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A diagramming-based literature review on housing market

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Abstract:

   The topic of using diagrams to conduct literature review (i.e., diagramming-based literature review) is not novel. The research angle in this paper is slightly unconventional. It presents an account on how diagramming-based literature review can be conducted as complementary to scholarly essay-form of literature review. The diagramming techniques employed here include mind mapping, systems mapping and cognitive mapping, which have a systems thinking flavor. The review topic in this case is housing market. Besides confirming the observations made by an earlier paper by the writer on diagramming-based literature review (Ho, 2016a), this paper also discusses how diagramming-based literature review is relevant to managerial intellectual learning, another research project launched by the writer (Ho, 2013; 2014a; 2014b). In this respect, the study offers some novelty as an academic work on both literature review and managerial intellectual learning.

Key words: diagramming-based literature review, housing market, managerial intellectual learning

INTRODUCTION

In dissertation projects done by tertiary education students, literature review has always been a struggle for most students, based the writer's long-time teaching experience. In Ho (2015),

the writer argues that difficulties on the students' part to conduct literature review reflect students' ineffective intellectual learning. In a more recent work on literature review, Ho (2016a) explored usage of diagramming techniques to carry out literature review on employability, which he argued to be more engaging and stimulating than solely relying on scholarly essay writing skills. This paper follows the same approach to conduct literature review, this time on the subject of housing market. Specifically, the objectives of the paper are to:

Objective 1: to improve understanding, via a hands-on exercise, on how literature review can be facilitated by diagramming techniques.
Objective 2: to render a more vivid intellectual landscape on the subject of housing market via literature review with diagramming techniques.

The study in this paper is expected to offer academic as well as pedagogical value on the subjects of housing market and literature review.

LITERATURE REVIEW ON HOUSING MARKET WITH SCHOLARLY ESSAY WRITING

To pave the way for a diagramming-based literature review, a scholarly essay-form of literature review is presented in this section. To begin with, a housing market comprises "the supply and demand for houses, usually in a particular country or region" (Pettinger, 2015). Features of a housing market include: (i) housing supply, (ii) housing demand, (iii) house prices, (iv) rented sector and (v) government intervention in the housing market (Pettinger, 2015). Primary research topics on housing market can be gauged from the coverage of the *International*

Journal of Housing Markets and Analysis (Emerald). Topics, with regard to this journal coverage, include:

- Examination of individual house price, design and cost factors;
- Examination of housing trends and influencing factors, e.g., demographics, unemployment rates, financial and economic factors, urban planning and advancement of technology;
- Government policy and influences on housing;
- Social housing considerations;
- Examination of housing markets in developed and developing countries;
- Examination of buyers and sellers in a housing market.

Beyond that, the subject of housing market is of interest to several disciplines, i.e., housing studies, economics, property management and urban studies. This is also manifested by where academic articles on house market have been published; they are: *Housing Studies* (Taylor and Francis), *Housing, Theory and Society* (Taylor and Francis), *International Journal of Housing Markets and Analysis* (Emerald), *Urban Studies* (Sage), *Urban Policy and Research* (Taylor and Francis), *International Journal of Strategic Property Management* (Taylor and Francis), *Journal of Property Research* (Taylor and Francis), *Journal of Post Keynesian Economics* (Taylor and Francis), *Journal of Housing Economics* (Academic Press), *Real Estate Economics* (American Real Estate and Urban Economics Association) and *The Economic Journal* (Wiley) and *Regional Science and Urban Economics* (North-Holland). These diverse journals take up different perspectives to study housing market. Via the literature review on these academic journals, the main ideas from the housing market literature are synthesized by the writer into seven associated themes.

Theme 1: *housing demand*

Idea 1.1: Investors are interested in residential property as it provides "a different risk-return profile from commercial real estate" (Pomogajko and Vigtländer, 2012);

Idea 1.2: There was a concern expressed by some economists about irrational exuberance taking place in some housing markets (Hargreaves, 2008);

Idea 1.3: Low interest rates stimulate tremendous surge in housing demand (Taylor, 2007);

Idea 1.4: "Gradually homeownership became deeply embedded in the UK psyche as the tenure of aspiration" (Pryce and Sprigings, 2009);

Idea 1.5: "In the UK… first time buyers increasingly rely on parents to fund the higher value deposits necessary to enter the homeownership market" (Pryce and Sprigings, 2009).

