foreign investment into the country. The expected benefits among which, will include a basis for decision making and a platform for further research that could include, but not limited to further segmentation studies of the residential property market.

6.4 Recommendations

6.4.1 The Brand Presence – Most Liveable City

Empirical evidence revealed that traditional investment portfolios which comprised a mixture of equity and bonds were either too volatile or provided too low a return. As a result, global real estate markets had gained significant attention from the world investment community due to their relatively stable risk profile and higher returns. Real estate had emerged as an investment option among both the large institutions and the private investors seeking diversification and progressively, it had become part of the asset class in the investment portfolio of world cross border investments.

In the midst of improved internationalisation and deregulation, Australia's residential property sector was identified as the major contender for global investors seeking improvement to their investment portfolio due to its relatively stable economic and political condition. In this study, some unique investing characteristics of global private investors in Australia were discovered. These global private investors looked beyond the traditional purpose of portfolio diversification. Instead they placed great emphasis on factors that were with "emotional" value attached such as clean air, nice parks and environment security of Australia etc. They sought residential properties for leisure, for their offspring and with the ultimate objective of attaining permanent residency. Australia had emerged as an internationally relevant and a highly ranked investment destination in terms of socio-economic stability and liveability. This research has aligned a strong Australian brand, akin to Apple or Mercedes, with an investment premium investors have been prepared to pay. This mapped closely to the emotional value attached to the environmental factors noted above. It is believed that as long as Australia continues its favourable brand image internationally, foreign investors from all over the world, not just China will continue to invest in Australian residential property.

Recommendation One:

This unique favourable characteristic of Australian residential property market is unprecedented and rare. Australia should have every reason to celebrate this huge achievement and competitive advantage that the country has over other countries in the world. If foreign investment is perceived important for the Australian economy, efforts on improving various social infrastructures to sustain Australia's most liveable brand must be maintained.

Whilst global investors are excited as they find Australian residential property not only a viable investment option but also a premium brand related to liveability, local Australians are fearful of being priced out of their own housing market particularly in Sydney and Melbourne. The Australian Government will have to address the fine line between attracting the much needed foreign capital

and the social wellbeing related to housing affordability for its citizens. If the government perceived foreign investment as crucial to sustain the economy, the public must be made to understand that Australia has increasingly become internationally relevant and its residential properties were regarded more as a strong “commodity type” and not just mere shelters or homes. This proposition requires a paradigm shift.

It is crucial that Australia start embarking on a mission to extend and improve its infrastructure of roads and public transport with an objective to embrace its land resources into the equation. Australia is a large country with a population of approximately 24 million, land is abundant and this major resource, if explored systematically, could be the home for many Australians who were being priced out due to housing affordability. Examples of successful affordable housing schemes are plentiful in the world. Besides physical infrastructure and affordable housing, perhaps on a much longer visionary scale, Australia should promote a knowledge based society with much realisation of the role of advanced technologies as a long term plan. Many Americans are not subjected to housing issue in the present time. They can live and work from a “remote office” in Seattle while meetings are being conducted in Los Angeles; simply with the help of advanced technologies.

China’s economic growth is slowing down as predicted by many economists. Concerns that of China’s economic growth slowdown will negatively impact Australian residential property market are valid. In order to avoid the risk of a severe negative impact on the residential property market, the current regulation that requires foreign owners to only sell to domestic buyers must remain and be effectively and strictly enforced. Reference is made to the 1980s when the Japanese were investing in Australia’s property market causing major concerns among the locals. Although the Japanese had since exited from the market, Australia is again faced with another major upward trend. The only difference this time round is that the major players are foreign investors from China. ***It is believed that as long as Australia continues its favourable brand image internationally, foreign investors from all over the world, not only China, will continue to invest in the Australian residential property market.***

6.4.2 Residential Tourism and Australian Tourism Industry

The tourism industry is a pillar of foreign income in Australia. Tourism Research Australia forecasted the number of foreign tourists to increase by 5.9 % to 7.5 million in 2015, including a 15.5 percent increment in the number of Chinese visitors (Freed, 2105). Spending from the domestic and international tourism sectors was expected to reach AUD145.1 billion by 2024-25, up from AUD107.8 billion in the 2014-15 financial year.

Residential Tourists uniquely carry both the characteristics of being tourists and migrants at the same time and it is difficult to distinctly separate the discussion of one from the other. They have been categorized into HNWIs and Middle Class respectively in this study. Note that both categories “live” life here in similar a manner in that they spend money in Australia much like tourists do while enjoying the “most liveable” aspects of life, yet the extensive duration they remain in Australia resembles the migrants’ pattern. Above all, their visitation to Australia becomes repetitive as they become “owner occupier” in the residential property they invested in. Contrary to the market fear that these investors would make a “ghost town” out of the properties they purchased, these Residential Tourists remain as owner occupier for a substantial period of time. Some eventually become permanent residents in Australia. In simple terms, Australia has found itself acquiring long-term customers through this Residential Tourism trend.

