

Title of Project:

Developing a Socio-Spatial Model of Social Service Accessibility - A Case Study in Food Assistance Services

Abstract of research comprehensible to a non-specialist:

Good social service planning is important. It ensures accountable use of public monies and service improvement. Conventionally, programme planners and policy makers often refer to service data and evidence of current provisions for further planning. They usually perform statistical analyses of these data to aid their tasks. Although these analyses definitely generate valuable information, the limitations are negligence towards possible spatial characteristics of these social data and their effects. All human activities have social and spatial dimensions, which mean there always carry some meanings how, where and when they occur, or do not occur. Provisions of social services are of no exception. Users may or may not be provided the services they needed due to various reasons such as accessibility. In this proposed study, the research team suggests a socio-spatial model in understanding service accessibility and applies it to analyze four types of food assistance services in Hong Kong - foodbank, community kitchen, bulk purchase scheme and parity shop. It is believed that better understanding of the socio-spatial concerns and difficulties affecting users' accessibility to social service will help better planning and delivery of social services to the needy groups in our community, both more efficiently and effectively. The team believes that research outcomes and knowledge developed in this showcase can demonstrate a new direction and method of social service planning, benefiting both Hong Kong and other regions in the long run.

良好的社會服務規劃十分重要。它可確保公共資源用得其所，並協助服務的改進。過往，規劃和決策者經常憑藉服務數據，以統計學的分析方法來進行規劃，其限制是對這些社會數據的空間特徵或會有所疏忽。所有人類活動都有其社會和空間維度，意味著相關活動如何、在何處及何時發生或不發生，都有其空間上的含義。社會服務的交付當然也不例外。服務使用者可能因為各種空間原因而得不到所需的服務。在此研究中，研究團隊提出一個協助理解服務可達性的社會空間模型，並用於分析香港的四類食物援助服務 – 食物銀行、社區廚房、集體採購計劃和平價店之上。我們認為，若更能了解社會空間因素對服務使用者的影響，將有助為社區中的困難群體提供更適切的社會服務。團隊認為，研究成果將會為社會服務規劃提出一個新的方向和方法；長遠而言，有利於香港及其他地區。

Impact and objectives

(a) Long-term impact

Systematic and comprehensive social service planning (and review) is always important to ensure accountable use of public monies and service improvement. Conventionally, programme planners and policy makers usually perform statistical methods to aid their planning tasks. The Census data for instance is very commonly used. Although these statistical analyses definitely generate valuable information to help our work, the limitations are their negligence of spatial characteristics of these social data and their effects. All human activities have social and spatial dimensions. Social problems, social needs and thus provisions of social services are of no exception. Based on the ground work of a pilot study on food assistance service conducted in 2013, the research team proposes this study on four major types of food services provided in Hong Kong. A socio-spatial model of service accessibility is adopted to understand how the four dimensions, namely physical distance, transport, social network, and relationship & values, are attributed to the concerns and difficulties of users and non-users in reaching the services. The team believes that research outcomes and knowledge built in this showcase can demonstrate a new direction and method of social service planning, benefiting both Hong Kong and other regions in the long run.

(b) Objectives

To validate and analyze attributions of the four socio-spatial dimensions in service accessibility,

To identify concerns and difficulties of users and non-users with respect to their service accessibilities, and thus

To develop a socio-spatial model of social service accessibility

(a) Background of Research

Food assistance services in Hong Kong

In Hong Kong, help for the poor is provided both in cash and in kind. While income maintenance needs are mainly met through the Comprehensive Social Security Assistance scheme, food assistance service is also a means of poverty alleviation in recent years.

Started in 2008, Hong Kong was economically hit seriously by the global financial tsunami. In August 2009, the unemployment rate in Hong Kong climbed to 5.4%, the highest recorded level since 2006¹, meanwhile food costs increased by more

¹ Information from the Census & Statistics Department, Hong Kong SAR Government.

than 50% in the same year.² Since many low-skilled workers were paid on a daily basis, unemployment thus often presented them with an immediate financial crisis. In response to the situation, the HKSAR Government allocated HK\$100M to provide five short-term food assistance projects (or “foodbanks”) to the needy, operated by different NGOs for a period of three years and subsequently extended. At the same time, there were other food assistance initiatives operated by other community organizations, sometimes joined hand with private corporates.

Today, there are in general four types of food assistance programmes. The Hong Kong Council of Social Services had stock-taken the situation in 2013. Apart from the thirty-seven foodbanks distributing food packs, there were also seventeen hot-meal service units (or “community kitchens”), seven member-serving bulk purchase schemes and eight “parity shops” (selling food and groceries at bargain prices) publicly serving the needy in the community (HKCSS, 2013). All these initiatives aim to relieve the financial hardship of the lower income groups.

Social service planning

Systematic and comprehensive social service planning (and review) is always important to ensure accountable use of public monies and service improvement (Rossi *et al.*, 2004). It is also important for planners and policy makers to learn from the data and evidence of the current provision for better future development of the respective policy areas.