Idea 1.6: "Low-income households …..find it harder to enter the cycle at the most profitable point – i.e. to buy when prices are low – because of the correlation between credit availability and house price movements" (Pryce and Sprigings, 2009).

Idea 1.7: "Conventional wisdom holds that it is better to own a home than any other option because the home then becomes an investment that affords people a great deal of flexibility in their future financial options…" (Fowler III and Lipscomb, 2010).

Idea 1.8: ".. Housing is a particularly powerful symbol of status and prestige … which, according to the conspicuous consumption hypothesis, leads to a desire for a relatively larger house" (Leguizamon, 2010).

Theme 2: *housing supply*

Idea 2.1: In Guangzhou, China, residential areas are divided into two categories: those built before and after the 1990s. This reflects the "gradual transition from the central supply and allocation to marketization"; the intention of the government was to alleviate "the housing shortage problem, diversifying

housing provision, nurturing the private real-estate market, and improving the quality of dwellings" (Jim and Chen, 2007);
Idea 2.2: "Quantifying unsold stock in Italy is a subject that is attracting the attention of various players in the construction and real estate sector, such as public bodies involved in planning projects, promoters and developers…." (Ciaramella and Celani, 2014).

Theme 3: *housing prices and returns on investment*
Idea 3.1: Housing prices can be conceived as being determined by macroeconomic variables (the homogeneous housing market theory camp) or by the interplay between housing market segments (the heterogeneous housing market theory camp) (Borgesen, 2014);
Idea 3.2: Inflation, population, unemployment and GDP are important determinants of returns on housing (Fereidouni and Bazrafshan, 2012);
Idea 3.3: Synchronization of business cycles, especially between nearby countries, affects co-movement of housing prices among countries (Pomogajko and Vigtländer, 2012).
Idea 3.4: "…rents drive house prices and not vice versa" (Hargreaves, 2008);
Idea 3.5: The hedonic pricing method can be and has been employed to assess monetary values of housing attributed to environmental externalities (Jim and Chen, 2007);
Idea 3.6: "In a competitive market, the systematic variation in the price of a heterogeneous property is comprised of a bundle of characteristics. The realized sale price could be attributed to the willingness-to-pay for the characteristics" (Jim and Chen, 2007);
Idea 3.7: "In equilibrium the price paid by consumers for the flow of services from the housing stock, the real rental price of housing services, should equal the real user cost, which is the opportunity cost of investing in those services" (Pain and Westaway, 1996);

Idea 3.8: "There are two main measures to determine whether property prices are in bubble territory: the P/E (price/earnings) ratio and the price-to-income ratio" (Mercille, 2014);

Idea 3.9: ".. Although the income of average household in Beijing is increasing, it appears that house prices have been rising at a faster rate, causing an affordability problem…." (Liu, Reed and Wu, 2008);

Idea 3.10: "..the fundamental reason driving both the rise in the real price of housing and its increased volatility is the increasing constraint on the supply or urban space applied by the British system of land use planning and its attempts to contain urban areas" (Chesire, 2004).

Theme 4: *housing market size and dynamics*
Idea 4.1: "An examination of historical house sales data reveals that housing markets are cyclical" (Hargreaves, 2008);

Idea 4.2: "…. the focus on the economic analysis of the housing market has been at the individual urban housing market or regional level" (Jones, 2002). Now, the concept of "a housing market area" has also been worked on by academics (Jones, 2002);

Idea 4.3: "The term "bubble" …. refers to a situation in which excessive public expectations of future price increases cause prices to be temporarily elevated… The term "housing bubble" had virtually no currency until 2002…" (Case and Shiller, 2003);

Idea 4.4: "…instability in property markets is closely related to financial crises, such as the property bubble collapses in Japan and Scandinavia in the early 1990s, the USA financial crisis triggered by the Lehman Shock in 2008, and so forth." (Shimizu and Karato, 2014);

Idea 4.5: "The importance of transaction costs and conversion costs in the market for residential housing suggests that the observed housing consumption of an individual household will

generally differ from its "equilibrium" level of demand …" (Hanushek and Quigley, 1979);

Idea 4.6: Housing prices diffuse, e.g., a shock in price movement in one region, to neighbouring regions over time (Brady, 2011);

Idea 4.7: North Sea oil development influences "the owner occupied housing market of Aberdeen sub-region in the 1970s and the consequent response by private housebuilders" (Jones and Maclennan, 1986).

