



Recent trends on housing affordability research: where are we up to?

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Abstract

This paper provides an updated account of housing affordability research in top-tier urban and housing related journals. The theme and foci of affordability studies are reviewed based on a literature survey of 112 journal papers over the period 1990 to 2013. Six perspectives are encompassed, namely definition and measurement of affordability, housing poverty, affordable housing, impact of planning and zoning; econometric analysis of housing affordability; and housing policy. In particular, the study reviews the methodological development of, and barrier to, housing affordability measurement. The nature and extent of housing affordability are critically discussed, and weakness of conventional measurement commented. Finally, future research agenda is proposed.

Introduction

Housing matters. It matters more to people's lifestyle than other necessities, such as food and clothing. Assessing housing needs typically considers three dimensions: amenity, affordability and overcrowding (Bogdon and Can, 1997). Unlike amenity and overcrowding problems which are more prevalent in less developed economies where there is little land for accommodation, the problem of housing affordability is associated with multi-facet economic, social, political and demographic considerations. Linneman and Megbolugbe (1992) outlined factors in relation to housing affordability issues, including housing prices, household incomes, mortgage rates, instruments and underwritings, real property taxes and insurance, consumer spending and debt, local public finance, rent controls, and housing subsidies. Skaburskis (2004) summarized eight factors that are responsible for housing affordability problems, including "geography, demography, migration/immigration/ethnicity, income recipients, income source, employment and education". Wang et al. (2010) concluded that family housing wealth and mortgage debt are key to the debates of housing affordability/inequality/security/stability issues in western societies, while housing price escalation is the major research focus for affordability studies in developing countries.

A vast literature has discussed the nature, extent and measurement of housing affordability in different countries. By nature, housing affordability refers to "an expression of the subjective social and material experiences of people, constituted as households, in relation to their individual housing situations" (Stone, 2006a). Housing affordability issues encompass homeownership affordability and rental housing affordability, thus being concerned with not only middle-income but also low-income households (Linneman and Megbolugbe, 1992). Methodologically, both ratio income approach and residual income approach are widely adopted, although in recent years the latter one receives increasing attention. Yet both methods have their own weaknesses. Therefore, a growing number of studies have extended the measurement of affordability by combining different methods, and the scope has gone beyond the border of poverty measurement. It is thus essential to raise the question regarding housing affordability research: Till present, where are we up to?

This paper provides a critical review of housing affordability research over the last two decades. It starts with an overview of the background for housing affordability studies, the methodology adopted, the coverage and process of research. Selected papers are then commented from various dimensions. Finally in conclusions the findings are summarized and future directions recommended.

Overview of research

The phrase “housing affordability” is used in the search engine of Scopus for title, abstract and keyword with a time span of 1990-2013, generating 463 relevant results. After rejecting conference proceedings and articles published in non-SCI/SSCI journals, 149 papers were retrieved. The abstracts of all papers were then read to exclude irrelevant ones, and finalizing 112 studies for literature review (see Table 1).

As shown in Table 1, *Housing Studies* contributes a leading 30 papers (26.8 per cent) to the affordability literature, and accumulates highest total citations (786 times) till December 2013. *Urban Studies* (10.7 per cent) and *Journal of Housing and the Built Environment* (9.8 per cent) come next. *Housing Policy Debate* ranks second in total citations (365 times), followed by *Journal of Housing Economics* and *Urban Studies* (both 227 times). The top three journal articles which have received most citations are from *Urban Studies* (Hancock, 1993), *Housing Studies* (Hulchanski, 1995), and *Housing Policy Debate* (Stone, 2006).