Before 1999, the Hong Kong Government mainly adopted the Five Year Planning (FYP) mechanism for planning and review of social welfare services. The FYP mechanism was primarily an incremental approach which was population-based and facility-driven, and had been criticized for lacking the flexibility to cope with rapid social and economic changes in a timely manner. FYP was consequently discontinued after 1999. The Social Welfare Department has then adopted a two-tier planning mechanism - Central and District Welfare Planning. In the “Report on Long-term Social Welfare Planning in Hong Kong” published by the Social Welfare Advisory Committee (SWAC) in 2011, it is recommended that the existing planning mechanism should be enhanced and aimed at collecting even more comprehensive view at three levels, namely, district, central, and advisory committees. Full and interactive participation of welfare agencies and stakeholders in the community through more transparent and evidence-based processes are recommended. The importance of good service review and planning perhaps can best be illustrated in the concluding paragraph of the report:

“After all, in the planning and provision of social welfare services for Hong Kong, government efforts alone are never enough. The real key to the success of the social welfare policies and initiatives lies in the support and participation of the social welfare sector, stakeholders and members of the public.” (SWAC, 2011:57)

Hudson (1979) compared and distinguished types of planning theories, concluding that there are different approaches that human/social service planning can be done, though the synoptic or rational planning method uses to dominate till today (Netting *et al.*, 2008). Generally speaking, three stages can be differentiated in a planning cycle, though there are other categorizations too (Julian & Lyons, 1992; Pancer &

² Information from the Xinhuanet. http://news.xinhuanet.com/gangao/2009-02/18/content_10837813.htm.

Westhues, 1989; York, 1982). They are the planning, implementation, and review & evaluation stages.

Needs assessment is often the most important task in the planning stage. Planners have to identify the nature and extent of social problems concerned, project future trends, compare needs to existing provisions. These will be followed by determining service goals and objectives in view of related social values, and choosing the appropriate programme alternatives. In the implementation stage, focus will then be put into service management concerns, i.e. how programme objectives are actualized. Data of programme inputs and outputs will be collected, such as service take-up rate, transaction volume, finance matters. When it comes to the review & evaluation stage, planners or policy makers will care about programme outcomes and impacts, such as changes in service users' behaviours (e.g. quit smoking) or social conditions (e.g. reduced poverty rate).

Conventionally, programme planners and policy makers usually perform statistical methods to aid their tasks throughout the planning processes. The Census data for instance is very commonly used. Statistical analyses of these data will yield the information needed for community needs assessment planning. Similarly, evaluators will statistically analyze service records to determine the programme effectiveness. Although these analyses definitely generate valuable information to help understand our various concerns, the limitations are their negligence of spatial characteristics of these social data and their effects. Social problems and needs always have a spatial dimension (Bigman & Deichmann, 2000; De Boyser *et al.*, 2009; Vista & Murayama, 2011). Poverty and social exclusion, for example, are always spatially concerned. Studies show that there are concentrated economic and social deprivations in certain areas of a country, or neighbourhoods within a city (Kasarda, 1993; Lee, 2000). The problem of suicide shows similar concerns (Baller & Richardson, 2002; Chang *et al.*, 2011; Phillips, 2013). In a recent local study, suicide rate in most deprived districts in Hong Kong is found to be 2.3 times higher than that in the least deprived ones. Males are also found to have greater geographic variations in rates than females, except the elderly group (Hsu *et al.*, 2015).

In Hong Kong, it is also observed that inadequacies in public and social service provisions are often attributed to the negligence of these spatial characteristics. Branch closures of banks in recent years, for example, were found to have significant negative impacts on the disadvantaged groups (elderly and disabled, etc.) in the community when they could not easily access another branch located afar from their immediate neighbourhoods (Consumer Council, 2007). Home-based support service for the elderly is another example in which transportation cost (time and money) is one of the major constraints experienced by elderly and therapists in service delivery, resulting in endless waiting of the people in need (香港老人權益聯盟, 2012; Sau Po Center on Ageing, 2011).