Theme 5: major stakeholders and their activities

Idea 5.1: Successive UK governments have been promoting property as an investment (Pryce and Sprigings, 2009);

Idea 5.2: "news organisations largely sustained the [housing] bubble until the property market collapsed" (Mercille, 2014);

Idea 5.3: "…since 1922,… successive [Irish] government, rather than addressing adequately social housing conditions, …subsidised private-sector developers and mortgage lenders, therefore gradually pushing larger sections of the population into owner-occupation…." (Mercille, 2014);

Idea 5.4: "the increased number of real estate agents [In Iran] and their activities positively significantly stimulate housing prices and rents…" (Fereidouni, 2012);

Idea 5.5: "..In a centrally planned economy, as China was until recently, housing was not a commodity,…but merely as a social obligation to be met by administrative organizations, state enterprises or municipal government" (Fu, 2000);

Idea 5.6: "…privatization [of Hungary's publicly owned rental housing] would bring savings in rent subsidies to the overstretched central budget" (Dániel, 1997);

Idea 5.7: "Most governments recognized at least three major purposes for intervention in the private housing market: allocation, stabilization, and growth and redistribution" (Ha, 2013).

Theme 6: market segmentation

Idea 6.1: "Within urban and real estate analyses, it has become clear that submarkets differentiated by housing or neighborhood type serve important purposes in urban analyses, and even more important purposes in home and property assessment" (Goodman and Thibodeau, 2003);

Idea 6.2: "Analysts have taken different approaches to identifying submarket boundaries within metropolitan areas" (Goodman and Thibodeau, 2003);

Idea 6.3: "Affordable housing is usually targeted at those whose housing needs cannot be met by the open market due to inadequate purchasing power" (Ayoade and Ahmed, 2014);

Idea 6.4: "in equilibrium the housing market will be racially segmented under a wide variety of conditions..." (Courant, 1978);

Idea 6.5: "there are two basic housing markets. The first one is the market for housing services and the other is the market of the stock of housing structures, and that is the investment market" (Ha, 2013).

Theme 7: impacts and contributions to the society

Idea 7.1: "....some home owners ...increase spending on consumer items by borrowing against increased home equity..." (Hargreaves, 2008);

Idea 7.2: If increases in house prices cannot be justified by increased labour market productivity, then house price increases "represent an intergenerational transfer payment between existing and aspiring home owners" (Hargreaves, 2008);

Idea 7.3: The general business cycle and real estate cycle were strongly correlated though not necessarily synchronised (Hargreaves, 2008);

Idea 7.4: "... the housing market lies at the heart of the European unemployment problem... By making it expensive to change location, high levels of home-ownership foster spatial

mismatch between workers' skills and the available jobs…" (Oswald, 1999);

Idea 7.5: "Housing impacts on the real economy via the construction, financial, estate agency and legal sectors and through housing-equity financed consumption, all of which are sensitive to housing market fluctuations, and all have become increasingly inter-linked across nations as a result of the globalisation of capital and labour…" (Pryce and Sprigings, 2009);

Idea 7.6: "… the long-term prospects for housing wealth remain strong for those that can access and maintain mortgage finance" (Pryce and Sprigings, 2009);

Idea 7.7: "Rising property prices directly benefitted builders and developers, banks, the government and property firms and, indirectly, the broader economy, thanks to high levels of growth" (Mercille, 2014);

Idea 7.8: "…The promotion of home-ownership in East Asian countries has had a positive impact, but has generated inequality and speculation" (Ha, 2013).

The seven emergent themes are recognized out of the literature review exercise by the writer. The illustrative housing market ideas provided above underline the huge and diverse theories and viewpoints examined in the housing market literature. They are by no means comprehensive. Other than grouping them into the aforementioned seven themes, it is also valuable to review all these ideas from different perspectives, e.g., the six perspectives adopted in the space-place-home matrix (Ho, 2016b; 2016c): (i) objective and history-sensitive, (ii) objective and history-insensitive, (iii) subjective and history-sensitive, (iv) subjective and history-insensitive, (v) critical and history-sensitive, and (vi) critical and history-insensitive perspectives. Adopting a multi-perspective stance to conduct literature review is able to foster a comprehensive, critical and creative way to conduct intellectual learning and problem-solving (Ho,

2013; 2014a; 2014b). Such an exercise is outside the scope of this study, though. All in all, a general intellectual landscape of the housing market field of study is provided via such literature review in essay form. So far, the literature review exercise is chiefly exploratory in nature; it is not focused enough to inform a research project with specific research objectives and questions. Nonetheless, it remains useful for a preliminary literature review to stimulate thinking on figuring out a research theme by a researcher on housing market study, depending also on the researcher's specific research interest and concerns. The intellectual landscape on housing market is further visualized via diagramming techniques. Such a diagramming-based exercise with three mapping techniques is presented in the next section.