Recommendation Two:

In order to ensure the continuation of this steady flow of foreign income, Australia’s Government needs to ensure the sustainability of various policies targeted at maintaining the quality of healthcare, culture and environment, education and infrastructure as depicted by the Economist (2015). Many of the Residential Tourists from Asia Pacific regard Australia as a western society and hold high regard to western culture. This quality should be upheld and maintained at all costs as it is this which has caught the eye of foreigners. It is recommended that some sort of induction program be implemented to bring the new migrants into embracing the social element of being a true “Australian”. The recent occurrences of a string of negative social incidents in Australia had somehow discoloured the country’s image abroad. Australia should work to rectify the undesired elements and restore its positive image of “Australian-ness” as a nation in order to stay relevant as a desired destination, be it to live or to invest in.

In order to capture the data for this new trend of Residential Tourism in Australia, it is recommended that two questionnaires be added into the existing “Incoming Passenger Card” and enforced through the Department of Immigration and Border Protection Australia. Figure 6.3 shows the existing Australian Incoming Passenger Card:

Figure 6.3: Australian Existing Incoming Passenger Card

Source: Department of Immigration and Border Protection Australia

As per figure 6.3, the existing Incoming Passenger Card does not capture adequate information on the proposed primary visitor accommodation during their stay in Australia and how often they have visited Australia. It is recommended two minor additions in the Incoming Passenger Card to be incorporated to assist in ABS data collection and segregating Residential Tourists with other form of visitors. The proposed addition is tabulated below as an outline:

Proposed Question	Proposed Answer
Where do you stay while in Australia? Address:	1. Own accommodation 2. Relative and Friend's House 3. Hotel 4. other
Have you entered into Australia past 12 months for the same purpose? Please indicate how many times have you entered into Australia past 12 months.	1. Yes 2. No 3. <input type="text"/> Number of Visits

The first question of “where do you stay while in Australia?” will provide data on tourists who are residing in their own accommodation, i.e. Residential Tourists. The second question of “Have you entered into Australia past 12 months for the same purpose? Please indicate how many times have you entered into Australia past 12 months.” will provide data on the frequency of Residential Tourists revisiting Australia.

In the effort of incentivising more Residential Tourists to report voluntarily and thus create ease in the process of Residential Tourist identification and data collection, it is proposed that a “Residential

Tourist” identity card be issued to the Residential Tourists. This simplified identity card works similarly to the “frequent flyer” program offered by Airlines, except that this identity card will have an element of simplifying the immigration process when they arrive in Australia compared to normal traveller. Simplified immigration process represents recognition of their status as a frequent visitor to Australia and served well as an emotional gimmick that they are welcomed in Australia. Custom and Border Patrol procedures should remain the same across all the visitors.

6.4.3 Education

Empirical studies have well addressed education was one of the major determinants for migration, foreign income and real estate performance in Australia. Verbik and Lasanowski (2007) revealed the increasing significance of Australian visa policies as an important in recruiting overseas skilled migrants to Australia. They exerted that international student visas and graduate visa schemes had become a central part of this recruitment effort. Hawthorne (2010) exemplified a transition termed as “two-step-migration” that international students were allowed to remain in Australia after completing an Australian degree and eventually applied for citizenship in Australia as skilled migrants. The education system was revamped between 1996 and 2000 and the infamous transition from “academy to global business” was recorded by (Marginson and Considine, 2000). As at June 2014, Australia was host to over 500,000 international students, with a significant proportion of these students contemplating remaining in Australia at the conclusion of their studies. Students were enrolled in programs ranging from a few weeks to several years had contributed to both Australian short and longer term travel statistics. It is envisaged that this emerging trend will develop into a vital element of Australia’s relationship with emerging countries within the Asia-Pacific region and in particular with the populous nations of China and India (Dwyer, 2010), in the context of both education and tourism.

Education was validated repeatedly as a major component of Australia’s service industry, having overtaken iron ore as one of the Australia largest foreign exchange income sources. Its role in the current Australian economy environment has become even more important in the midst of Government efforts moving away from relying heavily on resources development. Pascoe (2015) reported that the rise in foreign students will give rise to demand in residential property in Australia especially in the Education hotspots like Sydney and Melbourne. Recently the changes in Government regulations on migration policies had made it easier for students to remain in Australia after graduating and eventually becoming permanent residents. Garnaut (2015) from The Age reported that Australia is set to issue more than five million visas in year 2015, something not seen since World War II. He attributed the significant jump in the visas issuance to surging numbers of

international students, tourist and workers on short-term visas. According to Michael Pezzullo, Secretary of the Department of Immigration, as many as 1.9 million foreigners are likely to be in the country at any one time in 2015. By September 2015, there were 585,846 enrolments by full-fee paying international students in Australia on a student visa. This represents a 10.2% increase on YTD September 2014 and compares with the average YTD September growth rate for enrolments of 5.7% per year over the preceding ten years (AEI, 2015).