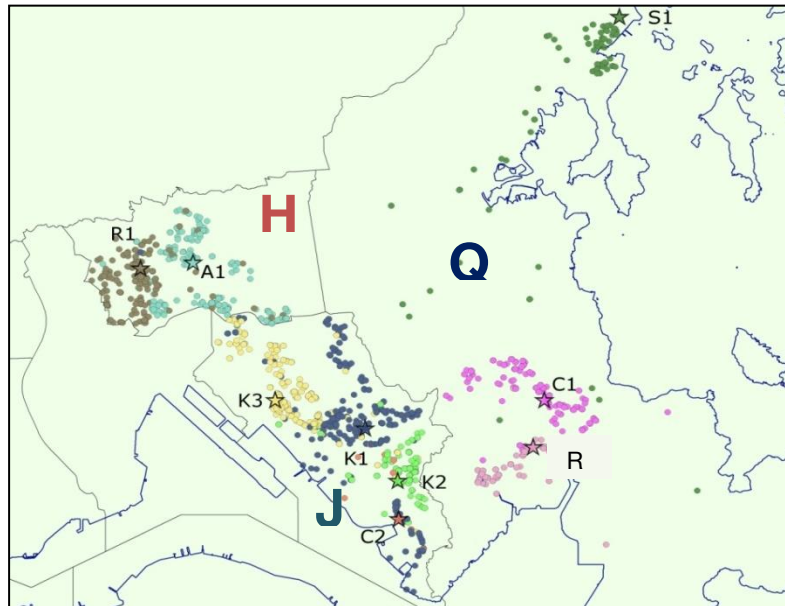
Food assistance service in Hong Kong is found to have similar spatial issues and concerns too. Despite the fact that many community organizations and private corporates are participating in the initiatives by providing hot meals and donating food items, they are not evenly distributed in the territory. Most of these services points are located near the city centre or 'popular' poor district such as Shamshuipo, while remote areas are relatively under-served (SIE Fund, 2015). Kwok *et al.* (郭、陳及葉, 2015) analyzed the accessibility of food assistance services in Hong Kong using the data of Census 2011 together with the food map created by the Hong Kong Council of Social Services.³ They

³ 香港食物援助服務地圖 <http://www.poverty.org.hk/foodmap/>

found that food services were not easily accessible in four districts despite the fact there are significant poor populations found in these areas.

The research team had also conducted a pilot study on food assistance service in 2013. Service user records of a foodbank serving the East Kowloon region were analyzed (Leung *et al.*, 2015). As shown in Figure 1, service users were found to be more clustered in District H and J which were densely populated with public rental housing. On the other hand, users were relatively sparsely distributed in District Q, a rural district in the region. Furthermore, five sub-districts (four in District J and one in Q) were found to have significantly higher service take-up rates (Leung *et al.*, 2015:44). On the other hand, there were segregated areas found, meaning that there were in fact poor populations in these areas according to the Census data, but they were under-served. One reason behind these uneven service take-up rates was the long travelling distance that had hindered the ones to receive the service they needed, elderly and disabled in particular. Although they could use public transport instead of walking, it would often be too costly to the disadvantaged groups. An informal interview with an old lady reveals that she had to walk upslope for thirty minutes to bring the collected food items home, in order to save HK\$6 for a bus trip!

Figure 1. Service user distributions of foodbank service in East Kowloon



It is thus obvious that addressing spatial characteristics of related social data can help improve social service planning and provision (Milligan and Fyfe, 2004; Harris and Hooper, 2004; Koschinsky, 2013). Kwan (2013) emphasizes three geographic notions to be well conceived and examined in both geographic and social science researches in particular - segregation, environmental exposure and accessibility.

Segregation means isolation or exclusion, referring to the extent to which people of certain groups are living apart from others in the place concerned. Related concepts are clustering, concentration, centralization, etc. Geographers often study segregation of ethnic groups and social classes. Social scientists probably concern more about segregation caused by socio-economic factors. Putting in the food assistance service context, this may refer to the concerns that whether food needs are clustered in certain

districts of the region served due to segregation; or where service points should be allocated to areas due to high density of particular target group(s).

Exposure is “the conceptual foundation of various methods for assessing people’s exposure to contextual or environmental influences” (Kwan, 2013:1080). Where and when people go, whom they meet, what they do, etc. are the questions to be asked when researching this notion. In food service provision, exposure may mean when and why service users drop by the service points, or explain why they continue to come and why others do not. That will help design or revise a better service implementation.

Accessibility “helps us understand how the built environment and individual attributes affect people’s access to social opportunities important to their quality of life and well-being” (Kwan, 2013:1081). It is also a major concern in evaluating service operations, especially with respect to target groups such as children, elderly and people with disabilities (Belanger and Stone, 2008; Damron-Rodriguez *et al.*, 1995). In general it can be expected that the nearer to a service point, the more accessible the service will be.

When the above mentioned spatial concerns are put back into service planning and provision, more questions, as compared to the conventional ones, can be asked. Table 1 shows some of the suggestions.