LITERATURE REVIEW ON HOUSING MARKET WITH THREE DIAGRAMMING TECHNIQUES

Using diagramming techniques for literature review is not a new idea. It has been discussed in research methods textbooks, such as Saunders *et al.* (2012). Utilizing the mind mapping, cognitive mapping and system mapping to conduct literature review on employability has previously been reported in Ho (2016a) on the employability topic. Here, the same three diagramming tools are again employed to render more vividly the intellectual landscape on housing market, based on the essay form of literature review presented in the previous section. The first diagram to consider is the mind map (Buzan and Buzan, 1995), followed by the system map (Open University, 2016); finally, the cognitive map (Eden *et al.*, 1983) is presented. Figure 1 is thus the mind map, shown as follows:

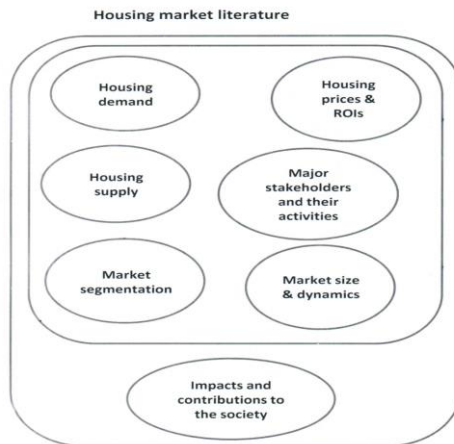Figure 1: A mind map on the housing market literature
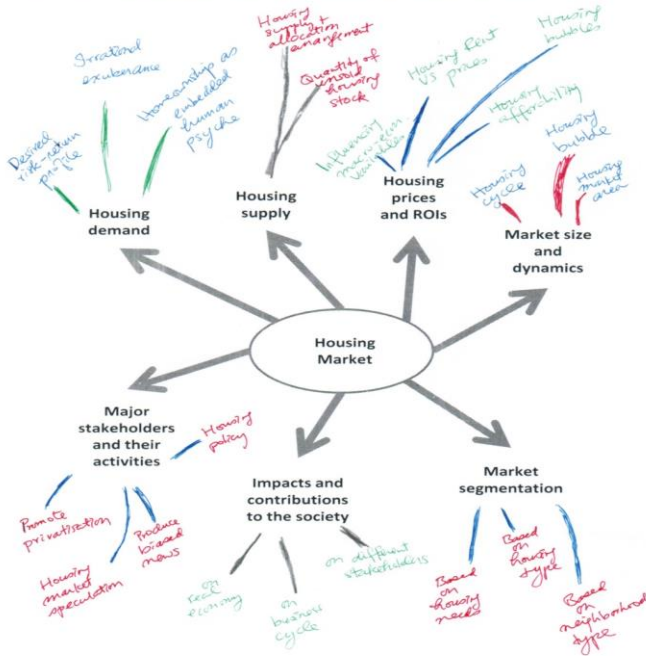
Regarding Figure 1, the mind map puts the core idea of *housing market* as the central node on the map. The seven branches out of the central node "Housing Market" represent the seven themes as identified in the previous section. Sub-branches out of the seven main branches stand for the main ideas associated with the main branches. Overall, the tree-form mind map (re: Figure 1) renders a visual and coloured picture on the knowledge structure on housing market. This knowledge structure is easier to comprehend at a glance than an essay form of literature review, but is weak in elaboration of ideas. Nevertheless, it does not indicate how the various main ideas of housing market are related with a tree-form knowledge structure.