Recommendation Three:

Exploration in this study revealed an emerging trend of international students enrolling in Australia's education institutions in their earlier years of study - in primary and secondary school. Instead of the general perceptions that international students were mostly confined to tertiary degree courses, they had been residing in Australia for a much longer period of time. This emerging trend had further incentivised overseas parents investing in residential property market in Australia for their children's accommodation purposes.

Whilst this study revealed that international students' had begun their education in Australia in their earlier years, assessments and decision makings by these international students had been centred at the reputation of Australian tertiary institutions especially in the context of choices among other universities in United States and United Kingdom. Primary and secondary educations were regarded as "pathways" for these international students to be eventually landed in a reputable university as the final goal.

According to the Times Higher Education, Australian universities were ranked below universities in United States, United Kingdom, Europe and Singapore (Williams, 2015). Times Higher Education assessed the world universities' performance based on 13 major criteria including teaching, international outlook, research, citation and industry income. Australian universities' rankings were weak in the area of teaching and research, for example, being ranked 33rd in the world. University of Melbourne scored 62 in teaching and 75.5 in research and its closest competitor National University of Singapore was ranked 26th and scored 71.7 in teaching and 84.5 in research.

It is recommended that if Australian universities intend to compete in the international arena for student enrolments, more energy and resources needed to be channelled into the these two aspects, namely teaching and research. Singapore and China are investing very heavily in universities and their public spending on research is growing while Australia seems to be heading in the wrong direction with its dwindling funding for universities research. However, currently there seems to be an over emphasis on research outcomes rather than teaching outcomes in universities. It is common

knowledge that in the higher education landscape that “students are the heart”. However, in many universities teaching is “regarded as a poor cousin to academic research”. The institutional funding and prestige to be gained from a successful performance resulted in many academics feeling under great pressure to turn out grant applications and narrowly focused journal articles than to talk to students (Williams, 2015).

6.5 Areas of Further Research

This study noted a number of issues arising from the relationship between the residential property market and the inflow of foreign investments which warrant further investigation. Below are the recommended areas for further research:

i. Private Wealth, Expanding Middle Class and their impacts on world cross border real estate markets; using an Australian city as a test case.

An emerging trend was discovered in the world cross border real estate transactions subsequent to GFC 2008 (see Chapter 1). The corporate and institutional ownership which dominated the real estate market globally suffered setbacks in GFC 2008. Empirical evidence revealed that the diminishing institutional cross border investments were caused mainly by a world market credit crunch and the decrease in debt funding. Corporate investments in global real estate in year 2012 stood at approximately USD600 billion, far below the pre GFC 2008 level which was more than USD900 billion. In contrast, private wealth investment in global real estate had surpassed the highest level in 2007 with approximately USD300 billion global real estate changing ownership in the hands of wealthy private funds. This relatively new trend emerged only soon after GFC 2008 and the impact of this new development is set to revolutionise the global real estate markets. In the midst of the globalisation era, this new development of global cross border real estate private investment is increasingly relevant in Australia as Australian cities are becoming more internationally relevant and well known. Future studies on Australian gateway cities and residential property markets at the backdrop of global private wealth will shed crucial and meaningful insights on Australian real estate market performance, as part of important components of the Australian economy.

ii. Asia Pacific World High Net Worth Individuals, Expanding Middle Class and the Apartment Market in Australian major cities

The residential property market was identified in Chapter 1 Introduction as the largest asset class invested in by High Net Worth Individuals (HNWIs) and Expanding Middle Class compared to cross border commercial property investments worldwide. Overtaking the rest of the world, Asia Pacific investment funds emerged as the largest cross border real estate investors, surpassing what had

been dominated by the Western advanced countries subsequent to GFC 2008. Chapter 2 literature reviews noted the discovery that among all the cross border transactions, private capital from the Asia Pacific played a major role and this capital seemed to be taking higher risks compared to institutional investors including with debt financing. Private capital adopted a different investment behaviour favouring residential properties due to reasons beyond normal investment theory. While the assessment on returns and diversification were still the guiding pillars in their decision making process; they imputed elements of emotional values into their acquisition strategy citing the presence of other considerations such as wealth preservation, attaining permanent residency and securing good living conditions for their children. Much of the private capital from Asia Pacific was found invested in apartment markets of the world major gateway cities such as London, New York, Paris, Sydney and Melbourne. At the same time, there had been numerous market commentaries on the oversupply of apartments in Sydney and Melbourne. With the captivating new investment trends emerging subsequent to GFC 2008 and the current lack of studies conducted on apartment demands in Australian major gateway cities, this oversupply scenario warrants further study before appropriate actions can be taken to effectively address the situation. The emergence of new wealthy investors from Asia Pacific who had their focus on residential property markets with a set of investment behaviours differs from the conventional practice had taken the Australian real estate market into a new territory and the need to further research has since intensified.