Table 1. Possible spatial concerns in social service planning

Stages &Key Issues	Conventional concerns	Possible spatial concerns
<i>Planning</i>		
Needs assessment	How many in need? What are the demographic characteristics?	How are the need spread? Any group segregated? Clustered
Project future trends	Need/problem trend in coming future	Movement of people in need and change of spread over time
Compare existing provisions	Whom served already? Service loophole?	Whom and where are served? Any loophole by locations or groups?
Choose programme alternatives	What possible alternatives exist? Which one being most suitable in terms of say effectiveness and	Do these alternatives match with geographical characteristics of the community?
<i>Implementation</i>		
Programme delivery strategies	What are the provision ratios? How many service points to set up?	Availability and accessibility- proximity of service points, travelling cost involved, etc.
Programme outputs	What is the service volume? What are the take-up rates of the community and/or specific target	Take-up rates according to locations, any group / district excluded, etc. Any unequal
<i>Review & evaluation</i>		
Programme outcomes	Perceptive, cognitive and/or behavioural changes of service users, and their extents	Spatial related outcomes (e.g. increased physical mobility , social exposure)
Extent of change in social problems concerned	Any statistical significant changes in social problems concerned	Spatial related impacts (e.g. reduced poverty rates / segregated areas)

As an initial research project on spatially-informed social service planning in Hong Kong, the proposed study focuses on the concept of service accessibility, whereas food assistance services will be studied as an illustration.

Towards a socio-spatial model of service accessibility

Nonetheless, spatial concerns in themselves are not enough. In the above mentioned pilot study conducted by the research team (Leung *et al.*, 2015), for example, there were odd findings that could not be explained by geographical accessibility alone. Instead of going to the nearest service point, some users collected their food items from a farther point. On the contrary, some sub-districts were found to have low take-up rates despite the fact there was a service point nearby. Kwan (2012) terms this as the “uncertain geographic context problem”, meaning that, in geography, individual behaviours or outcomes are found not only attributed to geographical or area-based factors. Non-spatial, contextual factors are often needed to explain the spatial uncertainty. In our foodbank example, those users collecting their food items from a farther point had different “social” reasons. Some preferred to following their peers’ choice, others thought they preferred getting help from a NGO they trusted better, etc.

Accessibility thus is a multidimensional construct. While the spatial dimensions are indispensable, social dimensions play an equally important account for the access to social services and other public facilities (Ho, 2009; Wang *et al.*, 2013). The concept of social capital, in particular, is adopted in this study to include these social attributes that help explain why and/or how people know the existence of food services or not (i.e. exposed/included or segregated/excluded), and in turn affect their accessibility to the services.

Social capital, including bonding and bridging social capital, exists in the structure of social relationships. The basic idea of social capital is that a person’s social networks constitute an important asset, one that can be called on in crisis, enjoyed for its own sake, and can be leveraged to compensate the economic and social disadvantages of marginal groups (Coleman and Hoffer, 1987; Woolcock and Narayan 2000). Embedded in durable personal and familiar social networks and relationships, social capital could enable individuals to gain access to information, power, and other types of resources (Adler & Kwon, 1999).

Bonding social capital (or strong ties) such as family, relatives, neighbors and friends are often the major sources of information, intra-group solidarity, mutual trust, and mutual help among members of the same group, family or community (Terrior, 2006). If the bonding social capital is small or not resourceful (often the case among socially disadvantaged groups), bridging social capital (or weak ties) become more important in obtaining information and resources not available in their existing social networks. Bridging social capital is the connections with diverse social cleavages or heterogeneous relationships between different families, groups and communities, including religious organizations, community and civil society organizations (Putnam, 2000). These linkages are vital for accessing external assets and information diffusion (Granovetter, 1973).

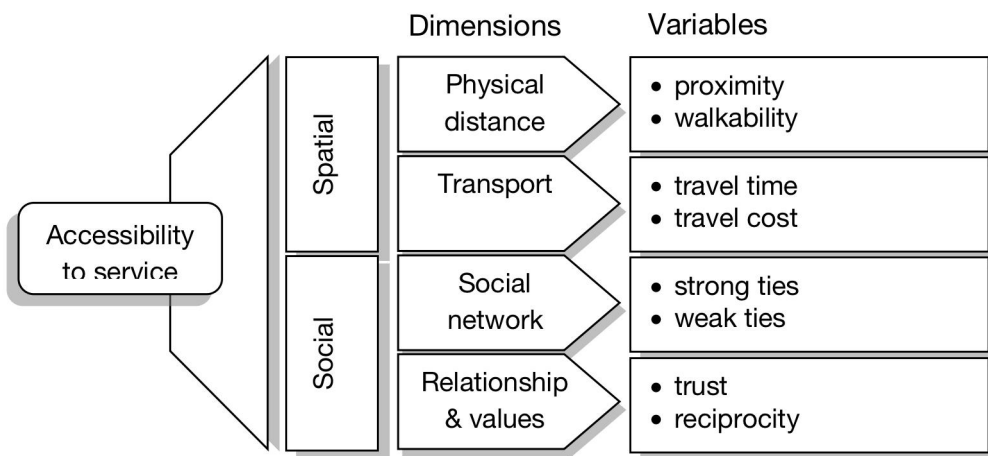
In Hong Kong, social services users are mainly economic and socially disadvantaged groups. Elderly living alone, low-income and single-parent families, new immigrants, racial minorities, and persons with physical and mental disabilities are some of the examples. These groups are often weak in both bonding and bridging social capital. Evaluation studies carried out by local universities had provided strong evidence on how the building of social capital could help access to societal resources and information

which were otherwise out of the reach of these disadvantaged groups (CIIF Evaluation Consortium Reports, 2006). In the context of food assistance and other social services, information about the services and the ability to get the services are important determinants of accessibility. Thus, it is imperative to look into the role of these social networks in the accessibility of social services, and to how such relationships and its embedded values (such as trust and reciprocity) may contribute to the motivation and behaviors of obtaining the services.