The next figure, Figure 2, is the system map on the housing market literature. The figure identifies the main topics

to cover, i.e., the structure of the system of interest, in presenting the housing literature to readers. The map chiefly uses blobs, words and boundaries to convey the system of interest, in our case, the housing market literature. This writer also recommends optional usage of arrows as an additional system diagramming symbol to indicate the inter-relatedness of the various sub-systems in the map (Ho, 2016a). In Figure 2, the main sub-systems of the system map correspond to the seven themes in the housing market literature as recognized in the previous section. Here, the system map is simpler than the mind map, but more concisely conveys the key themes of housing market to audience in a presentation exercise. [Clustering the system map with more details in the blobs becomes overwhelming to its readers, in the writer's view.]

Figure 2: A system map on the housing market literature

Housing market literature

Housing demand

Housing prices & ROIs

Housing supply

Major stakeholders and their activities

Market segmentation

Market size & dynamics

Impacts and contributions to the society

The last figure, Figure 3, is a cognitive map that portrays how certain housing market variables interact with each other to make up a systemic and dynamic housing market situation with feedback loops.

Figure 3: A cognitve map on certain housing market ideas
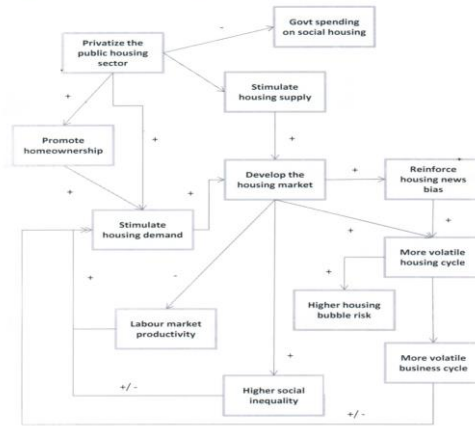
The twelve variables are selected from the housing market literature via the writer's literature review. The influences of these variables with each other are indicated by the arrows that connect them. A **+ve** sign on the arrow indicates a positive correlation between the connected variables while a **–ve** sign signifies a negative correlation between the variables. The arrows indicate the direction of influence. Some of the variables are connected into circles to form feedback loops. In this regard, a positive loop (e.g., +, +, +; or -, -, +) is self-amplifying whereas a negative loop (e.g., +, +, -) is self-stabilizing. Compared with Figures 1 and 2, Figure 3 is capable to depict a systemic situation with a housing market theme whereas Figures 1 and 2 cannot.

On the whole, the diagramming techniques, such as the three mapping techniques employed here, enable us to utilize more of our right brain to conduct literature review. The exercise, as presented in this paper, confirms the view of Ho (2016a) that diagramming techniques do not replace, but instead complement scholarly essay-form-based literature review (which is mainly a kind of left-brain activity). Moreover, it also largely confirms the observations by Ho (2016a) about

these three diagramming techniques with regard to (i) resolution level, (ii) perspective expressiveness, (iii) knowledge structure forms, and (iv) stimulation and engagement of thinking. The value of the diagramming-based literature review for managerial intellectual learning (Ho, 2013; 2014a; 2014b) is examined in the next section.

THE VALUE OF DIAGRAMMING-BASED LITERATURE REVIEW FOR MANAGERIAL INTELLECTUAL LEARNING

The kind of literature review carried out in this paper as well as in Ho (2016a) is chiefly exploratory in nature. It is what a researcher would do to make an overall grasp of a particular research topic without clearly formulated research objectives and questions. In short, it amounts to a preliminary literature review exercise at the very initial stage of a typical research project. From the perspective of intellectual learning, this preliminary stage research exercise is intellectually highly stimulating itself. For the writer, using scholarly essay writing together with diagramming techniques have been demonstrated here and in Ho (2016a) to be very useful to go through this preliminary literature review exercise. In terms of the managerial intellectual learning thinking of Ho (2013; 2014a; 2014b), such a literature review involves managerial intellectual learning, but still not Multi-perspective, Systems-based (MPSB) managerial intellectual learning. Specifically, it is directly associated with Phase 1 (Data Management) and Phase 2 (Absorbed reading) of the managerial intellectual learning framework of Ho (2013; 214a; 2014b), not yet involving Phase 3 (The Multi-perspective, Systems-based (MPSB) knowledge compilation) and Phase* (Practice-based intellectual learning). As such, the general intellectual knowledge gained via this preliminary literature review inevitably has very low actionable value. This is not considered a technique limitation as it is chiefly for preliminary literature review. Nonetheless, it

is a required learning exercise to enable subsequent MPSB managerial intellectual learning to be carried out. For this reason, the observations and illustrative examples on diagramming-based literature review made here and in Ho (2016a) have academic value in terms of contribution to the theoretical development of managerial intellectual learning as launched by Ho in 2013. Viewed from this academic context, this paper and the previous one (Ho, 2016a) can be regarded as supporting the innovative academic research on managerial intellectual learning, even though the topic of using diagrams in literature review per se is not novel in the research methods field.