Table 1 Overview of selected journals

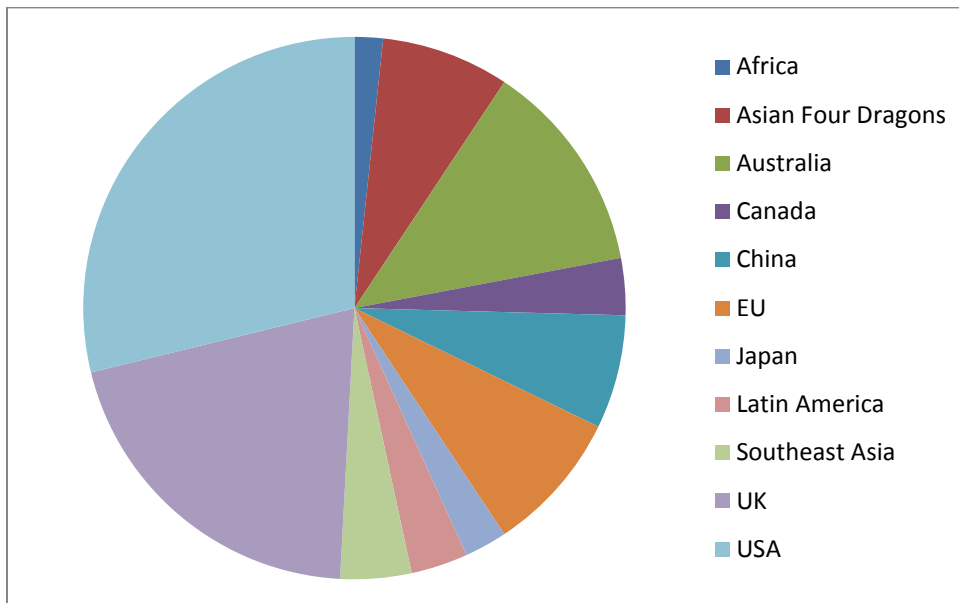
Journal	No. of papers	Total citation	Citation per paper
Cities	1	11	11.0
Economic Record	1	3	3.0
Environment and Planning A	2	17	8.5
Environment and Planning C	1	6	6.0
Habitat International	6	123	20.5
Housing Policy Debate	8	365	45.6
Housing Studies	30	786	26.2
Housing, theory and society	2	41	20.5
International Journal of Urban and Regional Research	1	5	5.0
Journal of Housing and the Built Environment	11	55	5.0
Journal of Housing Economics	6	227	37.8
Journal of Planning Literature	2	30	15.0
Journal of Real Estate Finance and Economics	1	59	59.0
Journal of Rural Studies	2	9	4.5
Journal of the American Planning Association	4	118	29.5
Journal of Urban Affairs	2	48	24.0
Journal of Urban Planning and Development ASCE	2	62	31.0
Oxford Review of Economic Policy	1	19	19.0
Real Estate Economics	2	108	54.0
Regional Science and Urban Economics	1	66	66.0
Social Science Research	1	10	10.0
Town Planning Review	2	10	5.0
Urban Affairs Review	2	6	3.0

Urban Geography	1	8	8.0
Urban Policy and Research	3	19	6.33
Urban Studies	12	227	39.5
Sub-Total	112	2882	25.7

Note: Citation is accumulated till December 2013, based on Google Scholar

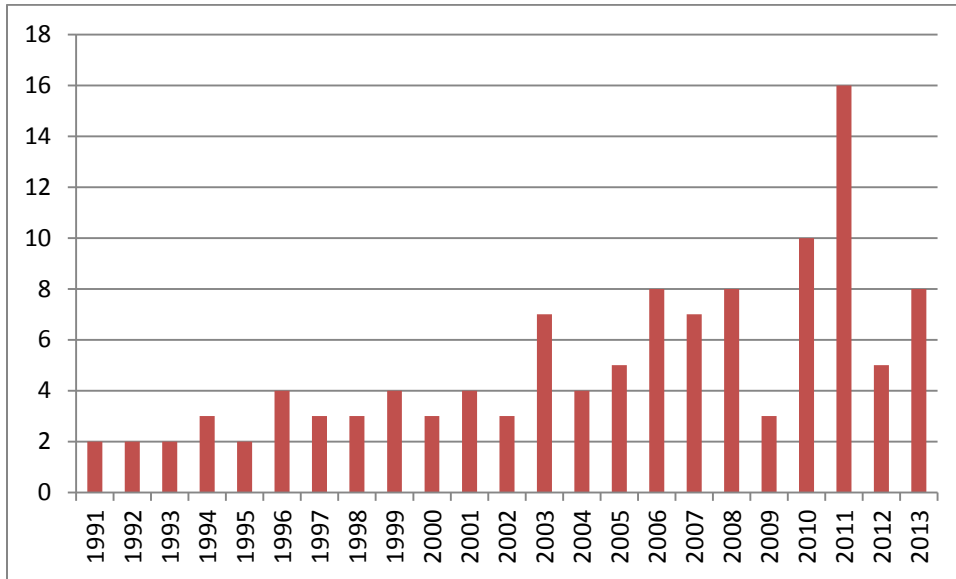
Empirical results encompass various regions, with studies in USA (28.8 per cent) and UK (20.3 per cent) comprising around half of the publications (see Figure 1). Subsequent to the two countries, Australia contributes to 12.7 per cent of total publications, followed by European Union countries (8.5 per cent), Asian Four Dragons (7.6 per cent), and Mainland China (6.8 per cent). Africa receives least academic interests (1.7 per cent). Over the immediate past three years, UK (8 papers), Australia (5 papers) and USA (4 papers) remain the top research focus.