In this proposed study, therefore, a socio-spatial model is adopted in understanding accessibility of food assistance services in Hong Kong. Accessibility is both spatial and social, and the two parts interplay with each other. Spatially, accessibility means either to walk or to use public transport to reach the service point. Low income groups definitely prefer a short walking distance so that they can save the transportation fees. If walking is not possible, existence of cheap public transport will imply higher accessibility, and vice versa. Socially, accessibility means whether people know the services exist, where they are located or whether they want to get service from specific service points, etc. depend on who or what organizations they know (i.e. social networks), how close or trustful they are, or whether they use to join for common activities (i.e. relationships and values).

The socio-spatial model of accessibility to social services adopted in this study thus can be conceived as shown in Figure 2.

Figure 2. A socio-spatial model of service accessibility



Work done by the Research Team

As mentioned above, the research had conducted a pilot study on food assistance service in 2013 and analyzed the service user records of a foodbank located in the East Kowloon region. Spatial analysis and visualization of the service data was demonstrated to reveal more understanding of the social problem concerned and better inform practitioners' and community stakeholders' decisions in locality service planning (Leung *et al.*, 2015). In this study, the team will extend its work to further and in-depth analysis of user's accessibility to the services, as well as to include all the four types of food assistance services in Hong Kong.

Dr. Zeno Leung (PI) has been involved in the planning, operation and evaluation of some food service projects since 2009, with the research results published (Leung,

2013; Leung *et al.*, 2012; 梁與王, 2009). He has also secured the collaboration with the Hong Kong Council of Social Services in this proposed study so that respective data sets can be made available, provided by the concerned service operators. Attached to this proposal is the supporting letter from the Council. Dr. Leung will be responsible for overseeing the project, liaison with collaborators, data collection and analysis, and report writing in this proposed research.

Dr. Lilian Pun (Co-I) has rich experience in applying geo-information technology in the context of Hong Kong environment in the past years, in particular in modeling and computing walking (or even cycling) paths and public transport routes. The algorithms for walking paths have been developed which are centerline-independent using exact cell decomposition, a modified motion planning method (Pun-Cheng, Tang & Cheung, 2007). With the user-defined origin and destination, the system will then compute a resultant path based on users criteria of say distance-time, comfort (Figure 3 and 4). On the other hand, based on the HKeTransport system she has jointly developed with the Transport Department since 2007 (Pun-Cheng, 2012), the cheapest means and time of public transport routes can be extracted between all homes of the needy and distribution points. Dr. Pun will be responsible for data collection, analysis and spatial modeling in this research.

Figure 3. Prototype of the path-finding process

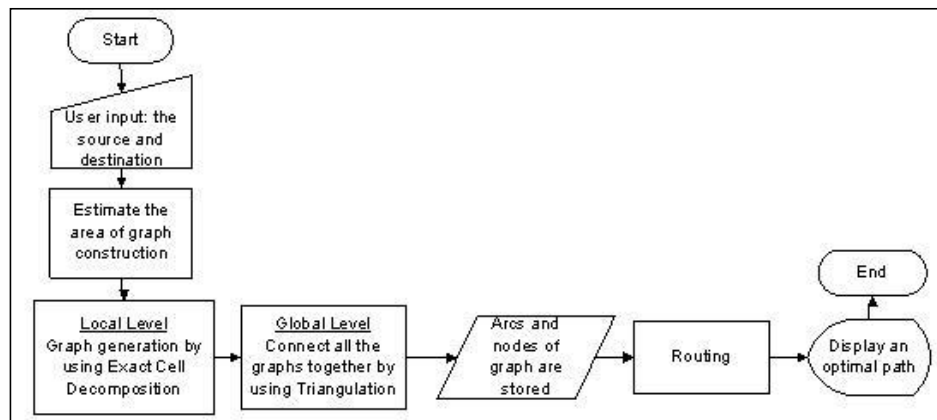
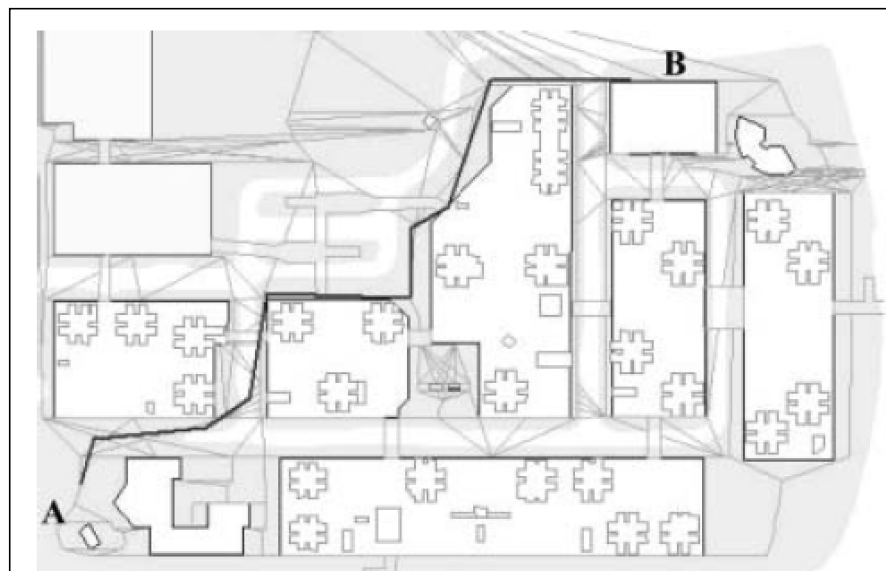