CONCLUDING REMARKS

Using diagramming techniques in literature review, whether done alone or in groups, can be an engaging and creative exercise. This is what this paper and Ho (2016a) intend to convey to readers. At the same time, different diagramming techniques have different strengths and weaknesses in terms of idea stimulation, user engagement and presentation quality. Thus, it is useful for researchers to assess the practical value of these techniques for literature review. Finally, diagramming techniques for preliminary literature review, as done in this paper, are also useful in managerial intellectual learning. Exactly how relevant they are in managerial intellectual learning has been discussed, albeit very briefly, in this paper in terms of the managerial intellectual learning framework of Ho (2013; 2014a; 2014b). In this respect, the discussion here is chiefly exploratory; more research works need to be carried on this topic still.

BIBLIOGRAPHY

1. Ayoade, O. and V. Ahmed. 2014. "An assessment of land use sources of barriers and the community-based housing model in the UK" *International Journal of Housing Markets and Analysis* 7(4), Emerald: 539-558.

2. Borgesen, T.A. 2014. "Heterogeneous housing markets: structural implications for pricing and risks" *International Journal of Housing Markets and Analysis* 7(3), Emerald: 383-396.

3. Brady, R.R. 2011. "Measuring the diffusion of housing prices across space and over time" *Journal of Applied Econometrics* 26, Wiley: 213-231.

4. Buzan, T. and B. Buzan, 1995. *The mindmap book*, BBC Books.

5. Case, K.E. and R.J. Shiller. 2003. "Is There a Bubble in the Housing Market?" Project Muse, Brookings Papers on Economic Activity 2, Brookings Institution Press: 299-362.

6. Chesire, P. 2004. "The British Housing Market: Contained and Exploding" *Urban Policy and Research* 22 (1) March: 13-22.

7. Ciaramella, A. and A. Celani. 2014. "Production and production over-supply in construction: estimating unsold stock in Italy" *International Journal of Housing Markets and Analysis* 7(4), Emerald: 506-523.

8. Courant, P.N. 1978. "Racial Prejudice in a Search Model of the Urban Housing Market" *Journal of Urban Economics* 5, Academic Press: 329-345.

9. Dániel, Z. 1997. "The paradox in the privatization of Hungary's public housing: a national gift or a bad bargain?" *Economics of Transition* 5(1): 147-170.

10. Eden, C., S. Jones and D. Sims. 1983. *Messing about in Problems: An informal Structured Approach to their*

Identification and Management, Pergamon Press, Oxford.

11. Fereidouni, H.G. 2012. "The Role of Real Estate Agents on Housing Prices and Rents: The Iranian Experience" *International Journal of Housing Markets and Analysis* 5(2), Emerald: 134-144.

12. Fereidouni, H.G. and E. Bazrafshan. 2012. "Determinants of returns on housing: the Iranian case" *International Journal of Housing Markets and Analysis* 5(4), Emerald: 351-360.

13. Fowler III, A.R. and C.A. Lipscomb. 2010. "Building a sense of home in rented spaces" *International Journal of Housing Markets and Analysis* 3(2), Emerald: 100-118.

14. Fu, Y.M. 2000. "Housing Choice Behavior of Urban Workers in China's Transition to a Housing Market" *Journal of Urban Economics* 47, Academic Press: 61-87.

15. Goodman, A.C. and T.G. Thibodeau. 2003. "Housing market segmentation and hedonic prediction accuracy" *Journal of Housing Economics* 12. Academic Press: 181-201.

16. Ha, S.K. 2013. "Housing markets and government intervention in East Asian countries" *International Journal of Urban Sciences* 17(1), Routlege: 32-45.

17. Hanushek, E.A. and J.M. Quigley. 1979. "The Dynamics of the Housing Market: A Stock Adjustment Model of Housing Consumption" *Journal of Urban Economics* 6, Academic Press: 90-111.