Figure 1 Research by country/region



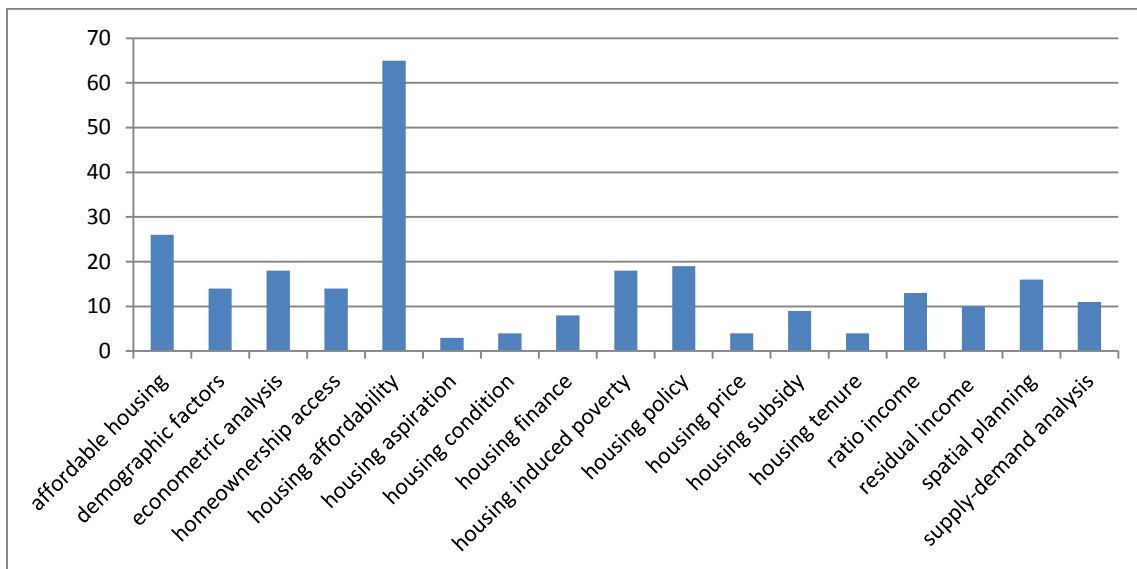
Concerning trend of research attention over time, the peak of publications is observed in year 2011 and followed by year 2010 (see Figure 2). A likely reason is that scholars tended to rethink government’s policies which lead to causing the global financial crisis after 2009, and came to realize that the fragility of housing mortgage markets was a major reason (Landis and McClure, 2010; Yates and Berry, 2011). In the immediate past two years, there is a decline in the number of publications in housing affordability issues in SCI/SSCI journals. Still, in other journals such as *Open House International* and *International Journal of Housing Markets and Analysis* there are special issues on housing affordability studies.

Figure 2 Number of papers published yearly in selected journals (1991-2013)



Witnessing an increasing trend in housing affordability studies, research topics are wide in scope: Apart from housing affordability (65 times) other research keywords include affordable housing (26 times), housing policy (19 times), econometric analysis (18 times), housing induced poverty (17 times), and spatial planning (16 times).

Figure 3 Frequency of keywords in housing affordability research



Based on the overview, key references are divided into six perspectives:

1. definition and measurement of affordability (e.g., Hancock, 1993; Hulchanski, 1995; Chaplin and Freeman, 1999; Stone, 2006a; 2006b; Gan and Hill, 2009)
2. housing poverty (e.g., Thalmann, 1999; 2003; Kutty, 2005; McClure, 2008)
3. affordable housing (e.g., Chiu, 1996; Hartman, 1998; Bramley and Karley, 2005)
4. planning and zoning impact (e.g., Bogdon and Can, 1997; Glaeser and Gyourko, 2002; Bunting et al., 2004; Beer et al., 2007)
5. econometric analysis of housing affordability (e.g., Kim, 1993; Green, 1996; Fisher et al., 2009)
6. housing policy (e.g., Whitehead, 1991; Bramley, 1994; Landis and McClure, 2010)