Figure 4. Resulting path from source A to destination B



Dr. Amy Ho (Co-I) has rich experience in social capital researches in the past years. She has also been involved in various social policy and program evaluation for government departments on social enterprise and funding schemes for poverty alleviation. She had also carried out research studies on the regulation and access to health services in Hong Kong (Dixon, Peckham & Ho, 2007; Ho, 2009). Dr. Ho will be responsible for social capital data collection and analysis, and report writing in this research.

(b) Research plan and methodology

Based on the pilot study conducted in 2013, the research team will extend its work in this study from evaluating foodbank to all the four types of food assistance services in Hong Kong.

Coverage

The Hong Kong Council of Social Services is secured as a collaborator and its full support will be rendered to locate appropriate NGOs which are operating the respective services and provide the data needed. One foodbank, one community kitchen, one bulk purchase scheme and one parity shop from the East Kowloon region will be studied. Service user records **over a period of 12 months** will be accessed and analyzed. The research team will also collect first-hand data sampled from these **service user** pools. On the other hand, **equal numbers of non-users** will be sampled for comparison, through other connections of these or other NGOs served in the region.

Service Type	Estimated service volumes in 12 months	Sample size
Foodbank	~ 2,000 households	200 households
Community kitchen	~ 1,000 households	100 household
Bulk purchase scheme	~ 200 households	50 households
Parity shop	~ 3000 users	100 users

Data collection

Multi-strategy research (Bryman, 2006) will be used in data collection. This is an approach which “combine quantitative and qualitative research”, considering the suitability of different methods in collecting different kinds of information. Its values for better serving the overall purpose of understanding the inherently complex social phenomena in context have been widely recognized (Greene 2007). In particular, an in-depth spatial analysis using geo-information technology is adopted. While quantitative methods may ensure greater validity and representativeness of findings, qualitative methods are used to address research objectives that require an in-depth understanding and explanation of social phenomena within the context it is situated. This also allows triangulation where the findings from different methods are compared and agreement is sought (Morse 2008).

Four data collection methods will be adopted:

1. **Service user records** - this data source will provide basic personal information such as gender, age range, reasons for receiving services and residential addresses; apart from conducting demographic analysis of users' background, residential addresses will also be used for walk path and isoplethic analysis of all service users involved;

2. **Activity log records** - this method will collect detailed spatial information about the daily activities of the sampled participants, where they go, what they do, etc.; GPS tracking device and/or smartphone apps may also be used for the purpose;
3. **Social capital survey** - this method will measure types and extents of social capital of the sampled participants; the research team initially intends to use a tool modified from the household questionnaire developed by World Bank (2015);
4. **Semi-structured interview** - this method will collect qualitative data about the subjective experiences of service users on why they choose / not choose certain type of food services; approximately twenty of each type of sampled participants will be involved and this method is mainly used to facilitate data triangulation.

Data analysis

Data collected by method (1) will be spatially analyzed so that a complete coverage of food service points and its surrounding environment in the region will be modeled. Choroplethic and isoplethic maps, for example, and respective statistics will be resulted. These necessitate not only base maps of land features, but also local terrain and structural features such as heights, staircase, lifts and escalators, footbridges and subways. Currently there is no complete database of walking path network. Informed by the dataset, optimal walking path in terms of time-distance, comfort, safety can be computed for every pair of origin and destination. Algorithms for generating these multi-criteria walking paths have been discussed previously in the Co-I's previous researches.