18. Hargreaves, B. 2008. "What do rents tell us about house prices?" *International Journal of Housing Markets and Analysis* 1(1), Emerald: 7-18.

19. Ho, J.K.K. 2013. "A Research Note: An exploration on the intellectual learning process of systems thinking by managers in the digital social media ecosystem" *European Academic Research* 1(5) August: 636-649.

20. Ho, J.K.K. 2014a. "A Research Note on the Managerial Intellectual Learning Capability-Building Mechanism (MILCBM)" *European Academic Research* 2(2) May: 2029-2047.

21. Ho, J.K.K. 2014b. "An empirical study on managerial intellectual learning (MIL) and managerial intellectual learning capability-building mechanism (MILCBM)" *European Academic Research* 2(8) November: 10564-10577.

22. Ho, J.K.K. 2015. "Examining Literature Review Practices and Concerns Based on Managerial Intellectual Learning Thinking" *International Journal of Interdisciplinary Research in Science, Society and Culture 1(1)*: 5-19.

23. Ho, J.K.K. 2016a. "A literature review on employability with diagramming techniques" *American Research Thoughts* 2(6) April: 3771-3784.

24. Ho, J.K.K. 2016b. "An elaboration on the space-place-home (sph) matrix for exploring housing-related problem-situations" *European Academic Research* 3(12) March: 13166-13185.

25. Ho, J.K.K. 2016c. "An examination of the space-place-home (sph) matrix as a conceptual tool for studying housing policy" *American Research Thoughts* 2(5) March: 3737-3747.

26. Jim, C.Y. and W.Y. Chen. 2007. "Consumption preferences and environmental externalities: A hedonic analysis of the housing market in Guangzhou" *Geoforum* 38, Elsevier: 414-431.

27. Jones, C. 2002. "Definition of Housing Market Areas and Strategic Planning" *Urban Studies* 39(3), Sage: 549-564.

28. Jones, C. and D. Maclennan. 1986. "The impact of North Sea oil development on the Aberdeen housing market" *Land Development Studies* 3(2), Taylor and Francis: 113-126.

29. Leguizamon, S. 2010. "The influence of Reference Group House Size on House Price" Real Estate Economics 38(3), *American Real Estate and Urban Economics Association*: 507-527.

30. Liu, M.J., R. Reed and H. Wu. 2008. "Challenges facing housing affordability in Beijing in the twenty-first century" *International Journal of Housing Markets and Analysis* 1(3), Emerald: 275-287.

31. Mercille, J. 2014. "The Role of the Media in Sustaining Ireland's Housing Bubble" *New Political Economy* 19(2), Routledge: 282-301.

32. Open University. 2016. "Systems Thinking and Practice: Diagramming" The Open University, U.K. (url address: http://systems.open.ac.uk/materials/T552/) [visited at April 25, 2016].

33. Oswald, A. 1999. "The Housing Market and Europe's Unemployment: A Non-Technical Paper" May, Department of Economics, University of Warwick CV4 7AL, United Kingdom.

34. Pain, N. and P. Westaway. 1996. "Modelling structural change in the UK housing market: A comparison of alternative house price models" July, National Institute of Economic and Social Research & Bank of England.

35. Pettinger, T. 2015. "Definition of the housing market" Economics.help December (url address: http://www.economicshelp.org/blog/glossary/definition-of-the-housing-market/) [visited at May 8, 2016].

36. Pomogajko, K. and M. Vigtländer. 2012. "Co-movement of house price cycles – a factor analysis" *International Journal of Housing Markets and Analysis* 5(4), Emerald: 414-426.

37. Pryce, G. and N. Sprigings. 2009. "Outlook for UK housing and the implications for policy" *International Journal of Housing Markets and Analysis* 2(2), Emerald: 145-166.

38. Saunders, M., P. Lewis and A. Thornhill. 2012. *Research methods for business students*, Pearson, Harlow, England.

39. Shimizu, C. and K. Karato. 2014. "Nonlinearity of housing price structure" *International Journal of Housing Markets and Analysis* 7(4), Emerald: 459-488.

40. Taylor, J.B. 2007. "Housing and Monetary Policy" SIEPR Discussion Paper No. 07-03 September, Stanford Institute for Economic Policy Research, Stanford University, Stanford, CA 94305.