iii. Australian most liveable cities, branding and the residential property market

Quantitative analysis in this study had created an investment model which revealed RT as a new investment component in Australian residential property markets (see Chapters four and five). The unique investment characteristics of RT who had their priorities set to include intangible values such as social security and living conditions had added complexity in the property market modelling and valuation exercise. Participants from interviews conducted both onshore and offshore had in numerous occasions stressed that the Australian cities carry brand presence in their image in terms of their liveability and education standards. Due to the brand images of Australia imprinted in the eyes of the world investment communities, overseas private investors seem undeterred by the high price points of residential properties in Australia. Demand continues to pour in from overseas investors despite the escalating prices. The extent to which this brand presence of Australia's liveability influences investors' decision in paying premium prices for its residential properties should be further investigated.

iv. The New source of Foreign Money in Australia – Real Estate Markets

Australia was perceived as a “commodity” based nation in terms of its exports and source of foreign income during and after GFC 2008, riding on the significant economic growth in Asia Pacific countries, particularly China. Australia’s persistent trade deficits were mainly attributable to the slowdown in China’s economic growth and reduction in China domestic construction activities. This setback had raised concern among economists asserting that Australia does not measure up to its place as an advanced country due to its lacking in export diversification and too heavy a reliance on commodities as a single source of exports. The deteriorating economic conditions in Australia especially in its unhealthy balance of payments had given rise to many projecting the need for Australia to rely on its real estate industry to cushion the negative impacts. In Chapter 5 Qualitative Analysis, the concern regarding Australia’s macro-economic conditions was raised and the possibility of real estate market’s contribution to the potential recovery of the Australian economy was explored. Alongside this new development, there were concerns among the Australian locals that they were gradually being priced out due to foreign investments in the Australian residential property market and this sentiment had been whirling in the local media. What paradigm shift is needed to realign the economic measures acutely needed in Australia to address both the country’s economic needs and meeting the people’s expectations? Reference is made to the hugely successful public housing scheme in the United States that allows private sectors to fill the gap of providing affordable housing in the form of “Multi-family” properties. Can Australia evolve itself to accommodate the global changes as residential properties emerge as an important investment portfolio for the world investment communities due to diminishing returns from traditional equity and bonds markets?

This thesis revealed the latest characteristics of world cross border real estate investment subsequent to the GFC 2008. The findings of this research discovered imminent trends and profound changes in the world investment patterns and determinants as a result of GFC 2008. Led by the United States, countries all over the world are adopting Quantitative Easing (QE) economic measures, although each with different magnitudes. Among others, these series of actions had given rise to a widespread low interest rate regime, low returns on equities and bonds, cheap and fluid cross border money. Monetary policies outpaced the traditional fiscal policies and the world real estate transactions amidst this development have since evolved too. In conclusion, the new findings that this research surfaced could form an initial insight into the new frontier of foreign investments in world cross border real estate transactions. They can potentially alter the framework in which the Australian residential property market is assessed, drawing from the validated results of widespread

foreign influences in the Australian residential property market. This study uncovered the imminent overseas investments significance and their unique asset allocation strategies into Australian residential property market. The associated impacts on the housing mortgage market of AUD1.4 trillion in 2015 and the issuance of RMBS equivalent to that of AUD32 billion (highest level since GFC 2008) are equally relevant. By merging both the overseas new investments' patterns and the major determinants in Australian residential property market, the looming market trends are unveiled. The conceptual framework and models developed from this research will help enhance academic theory and understanding of the behaviour of the Australian residential property market, further facilitating future research to enrich the body of knowledge in relation to foreign investments in Australia's property market.

End.

Appendices

Appendix I: Non-traditional Determinants and the Expected Correlations Outcome

Non-traditional Determinants	Data Rationales	Correlations Analysis Approaches
Long-term visitor arrivals (LTVA)	ABS3401 Overseas Arrivals and Departures data provides information and analysis of short-term visitor arrivals (STVA) and Long-term visitor arrivals (LTAV). LTVA denotes overseas visitors who state that they intend to stay in Australia for 12 months or more (but not permanently).	This non-traditional factor is expected to provide positive (+) correlation with the house prices in the study.
Short-term visitor arrivals (STVA)	Overseas visitors who intend to stay in Australia for less than 12 months.	
Short-term visitor arrivals Victoria (STVAV)	Overseas visitors who intend to stay in Australia for less than 12 months in Victoria State.	
Education	<p>Australian Education International (AEI) records Enrolment data from the Commonwealth Provider Registration and International Student Management System (PRISMS) database. PRISMS includes:</p> <ul style="list-style-type: none"> •enrolment data for all sectors (schools, Vocational Education, Higher Education and ELICOS) •enrolments by students on a student visa •data based on electronic confirmation of enrolments (eCoE), and •country of origin based on citizenship rather than permanent home residence. 	This non-traditional factor is expected to provide positive (+) correlation with house prices in the study.