Definition and measurement of affordability

Definition of affordability

Despite increasing concerns about affordability, no consensus has been reached on how the concept is defined and measured. Hulchanski (1995) used the “one week’s pay for one month’s rent” as the rule of thumb for household’s expenditure-to-income ratio. In the USA, a ratio standard for indicating housing affordability of 25 to 30 percent of income has been adopted since 1980s and its use had lasted for a long time (Stone, 2006a). Notwithstanding the difference in the definitions, they deal with the user cost of housing for individual households with some lowest standard, thus linking affordability to living standards and housing poverty. Previous literatures have documented three methods in measuring housing affordability, namely normative, behavioral and subjective (See Yip, 1995 for a more thorough discussion). A normative approach defines a certain threshold value for the limit or norm of housing affordability. A behavioral approach evaluates housing affordability by investigating housing decisions of different household characteristics. A subjective approach rests on large sample surveys, summarizing the subjective evaluations of respondents’ feelings about their affordability situations. The normative approach has received much more research attention so far.

Ratio income approach

A typical normative approach, known as ratio income approach, assigns a threshold value of housing cost to income ratio to assess a household’s capability for housing consumption. However, conventional rent-to-income ratio (RIR) has often been criticized for difficulties in measuring the ability to pay and setting a normative standard for comparison (Thalmann, 2003), and non-differential criteria for households at all income levels (Chaplin and Freeman, 1999). The measurement does not control for the quality changes of housing stock over time and the impacts of housing cost appreciation (Linneman and Megbolugbe, 1992). Hancock (1993) maintained that ratio measures have little value concerning the prescribed cordon of housing cost to income. Similarly, Ho and Chiu (2002) noticed a much higher rent-

to-income ratio in Hong Kong compared to other cities, but found insignificant affordability problem by the residual income approach. Furthermore, higher cost-to-income ratio does not necessarily indicate housing unaffordability: it may merely suggest that households prefer larger quantity or better quality of living standard (Kutty, 2005). Such divergence in housing preferences have different cultural underpinnings: In Eastern and Asian cultural norms and expectations, independent living typically coincides with marriage (Li, 2014), whereas in the Anglo-Saxon cultures the relevance is less salient. Gan and Hill (2009) distinguished between a household’s ability to borrow for house purchase and the burden imposed on the household to repay the mortgage. They further demonstrated that for lower income households the traditional medium price-to-income ratio would underestimate their housing burdens. The adoption of medium income in estimating affordability has been further criticized for deficiencies such as incapability to determine whether housing cost is unreasonable to a household’s income (Yip and Lau, 2002). In general, the ratio approach has been criticized for asserting a certain percentage of income for meeting non-housing needs, regardless of the minimum amount it requires for households under different income levels (Stone, 2006b).

Residual income approach

Advocates of another typical normative approach, or the residual income approach, claim to rectify the shortcoming of ratio income approach through comparing housing cost deducted income with poverty lines (Hancock, 1993; Thalmann, 2003). Associated with the residual income approach are the concepts of shelter poverty (Stone, 1993) and housing induced poverty (Kutty, 2005), which treat the scales of housing costs differently regarding various levels of income, house size and type. The beauty of residual income approach is its recognition of the low incomes who cannot afford a threshold proportion of their income for housing consumption, which deem to be rational under the ratio income approach. Selection of non-housing items and treatment of taxes thus underpin the conceptual soundness of the residual income standard (Stone, 2006a). Still, residual income approach has been criticized for its confusion with poverty measurement (Yip, 1995). Bramley (2012) compared the merits and effectiveness of ratio income, residual income and subjective approaches, and pointed out that subjective approach can supplement the validation of best threshold cordon for ratio income approach, with residual income approach playing a supporting role only.

Among articles reviewed in this study, more papers adopted ratio income approach than the residual income approach, probably because there is inadequate database for estimating other household costs. Other empirical studies used mixed or other methods. Table 2 summarizes the different measurement of housing affordability in the past literatures. The contrast reflects the conflict between “rule of thumb” and “economic first principle” in affordability assessment (Hancock, 1993; Chaplin and Freeman, 1999; Hui, 2001; Stone, 2006a).