When these results are combined with the data collected by method (2), effects of the spatial dimensions of service accessibility can be illustrated. Through the information provided by the activity logs, the research team will know the actual geographic paths along which daily activities of the sampled participants will go through, and that will describe their accessibility to particular service point in more details. Data collected by method (3), when integrated to the analysis, will further explain the combined influence of social-spatial considerations in accessibility, such as why some users travel far away to receive the service instead of getting from a service point nearby their homes. A comprehensive picture of socio-spatial model of accessibility will be revealed. Similarly, analysis of the non-users' data will tell us the difficulties and concerns of their accessibility. Qualitative data collected by method (4), as mentioned, will be used for triangulation and supplement a contextual understanding of the research findings.

References

- Adler, P.S., & Kwon, S-W. (1999). Social capital: Prospects for a new concept. *Academy of Management Review*, 27, 17-40.
- Baller, R.D., & Richardson, K.K. (2002). Social integration, imitation, and the geographic patterning of suicide. *American Sociological Review*, 67(6), 873-888.
- Belanger, K. & Stone, W. (2008). The social service divide: Service availability and accessibility in rural versus urban counties and impact on child welfare outcomes. *Child Welfare*, 87(4), 101-124.
- Bigman, D., & Deichmann, U. (2000). Geographic targeting: A review of different approaches. In D. Bigman & H. Fofack (Eds.), *Geographical targeting for poverty alleviation: Methodology and applications* (pp. 43–73). Washington, DC: The World Bank.
- Bryman, A. (ed.) (2006). *Mixed Methods*. London: Sage Publications.
- Chang, S.-S., Sterne, J.A.C., Wheeler, B.W., Lu, T.-H., Lin, J.-J., & Gunnell, D. (2011). Geography of suicide in Taiwan: Spatial patterning and socioeconomic correlates. *Health & Place*, 17(2), 641-650.
- CIIF Consortium. (2006). The CIIF evaluation consortium reports – Integrated summary of key findings, critical success factors and recommendations. Hong Kong: CIIF Consortium. Retrieved October 22, 2015 from <http://www.CIIF.gov.hk/download/en/resources-centre/CIIF-evaluation-study/CIIF-finalreport-e.pdf>.
- Coleman, J.S., & Hoffer, T. (1987). *Public and private schools: The impact of the communities*. NY: Basic Books.
- Consumer Council. (2007). *Impact of branch closures and fee increases of banks on disadvantaged consumers*. Retrieved on Oct 2, 2015 at https://www.consumer.org.hk/web/CompetitionStudyReports/2007-03_Bank_Branch.pdf
- Damron-Rodriguez, J., Wallace, S. & Kington, R. (1995) Service utilization and minority elderly: Appropriateness, accessibility and acceptability. *Gerontology and Geriatrics Education*, 15(1), 45-64.
- De Boyser, K., Dewilde, C., Dierckx, D., & Friedrichs, J. (ed.) (2009). *Between the social and the spatial: Exploring the multiple dimensions of poverty and social exclusion*. Farnham: Ashgate.
- Dixon, A., Peckham, S., & A.P.Y. Ho. (2007). Informing UK policy development on the regulation of CAM practitioners: Lessons from Hong Kong? *Social Policy & Administration*, 41(7), 711-728.
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360-80.
- Greene, Jennifer C. (2007). *Mixed methods in social inquiry*. San Francisco: Jossey-Bass.
- Harris, N., & Hooper, A. (2004). Rediscovering the ‘spatial’ in public and planning: An examination of the spatial content of sectoral policy documents. *Planning Theory & Practice*, 5(2), 147-169.