Space Market Key Economic Indicators	Data Rationales	Correlations Analysis Approach
GDP Per Capita (GDP)	ABS5206 defines GDP as the total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of	This traditional economic factor is expected to provide positive (+) correlation with Melbourne house prices. However, this study does not rule out the

	production but before deducting allowances for the consumption of fixed capital. GDP per capita is the ratio of the chain volume estimate of GDP to an estimate of the resident Australian population.	possibilities of negative (-) correlation due to Australian GDP per Capita growth lagging behind all OECD countries (Wilkie, 2008) and diverged from the actual improving house prices in Australia since GFC 2008.
Total Employed Labour Force (EMPL)	ABS6202 defines Total Employed Labour Force as the civilian population aged 15 years and over engaged in employment. The definitions conform closely to the international standard definitions adopted by the International Conferences of Labour Statisticians.	This traditional economic factor is expected to provide positive (+) correlation with house prices.
Population Growth (Pop)	ABS3101 defines Population Growth as the sum of natural increase and net overseas migration. For states and territories, population growth also includes net interstate migration. After the Census, intercensal population growth also includes an allowance for intercensal difference.	This traditional economic factor is expected to provide positive (+) correlation with house prices.
Net Saving Current Prices (Save)	ABS5232 defines Net Saving as the balancing item of the income account, equal to total income receivable less total income payable, final consumption expenditure and consumption of fixed capital. Represents the excess of income over consumption. Current prices relates to savings valued at the prices of the period to which the observation relates.	This traditional economic factor is expected to provide positive (+) correlation with house prices.
Net Overseas Migration-NOM	ABS3101 defines Net Overseas Migration as the net gain or loss of population through immigration to Australia and emigration from Australia.	This traditional economic factor is expected to provide positive (+) correlation with house prices.

Capital Market Key Economic Indicator	Data Rationales	Correlations Analysis Approach
10-year Government Bond Yield -10Bond	RBA defines Government Bond Yield as the midpoint of predominant bid and offer quotations in each market. Yields for the Australian Government Indexed Bond prior to 18 September 2013 are sourced from a survey of dealers by the RBA. All other yields are sourced from Yieldbroker Pty Limited. Figures are the average of daily end-of-day yields for that month. Indexed' bond yields are those on bonds with the longest time to maturity.	Traditionally this economic factor is expected to provide negative (-) correlation with the house prices, signifying the historical reverse relationship between real estate market and bond market performance. However, this relationship is applicable only on a traditional asset allocation strategy with less emphasis on foreign investments strategy. As at June 2015, Australian Office of Financial Management (AOFM, 2015) reported that approximately 65.2% of the Australian Government Securities (Treasury Bonds, Treasury Indexed Bonds, and Treasury Notes) were in the hands of foreign investors. As foreign investors keenly pursue alternative asset classes as part of their diversified portfolio, real estate had emerged as a crucial asset class alongside with ACGBs with a similar investment trend observed. As such, this economic factor is expected to provide positive (+) correlation with house prices.
ASX 200 Index - ASX	The S&P/ASX 200 index is a market-capitalization weighted and float-adjusted stock market index of Australian stocks listed on the Australian Securities Exchange from Standard & Poor's.	This traditional economic factor is expected to provide negative (-) correlation with house prices.
Exchange Rate - Forex	RBA bulletin defines Exchange Rate as the rate shown for the USD is the WM/Reuters Australian Dollar Fix at 4.00 pm (Sydney) on the day concerned.	This traditional economic factor is expected to provide negative (-) correlation with house prices.

Mortgage Rate - MRate	RBA bulletin defines Mortgage Rate as 'Housing loan' rates - those quoted for loans to owner-occupiers; in most cases, the same rates also apply to investment housing.	This traditional economic factor is expected to provide negative (-) correlation with house prices.
90-day Bank Bills Yield – 90Bill	RBA defines AFMA's 90 day bank bill futures and options product is Australia's benchmark indicator for short term interest rates.	This traditional economic factor is expected to provide negative (-) correlation with house prices.