Table 2 *Measurement of Housing Affordability*

Ratio Income	Citation	Residual Income	Citation	Composite Methods	Citation
Hulchanski (1995)	174	Hancock (1993)	177	Gan and Hill (2009)	44

Bogdon and Can (1997)	81	Stone (2006a)	123	Skaburskis (2004)	21
Thalmann (1999)	70	Kutty (2005)	79	Tiwari and Parikh (1998)	18
Bunting et al. (2004)	58	Thalmann (2003)	61	Nepal et al. (2010)	15
Chaplin and Freeman (1999)	51	Stone (2006b)	49	Haffner and Heylen (2011)	12
Mak et al. (2007)	37	Hui (2001)	39	Ho and Chiu (2002)	10
Chiu (1996)	31	Yang and Shen (2008)	15	Lux (2007)	8
Lau and Li (2006)	27	Williamson (2011)	3	Meen (2011)	6
Mostafa et al. (2006)	23	Brown et al. (2011)	3	Abeyasinghe and Gu (2011)	5
Chen et al. (2010)	16	Heylen and Haffner (2013)	1	Bramley (2012)	5
Haffner and Boumeester (2010)	13			Ruming et al. (2011)	3

Note: Citation is accumulated till December 2013, based on Google Scholar

Composite methods

While the debate between ratio income and residual income cannot be resolved easily, recent works tend to use composite methods (Tiwari and Parikh, 1998; Skaburskis, 2004; Nepal et al., 2010). New concepts of affordability have also arisen, with development in new methodologies. For example, Gan and Hill (2009) distinguished between purchase affordability and repayment affordability: The former refers to the ability of a household to borrow while the latter refers to the burden for a household to repay. Adopting a value-at-risk (VAR) approach, which is often used in the corporate finance literature, they operationalized this distinction through depicting the entire distribution of household income and housing price. Lux (2007) established a quasi-normative affordability indicator by estimating the total housing costs at different rent levels through econometric regression of economic factors. More lately development in defining housing affordability divides the concept into short-term and long-term: The former refers to financial access to dwelling while the latter concerns the costs of housing consumption (Haffner and Heylen, 2011). Concerning time invariance weakness of conventional methods, Abeyasinghe and Gu (2011) defined the affordability index as the ratio of lifetime income to house price, which reflects the trends and cycles of housing affordability private and public housing markets. With similar considerations for time but with different controlling factors, the long-run housing affordability has also been simulated (Meen, 2011).

Housing poverty

Deteriorating housing affordability

Escalating housing prices, a notable feature for developing economies experiencing rapid GDP growth, has often raised housing affordability concerns (Kim, 1993; Tiwari and Parikh, 1998; Lau and Li, 2006; Mostafa et al., 2006; Mak et al., 2007; Yang and Shen, 2008; Chen et al., 2010; Kim and Cho, 2010; Tsai, 2013; Ying et al., 2013). Still in developed economies with slower GDP growth there is also a deteriorating housing affordability trend among low incomes, younger households, elderly and singles.

Evidences come from public and private, ownership and rental sectors, ranging from Australia (Berry and Hall, 2005; Wood et al., 2005; Burke and Hulse, 2010; Wood and Ong, 2011; Yates and Berry, 2011), Canada (Murdie, 2003; Skaburskis, 2004); Japan (Vliet and Hirayama, 1994; Yamada, 1999), Netherland (Haffner and Boumeester, 2010; Haffner and Heylen, 2011), Switherland (Thalmann, 2003), UK (Whitehead, 1991; Hancock, 1993; Bramley, 1994; Yamada, 1999; Morrison and Monk, 2006; Mckee, 2012) and USA (Nelson, 1992; Hartman, 1998; Clark et al., 2000; Quercia et al., 2002; Turk, 2004; McClure, 2008; Williamson, 2011). Hence the more general questions to ask are: Is housing affordability problem part of the poverty issue? What factors account for housing unaffordability?

Unstable Employment

A salient feature of people who have housing affordability problems is that they have more unstable employment (Bramley, 1994; Hulchanski, 1995; Morrison and Monk, 2006; Hirayama, 2010). In times of economic crisis, such observation is even more apparent. Thus housing affordability issue has switched from a poverty concern of the poor to the middle income group too (Linneman and Megbolugbe, 1992).