- HKCSS (Hong Kong Council of Social Services). (2013). Overview of food assistance services in Hong Kong, October 2013. Retrieved September 17, 2015 from http://www.poverty.org.hk/sites/default/files/HKFoodAsst_2013.pdf. (In Chinese).
- Ho, A.P.Y. (2009). Promoting health equality through evidence-based study: Health-care access for Pakistani women and their children in Hong Kong. In Bywaters, P., McLeod, E., & Napier, L. (Ed.) *Social work and global health inequalities - Policy and practice developments*. University of Bristol: Policy Press.
- Hsu, C., Chang, S., Lee, E.S.T., & Yip, P.S.F. (2015). Geography of suicide in Hong Kong: Spatial patterning, and socioeconomic correlates and inequalities. *Social Science & Medicine*, 130, 190–203.
- Hudson, B.M. (1979) Comparison of current planning theories: Counterparts and contradictions. *Journal of the American Planning Association*, 45(4), 387-398.
- Julian, D.A., & Lyons, T.S. (1992). A strategic planning model for human services: Problem solving at the local level. *Evaluation and Program Planning*, 15(3), 247–254.
- Kasarda, J.D. (1993). Inner-city concentrated poverty and neighborhood distress: 1970 to 1990. *Housing Policy Debate*, 4(3), 253-302.
- Koschinsky, J. (2013). The case for spatial analysis in evaluation to reduce health inequities. *Evaluation and Program Planning*, 36, 172-176.
- Kwan, M.-P. (2012). The uncertain geographic context problem. *Annals of the Association of American Geographers*, 102(5): 958-968.
- Kwan, M.-P. (2013). Beyond space (as we knew it): Toward temporally integrated geographies of segregation, health, and accessibility. *Annals of the Association of American Geographers*, 103(5), 1078-1086.
- Lee, M.R. (2000). Concentrated poverty, race, and homicide. *The Sociological Quarterly*, 41(2), 189-206.
- Leung, Z.C.S. (2013) Boundary spanning in inter-organizational collaboration. *Administration in Social Work*, 37(5), 447-457.
- Leung, Z.C.S., Cheung, C.F., Chan, K.T. & Lo, K.H.K. (2012). Effectiveness of knowledge management system in social services - Food assistance project as an example. *Administration in Social Work*, 36(3), 302-313.
- Leung, Z.C.S., Pun-Cheng, L.S.C., & Ho, A.P.Y. (2015). Locality service review and planning with GIS: A pilot study of spatial analysis of poverty data in Hong Kong. *Journal of Technology in Human Services*, 33(1), 38-52.
- Milligan, C. & Fyfe, N.R. (2004). Putting the voluntary sector in its place: Geographical perspectives on voluntary activity and social welfare in Glasgow. *Journal of Social Policy*, 33(1), 73-93.
- Morse, J.M. (2008). Approaches to qualitative-quantitative methodological triangulation. In V. L. Plano Clark & J. W. Creswell (eds.). *The mixed methods reader*. pp. 151-158. Thousand Oaks, CA: SAGE.
- Netting, F.E., O'Connor, M.K., & Fauri, D.P. (2008). *Comparative approaches to program planning*. Hoboken: John Wiley & Sons, Inc.
- Pancer, S.M., & Westhues, A. (1989). A developmental stage approach to program planning and evaluation. *Evaluation Review*, 13(1), 56-77.
- Phillips, J.A. (2013). Factors associated with temporal and spatial patterns in suicide rates across U.S. States, 1976-2000. *Demography*, 50(2), 591-614.
- Pun-Cheng, L.S.C. (2012) An interactive web-based public transport enquiry system with real-time optimal route computation, *IEEE Transactions on Intelligent Transportation Systems*, 13(2), 983-988.

- Pun-Cheng, L.S.C., Tang, M.Y.F. & Cheung, I.K.L. (2007) Exact cell decomposition on base map features for optimal path finding, *International Journal of Geographic Information Science*, 21(2), 175-185.
- Putnam, R.D. (2000). *Bowling alone: The collapse and revival of American community*. NY: Touchstone Books / Simon & Schuster.
- Rossi, P.H., Lipsey, M.W., & Freeman, H.E. (2004). *Evaluation: A systematic approach*. (7th ed.). Thousand Oaks: Sage.
- Sau Po Center on Ageing. (2011). Consultancy study on community care services for the elderly - Final report. Retrieved on Oct 2, 2015 at <http://www.elderlycommission.gov.hk/en/library/>
- SIE Fund. (2015). SIE Fund to mitigate mismatch of resources and enhance efficiency for food support services. Retrieved on Oct 2, 2015, at <http://www.sie.gov.hk/en/news-event/media-centre/detail.page?content=224>
- SWAC (Social Welfare Advisory Committee). (2011). *Report on long-term social welfare planning in Hong Kong*. Retrieved on Apr 17, 2014 at <http://www.lwb.gov.hk/eng/advisory/swac.htm>.
- Terrion, J.L. (2006). Building social capital in vulnerable families: Success makers. *Youth and Society*, 38, 155-176.
- Vista, B. M., & Murayama, Y. (2011). Spatial determinants of poverty using GIS-based mapping. In Y. Murayama & R. B. Thapa (Eds.), *Spatial analysis and modeling in geographical transformation process GIS-based applications* (pp. 275-296). Dordrecht: Springer.
- Wang, D., Brown, G., & Mateo-Babiano, I. (2012). Beyond proximity: An integrated model of accessibility for public parks. *Asian Journal of Social Sciences & Humanities*, 2(3), 486-498.
- World Bank. (2015). Social Capital Assessment Tool (SOCAT). Retrieved on Oct 24, 2015 at <http://www.worldbank.org/>.
- Woolcock, M., & Narayan, D. (2000). Social capital: Implications for development theory, research, and policy. *World Bank Research Observer*, 15(2), 225-249.
- York, R. O. (1982). *Human service planning*. Chapel Hill: The University of North Carolina Press.
- 香港老人權益聯盟。(2012)。「長者社區支援服務」參與式研究報告。香港：香港社區組織協會。
- 梁傳孫與王瑾。(2009, Nov 30 - Dec 2)。「香港非政府機構於社區扶貧的實踐——「天糧網」短期食物援助服務成效初探」。論文發表於「可持續發展與社會工作：實務與前瞻」會議。中國天津：天津南開大學、香港社會工作人員協會。
- 郭瑛琦、陳之翰及葉兆輝。(2015)。「食物援助服務的可達性分析」。明報。