Property Market Key Economic Indicator	Data Rationales	Correlations Analysis Approach
New Housing Supply	ABS 8752 defines that a residential building job may result in the creation of one or more dwellings. Multiple dwelling unit jobs can be buildings (such as apartment blocks) which contain several dwelling units, or a group of single dwellings (such as a project to build multiple houses to a subdivision). All dwelling units created by a job are considered to have completed when the job is completed. Progress on individual dwelling units is not tracked.	This traditional economic factor is expected to provide negative (-) correlation with house prices.
Building Planning Approvals	ABS 8731 defines Building Approvals as building work approved for dwellings as total number. The data series is the approvals for Victoria state on all types of dwelling building in all sectors.	This traditional economic factor is expected to provide positive (+) correlation with the house prices. Building application increases as the housing market performance improves and the cycle then flows to prices being negatively affected if over building occurs.
Rent Growth	ABS 6401 captures the Consumer Price Index (CPI) which measures quarterly changes in the price of a 'basket' of goods and services which account for a high proportion of expenditure by the CPI population group (i.e. metropolitan households). Series A2331841F captures Rent Growth	This traditional economic factor is expected to provide positive (+) correlation with the house prices.

in Melbourne.		
House Price Index	ABS 6401 defines Residential Property Price Indexes for eight capital cities in Australia.	This traditional economic factor is expected to provide positive (+) correlation with the house prices data collected from REIV database. This indicator and its trend analysis shall provide the embedded validation of the accuracy of data collected from REIV as the first statistical testing of data collection exercise.
Building Activity – Value of Building Work Done (Residential Victoria State)	ABS 8752 captures the statistics of building approval details and returns collected from builders and other individuals and organisations engaged in building activity. Since the September quarter of 1990, the quarterly estimates have represented all approved public and private sector owned for residential building jobs valued at AUD10,000 or more and non-residential building jobs valued at AUD50,000 or more. This series captures data for residential buildings in Victoria State.	This traditional economic factor is expected to provide negative (-) correlation with house prices.

China Space Market Key Economic Indicators	Data Rationales	Correlations Analysis Approach
Per Capita Disposable Income (CIncome)	The total actual income of the sample urban households, including regular or fixed income and occasional income .	This economic factor is expected to provide positive (+) correlation with house prices.
China Real GDP Growth(CGDP)	Gross Domestic Product (GDP) refers to the final products of all resident units in the country. Gross domestic product is expressed in three different forms, i.e. value, income, and products respectively. The form of products refers to the value of all final goods and services	This economic factor is expected to provide positive (+) correlation with house prices.

	for final use by all resident units plus the value of net exports of goods and services during a given period of time. GDP growth rate compares GDP of two fiscal periods.	
China CPI Inflation (CCPI)	The trend and degree of changes in prices of consumer goods and services purchased by urban and rural residents, and is a composite index derived from the urban consumer price index and the rural consumer price index.	This economic factor is expected to provide positive (+) correlation with house prices in Australia. As CPI increases in China, overseas real estate investment will become increasingly affordable.
China Outflow of FDI (CFDI)	Outward investment for reporting country refers to a foreign direct investor is an individual, an incorporated or unincorporated public or private enterprise, a government, a group of related individuals, or a group of related incorporated and/or unincorporated enterprises which has a direct investment enterprise - that is, a subsidiary, associate or branch - operating in a country other than the country or countries of residence of the foreign direct investor or investors.	This economic factor is expected to provide positive (+) correlation with house prices.
Price Index for Investment in Fixed Assets (FA)	Reflects the trend and degree of changes in prices of investment in fixed assets. The investment in fixed assets consists of three components, namely the investment in construction and installation, the investment in purchases of equipment and instrument, and the investment in other items.	This economic factor is expected to provide negative (-) correlation with house prices.

China Capital Market Key Economic Indicators	Data Rationales	Correlations Analysis Approach
Shanghai Stock	Stock market index of all stocks	This economic factor is

Market Indies (SSE)	(A shares and B shares) that are traded at the Shanghai Stock Exchange.	expected to provide negative (-) correlation with the house prices.
China Exchange Rate (CForex)	OECD defines Exchange Rate as the price of one currency over the United States Dollar.	This economic factor is expected to provide positive (+) correlation with the house prices. A stronger Yuan makes overseas investment more affordable. However, recent developments had shown otherwise. As Yuan depreciated in value, investors from China seem to prefer overseas currency as part of the wealth diversification strategy.
China Short Term Interest Rate (CIRate)	OECD defines Short-term interest rates as rates at which short-term borrowings are effected between financial institutions or the rate at which short-term government paper is issued or traded in the market.	This economic factor is expected to provide negative (-) correlation with house prices.
China Balance Of Payment (CBOP)	OECD defines Balance of Payments as investment incomes covers income derived from a resident entity's ownership of foreign assets.	This economic factor is expected to provide positive (+) correlation with house prices.

China Property Market Key Economic Indicators	Data Rationales	Correlations Analysis Approach
Price Indices of Construction and Installation (CBuiltInx)	Refers to the trend and degree of changes in prices of the construction of buildings and structures and the installation of equipment.	This economic factor is expected to provide positive (+) correlation with the house prices in the Melbourne.
China Residential Buildings Floor Space Completed (CFlr)	The floor space of the residential buildings completed among the total space of buildings under construction.	This economic factor is expected to provide negative (-) correlation with house prices.
Floor Space Newly Started (CNewFlr)	The total floor space for newly started construction for all buildings and refers to projects	This economic factor is expected to provide negative (-) correlation with house

	having construction and installation activities started in the reference period.	prices.
China Construction Output Value (CCValue)	Total of construction products, expressed in money terms, completed by construction and installation enterprises during a given period of time.	This economic factor is expected to provide negative (-) correlation with house prices.