Income inequality

Income inequality has often been criticized for housing unaffordability of the poor, as increases in higher income groups lift up the overall housing costs of lower income groups (Matlack and Vigdor, 2008). There is a broad economic and social context for income polarization induced affordability problems. The increasing difficulties in recruitment and retention have led to rising housing costs, while planning and physical constraints also exacerbate housing shortages (Morrison and Monk, 2006). From a new urbanism perspective, social diversity increased in the development of mixed-use neighborhood, when the low and moderate income households are subsidized or supported for housing affordability (Talen, 2010).

Living condition

Less developed economies usually have poorer living conditions. In Ghana, poor living condition is often associated with bad economy, strict rent control, unrealistic building regulation and lack of housing finance (Agyemang, 2001). However, in many developed economies living conditions remain a concern. In Japan, living condition does not catch up with economic development (Vliet and Hirayama, 1994). In southern Europe there is serious housing deprivation while in northern Europe the problems of overcrowding are particularly observed in UK, Ireland, France and Belgium (Healy, 2003). It is in the USA that the market seems to provide a wide range of housing access to solve crowding and room stress (Clark et al., 2000), although there is a shift from living quality to unaffordable living cost (Turk, 2004).

Affordable housing

Provision of affordable housing is associated with poverty reduction, thus linking the concept of housing affordability to affordable housing. Low-income household is a focus of affordable housing research, for policy domain analysis concerns housing poverty and housing assistance mainly for people who cannot afford renting a house (Addison et al., 2013). Mismatch exists between the supply and demand of housing finance for low-income households, as affordability criteria sometimes discriminate incremental financing for the urban poor (Smets, 1999).

Housing supply

Sufficient housing supply might be a solution to affordability problems (Bramley, 2007; Fingleton, 2008), but is subject to a large elasticity of housing prices to housing supply and efficient policy implementation (Bramley, 2007; Meen, 2008; Mulliner and Maliene, 2013). Another difficulty with housing supply is the lack of developable land. While worsening housing affordability indicates more land required for residential development purpose, conventional land release approach may lead to deteriorating affordability over time (Meen and Andrew, 2008). Still, in Hong Kong where land ownership and development right belong to the government, the availability of affordable housing may depend on whether the government has commitment and priority to solve housing problems (Chiu, 2007). Apart from land management, evaluating the rationale of affordable housing provision involves considerations of other physical factors, i.e. the design of standards (Afshar, 1992) and access to public facilities (Fisher et al., 2009; Yang et al., 2013).

Housing subsidy

Although many countries have abandoned using housing supply subsidies for the low-incomes, whether direct income subsidy is more effective remains questionable (Wood et al., 2005). The effect of housing subsidy for poverty de-concentration is also obscure, as there is no evidence showing that subsidizing households is more effective than subsidizing housing units for low-income households (McClure, 2008). Housing subsidizes takes various forms for low incomes. Wood et al. (2008) found that housing vouchers increase housing mobility while reduce homelessness.

A more general question with affordable housing provision is to assess the number and scale of houses available. Empirical studies are available from UK (Bramley and Karley, 2005), Latin America (Balchin and Stewart, 2001). Efficiency of housing subsidies relies on the price elasticity of housing demand and management risks. Tiwari and Parikh (1998) devised the demand function for Indian urban housing market through the hedonic price index. They found that housing demand is inelastic to household income but is elastic to house price, and the price elasticity for tenants is higher than for owners. Hall and Berry (2005) simulated the systematic risks with housing subsidies, indicating that significant

reductions in subsidy costs can be achieved by discrepancy policies: capital provision, rent assistance, or subsidized home purchase.

Impact of planning and zoning

A growing number of studies have paid attention to analyzing the spatial parameters and geographical dimensions of housing affordability stress (Knaap, 1998; Ryan and Enderle, 2012). This is probably because homeownership depends on land ownership, whereas area planning restricts land supply and adds to developers' costs (Yamada, 1999).

In the USA, Glaeser and Gyourko (2002) explored the impact of zoning on housing affordability, and demonstrated that there was not a nationwide housing affordability problem except for particular areas such as New York City and California. Fisher et al. (2009) introduced the concept of area affordability to consider the impacts of town-specific amenities on moderate income households, and found that the price/rent of a dwelling is affected by locational factors such as job accessibility, school quality and safety. In UK, higher housing costs and increasing housing shortages are associated with planning and physical constraints (Morrison and Monk, 2006). In Australia, pro-active planning strategies, i.e. planning bonuses, inclusionary zoning and betterment taxes, have largely failed due to private sector opposition (Beer et al., 2007). Attempting to meet the environmental challenges, these measures on the other hand have limited effect to provide affordable housing opportunities (Beer et al., 2007).

In less developed economies, such as Latin American countries, there is scanty research in affordable housing due to minimal affordability and limited investment in social housing (Balchin and Stewart, 2001). As a largely marginalized type of housing tenure, provision of affordable housing in this area is often intended for addressing the needs of urban poor communities (Mitlin, 2001).

Econometric Analysis of Housing affordability

While prior affordability studies mainly takes a normative approach, more recent research direction is shifting towards empirical bases (Tsai, 2013). Econometric analysis of large sample dataset is widely adopted, examining the socio-economic impacts of housing affordability. Research topics fall into various categories.

Factors Affecting Affordability

Meen (2011) introduced a long-run econometric model of regional housing market adopted by the UK government to evaluate the impacts of different levels of housing construction on affordability. The model consists of six major components: house price, household formation, housing tenure, migration, demography and labor. Among these factors, household formation represents the dynamic shift from

homeownership need to housing affordability. Although the shift in emphasize seems one of rhetoric than of reality (Whitehead, 1991), evidence showing that such transition is taking place are observed in Canada (Miron, 1996), China (Yang and Shen, 2008), and Korea (Kim and Cho, 2010).

Homeownership

Worldwide, there is a trend of rising rates of homeownership. There are mainly two contrasting housing systems for homeownership: mass homeownership rate with small public housing system (Yamada, 1999; Green, 2005; Milligan et al., 2006; Mckee, 2012; Ying et al., 2013), notably Australia, China, Japan, UK and USA; versus a large and diversified social and public housing sector (La Grange and Pretorius, 2000; Wong and Yap, 2003), typically Singapore, Hong Kong, and Netherland.

In the USA, federal housing policy aims at promoting homeownership, assisting low-income renters' access to affordable housing with good quality, and combating against housing discrimination as an integral part of the American Dream of housing (Nelson, 1992; Wolch and Li, 1997; Anthony, 2003; Landis and McClure, 2010; Weiss et al., 2010). Quercia et al. (2003) estimated the impacts of lower underwriting requirement on affordability, and found that the 3 per cent down payment permit of housing loans could increase the homeownership rates of young people by 27 per cent, blacks by 21 per cent, and central city residents by 15 per cent. In Hong Kong, there is a rich government to make homeownership scheme housing affordable to public tenants (La Grange and Pretorius, 2000), while the private sector provides homeownership to the rich.

Singapore is an exception. Unlike in other developed countries where more public housing provision is needed, Singapore has established a public housing system with wide coverage for the poor since 1960s. As its economy develops and its middle class increases, the high-end private housing demand becomes pressing despite that a price spiral in the early 1990s made private housing unaffordable to many (Wong and Yap, 2003).

Market stability

In particular in the aftermath of the sub-mortgage crisis, the widely cited work of Glaeser and Gyourko (2002) on affordability and planning issues has been extended to investigate the melt-down of US housing market. The relationship between price affordability and housing market stability has aroused substantial research interests (Beitel, 2007; Clark, 2011; Bramley, 2013). While most of the developed countries are documented to have suffered from severe setbacks, Australia was one of the few western countries which did not suffer housing market collapse in the sub-mortgage crisis period (Burke and Hulse, 2010; Yates and Berry, 2011). Its immunity is largely due to the institutional settings of housing which intend to avoid instabilities in times of crisis, but at the expense of structural housing problems for the longer term (Burke and Hulse, 2010).

Demographics and mobility

Demographics play a pivotal role in the diversity of housing affordability across regions, due to income variations in age groups and household configurations (Hughes, 1991), and demographic balkanization with “pronounced spatial segmentation of the population by race, class, ethnicity and age” (Withers, 1997). Conventional middle class families tend to be protected by conservative policies to move up the housing ladder and maintain their relative positions in the society (Hirayama, 2010). Demographic variants of housing costs depend on multiple factors, i.e. housing type and tenure, income level, age group and cohort, nationality and ethnicity (Hughes, 1996; Withers, 1997; Murdie, 2003).