Appendix II: Proposed Semi-Structured Interview Questions

(In Australia)

Information on your Organisation

1. What property markets does your organisation operate within (both geographically and scale)?
2. How does your organization service foreign investors, specifically foreign investors from China, in the Australian residential property market?

Information on Overseas Investors

1. What are the types and characteristics of these overseas investors in Melbourne residential property market?
2. How have these offshore investments impacted on the residential property market in Australia?
3. Why do they invest in Melbourne? Specifically refer area listed below:
 - Melbourne Metropolitan, Doncaster, Balwyn and Box Hill

Property Market Conditions

1. Has property market characteristics significantly changed in Melbourne (or Doncaster, Balwyn and Box Hill), if so why?
2. Assessing past and present, who are buying residential properties in Melbourne (or Doncaster, Balwyn and Box Hill)? What is your perception on the composition of transactions derived separately from local, migrants and overseas investors?
3. Has the Melbourne property market conditions been affected by these offshore investment?
 - Sales : Competition, features, types of purchases
 - Leasing : Competition, features, types of tenants

Information on Education and Tourism

1. What is the significance of the Australian education system in overseas investors' decision? Specifically refers to the Secondary Schools and Tertiary Education in Melbourne.
2. Is there any relationship between Melbourne as a world tourist destination and the investors' decision to purchase residential properties? If yes, why?
3. As part of the decision making process, do China investors frequently visit to the locations of interest before they purchase the residential properties?
4. What is the role of the living standard and conditions in Melbourne, specifically refer to Doncaster, Balwyn and Box Hill on overseas investors' choice and decision making when it comes to buying residential properties?

Appendix III: Proposed Semi-Structured Interview Questions

(In China)

Information on your Organisation

1. Which overseas property markets does your organisation operate within (both geographically and scale)?
2. How does your organization service Chinese investors who wish to invest in overseas property market?

Information on China Investor Overseas Investments

1. What are the different characteristics and types of Chinese investors who invested in overseas residential property market?
2. Focusing on private investors from China, what do you perceive are the main drivers for their investment in overseas residential property markets?
 - Are these drivers mainly specific factors or are they economic and social factors that encouraged overseas investments?
 - What are any other considerations, for example capital preservation, taxation? Please explain.

Property Market Conditions

1. Assessing past and present, which type of properties do China private investors prefer and why?
2. Compared to other overseas investment destinations, how has Australia performed in:
 - Sales : Competition, features, types of purchases?
3. What are the major local factors in Australia (Melbourne) that attract Chinese property investors to buy residential properties?

Information on Education and Tourism

1. Will the investors regularly visit locations interested prior to residential property purchase? If yes, why and with who?
2. Do you perceive the education system play a role in these investors' decision making? How significant is Australian education system influences these overseas investors' decision on residential property market?
3. What is the role of the living standards and conditions (tourism) of Australia on Chinese investors' choice and decision makings when it comes down to buying overseas residential properties?

Appendix IV: Interviewed Property Professionals

Role in Organization	Type of Organisation	Location/Coverage	Code to be used for analysis
Director Retail Investment	Real estate consultant - Global multi-disciplinary property organisation, property agent serving all types of property markets	Melbourne, Victoria	Australia-Global-Real-Estate-Agent
Owner	Local Residential Property Agent	Melbourne, Victoria	Australia-Real-Estate-Agent
Associate Director	Real estate consultant – Global multi-disciplinary property organization, property agent serving all types of property markets	Shanghai, China	China-Global-Real-Estate-Agent
Owner	China Property Agent serving overseas property investments and international property conference organiser	Shanghai, China	China-Real-Estate-Agent
National Head of Research	Real estate researcher – Global multi-disciplinary property organisation serving all types of property markets	Melbourne, Victoria, Australia	Australia-Global-Researcher
President	Residential real estate professional association	Melbourne, Victoria, Australia	Australia-Local-Property-Researcher
Director, Head of China Strategy Research	Real estate researcher – Global multi-disciplinary property organisation serving all types of property markets	Shanghai, China	China-Global-Property-Researcher1
Head of Research	Real estate researcher – Global multi-disciplinary property organization serving all types of property markets	Shanghai, China	China-Global-Property-Researcher2
President	Shanghai local property surveyor and agent	Shanghai, China	China-Local-Property-Researcher
Director, Real Estate Services Advisory	Real estate consultant – Global organisation providing financial advisory services	Melbourne, Victoria Australia	Australia-Global-Property-Consultant
Development Manager	Real estate consultant – providing advisory services to overseas investors on mortgages and education	Melbourne Australia	Australia-Local-Property-Consultant
General Manager	International Merchant Banker – providing cross border financing and transactional services	Shanghai, Beijing China	China-Global-Investment-Consultant
Vice President	Fund Manager and Consultant – providing advisory services to companies and clients on investment	Shanghai, Beijing China	China-Local-Property-Consultant
Director - Development	Property Developer	International, Australia	Global-Property-Developer
Owner	Property Developer	Australia	Local-Property-Developer

Appendix IV: Publications in Online News Portals

Citations for the online news portal include (extracted from News RMIT):

Wealthy Indians poised to buy up trophy homes

Sunday Age, 13 Mar 2016

Peng Wong

+ 1 website

China travel the way to Australia to buy a house off to the main Mexican housing market Daikin

"The Australian Times," O Odd News, 06 Mar 2016

Peng Wong, RMIT Research

<http://www.myactimes.com/actimes/plus/view.php?aid=1043469>

China "property tourists" into the Melbourne property market force: Self emphasis on investment

Property Network, 08 Mar 2016

Peng Wong, RMIT Research

<http://jn.loupan.com/html/news/201603/2206301.html>

Also:

<http://www.dian-ai.com/news-view-id-537290.html>

<http://edu.sina.com.cn/a/2016-03-08/doc-ifxqafha0475948.shtml>

<http://hk.crntt.com/crn->

webapp/doc/docDetailCreate.jsp?coluid=49&kindid=975&docid=104150642&mdate=0308103427

<http://lianyungang.house.qq.com/a/20160308/026352.htm>

<http://news.focus.cn/aomen/2016-03-08/10739589.html>

<http://huaren.haiwainet.cn/n/2016/0308/c232657-29710835.html>

<http://dl.house.sina.com.cn/news/2016-03-08/07546112757041535966012.shtml>

+ 6 websites

China travel to Australia to buy a house way off into the Melbourne housing market Daikin master

Overseas property outside the home network, 07 Mar 2016

Peng Wong, RMIT Research

<http://www.juwai.com/news/167159.htm>

Also:

<http://www.huaxunsw.com/house/dichan/14573463856334.html>

<http://www.erhainews.com/n1289552.html>

<http://commerce.dbw.cn/system/2016/03/07/001071157.shtml>

<http://gz.workercn.cn/23302/201603/07/160307165139953.shtml>

<http://www.wtoutiao.com/p/1a4vTfC.html>

<http://news.cnyes.com/Content/20160307/20160307142011548587210.shtml>

http://www.hkcd.com/content/2016-03/07/content_989153.html

<http://www.hb.chinanews.com/news/2016/0307/241635.html>

<http://toutiao.com/i6259139437838483969/>

http://big5.china.com.cn/gate/big5/news.china.com.cn/live/2016-03/07/content_35455166.htm

<http://sina.com.hk/news/article/20160307/1/11/2/%E4%B8%AD%E5%9C%8B%E6%88%BF%E7%94%A2%E9%81%8A%E5%AE%A2%E6%88%90%E5%A2%A8%E7%88%BE%E6%9C%AC%E6%A8%93%E5%B8%82%E7%94%9F%E5%8A%9B%E8%BB%8D-%E8%87%AA%E4%BD%8F%E9%87%8D%E6%96%BC%E6%8A%95%E8%B3%87-5507626.html>

<http://www.dianxinnews.com/world/2016/03/07/515678019.html?comment=1>

<http://dailynews.sina.com/gb/news/usa/uslocal/chinanews/20160306/18297215625.html>

<http://www.huaglad.com/aunews/20160307/239683.html>

<http://www.huaglad.com/auhouse/invest/20160307/239656.html>

<http://www.myactimes.com/actimes/plus/view.php?aid=1043668>

+ 20 other websites

China travel the way to Australia to buy a house off to the main Mexican housing market Daikin

"The Australian Times," O Odd News, 06 Mar 2016

Peng Wong, RMIT Research

<http://www.myactimes.com/actimes/plus/view.php?aid=1043469>

From China, with love: the residential tourists falling for Melbourne property

Domain, 06 Mar 2016

Peng Wong, RMIT Research

<http://www.domain.com.au/news/from-china-with-love-the-residential-tourists-falling-for-melbourne-property-20160305-gnbe0t/>

China "property tourists" and coke Melbourne

Saia Mall, 09 Mar 2016

Peng Wong, RMIT Research

<http://www.spyb.cn/jiaju/fangchan/201603/s973728.html>

Also:

<http://km.house.qq.com/a/20160309/017770.htm>

<http://culture.dwnnews.com/news/2016-03-08/59723663.html> (08 Mar)

While tourism side to Australia to buy a house? The rise in new wave of Chinese

Micro headlines, 15 Mar 2016

Peng Wong, RMIT Research

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