Demographics impact on migration and social cohesion. Lux and Sunega (2012) found significant impact of housing tenure on labor mobility, while the impact of housing affordability on labor migration is obvious only within the highly educated people. Strassmann (2000) concluded that booms of particular industries in the US have attracted migrants into specific cities, boosted local housing prices, and intensified regional housing affordability problems. For new immigrants or refugees in gateway city of Toronto, ethnic enclaves remain a barrier to social integration (Murdie, 2003).

Not surprisingly, empirical evidence has lent support to the notion that households with children and unemployed are most prone to persistent housing affordability stress (Wood and Ong, 2011). Marital status also affects housing affordability by impacting on household’s wealth accumulation, financing leverage and tenure choice (Hendershott et al., 2009).

Housing Policy

Housing policies for enhancing affordability are normally designed for specific groups, i.e. low-incomes, elderly, and key workers (Quercia et al., 2002; Morrison, 2003; Morrison and Monk, 2006; Beitel, 2007). As for measures taken, housing policies may be either supportive or restrictive, market oriented or welfare based, restriction of rent increase and imposition of rent ceiling (Yip and Lau, 2002; Tang, 2008). There are also political struggles. For example, Hartman (1998) stated that it is everyone right to decent and affordable housing in the US, while failure to attain the goal is due to political struggles. Kim (1993) maintained that housing access problem in Korea is due to socioeconomic forces and policy failures.

Financial policy is a central issue of affordability debates in western societies (Wang et al., 2010). In the USA, housing price was deeply distorted by teaser rates (Green and Shilling, 1994). In UK, financial deregulation was a particularly important factor to account for the affordability crisis in the late 1980s and early 1990s (Bramley, 1994). In Ireland, it is noticed that failure to strategically manage new housing supply and distorted fiscal policy could result in imbalanced housing provision for households with greatest affordability problem (Norris and Shiels, 2007). Tax relief is believed as an effective way to reduce the housing burden for low income households, in particular for those living in the rental sector (Wood et al., 2006).

The impact of housing tenure on affordability provides another policy angle. In countries such as UK and Japan where homeownership rates have steadily increased (Yamada, 1999), more public housing provision is needed for the poor. Yet Kemp (2011) has emphasized that the private rental sector in UK plays an important role in accommodating the poor.

Concluding Remarks

Housing affordability issue is a topic which has received increasingly intensive attention over the last two decades. Since there is limited systematic review on this topic, this study surveys various aspects of it in recent literatures. While measurement of housing affordability, affordable housing,

However, the concept of affordability does not address the effect of housing supply, nor does it consider the heterogeneous behaviors of individuals among the same income group. Besides that affordability measurement has been dominated by the normative approach, among which the ratio income approach and the residual income approach are most popular, the feasibility of behavioral approaches is worth debating. Yip (1995) maintained that behavioral perspective can be incorporated into the normative approach to determine the threshold affordability ratios. Bramley and Karley (2005) agreed that although affordability mainly rests on normative judgment, it may have a behavioral and empirical underpinning. Wood et al. (2005) claimed that the behavioral impacts of different types of housing allowances are underexplored, as housing subsidies may deter unemployed households from searching jobs in other areas. Weiss et al. (2010) noticed low income individuals' saving behaviors are largely affected by the structured opportunities they are provided with. Given the development of behavioral economics over the last two decades and the weaknesses with normative approaches, behavioral approach may be another solution to the problems commented in this article. Case studies may provide more support for developing the subjective approach too (Talen, 2010; Ruming et al., 2011).

Concerning research focus, the housing affordability issue of young people is an angle that worth further exploration. Mckee (2012) acknowledged that young people are increasingly excluded from the housing ladder. Forrest and Yip (2012) pointed out that such trend is partly due to the changing socio-economic environment of higher housing prices, longer period of education, less job opportunities, more unstable employment, delayed marriage and departure from parental home; and partly due to young people's generational features i.e. heterogeneity in belief, increasing mobility, more optimism and consumerism. Would this background result in different patterns of homeownership, housing preference, and different measurement of affordability using behavioral and subjective approaches? Finally, although this review includes a few cross country studies (Yamada, 1999; Balchin and Stewart, 2001; Milligan et al., 2006; Gan and Hill, 2009), there is no focus between developed and developing countries, which deserves more investigation in subsequent works. For example, in developing countries housing affordability is most often assessed by ratio income approach, while in developed countries residual income approach is in more frequent use. What has caused such difference? Future research will explore the answer to these questions and issues.

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