



"My space and time are dictated by my jobs": Space-Time Constraints for Female Domestic Workers in Hong Kong

Fikriyah Winata, Department of Geography and Geographic Information Science, University of Illinois at Urbana-Champaign

BACKGROUND

Increase of transnational migration in Asia has included large inflows of unskilled and low-educated women from developing countries to work as domestic workers in foreign countries. Female domestic workers (FDWs) are a highly vulnerable group (Wang et al., 2018) both due to **intensive work responsibilities** that limit women's mobilities within space and time constraints (Mendoza et al., 2017) and **demanding daily tasks** that restrict FDWs' social interactions outside their employers' homes (Chen et al., 2017). Their transnational migration experiences – moving to an unfamiliar place and culture – can compound their work-related social and emotional vulnerabilities (Yeoh and Huang, 2000).

Indonesian Female Domestic Workers in Hong Kong

- Domestic workers were the highest percentage type of Indonesian migrant workers in 2018 (32.8%), and 70% of them are female (BNPTKI, 2019). In the last the decade, Indonesian FDWs migrated to Hong Kong increased significantly.
- Hong Kong is the only top destination for Indonesian FDWs that regulates & implemented a mandated rest day, while many other Asian countries do not successfully implement it. With a rest day, FDWs are able to go out their employers' homes to do any activities that are not related to their work tasks.



Figure 1. Indonesian FDWs in Hong Kong during the rest day (Photo: Winata, 2015)

METHODS

Data Collection and Participant Recruitment

Participants were recruited through:

- Dompot Dhuafa Hong Kong (DDHK)**, a non-profit organization that provides social, religious, and educational programs for Indonesian FDWs.
- Snowball sampling**
- Peduli Sehat Hong Kong**, non-profit organization that promotes breast cancer



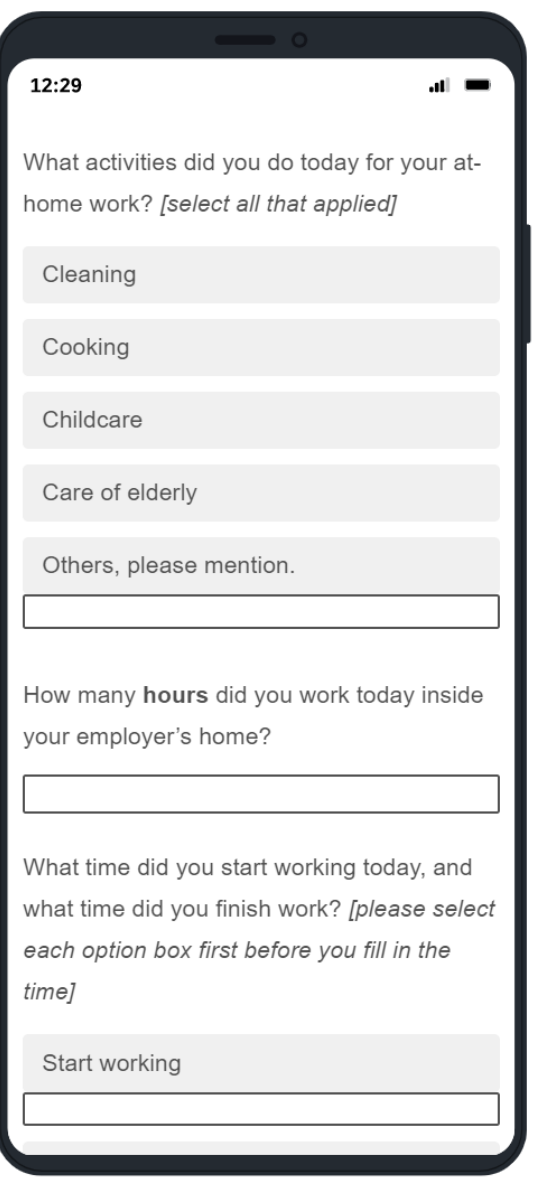
Primary data collection:

42 Indonesian female domestic workers collected activity diaries in working & rest days. Online activity diaries recorded:

- Type of activity
- Location
- Time spent in each location

GIS approaches:

- Each location from activity diaries (in working & rest day) was geocoded in ArcGIS Pro.
- Hours of being outside employers' house were 3D-visualized in ArcGIS Pro.



- Geocoded activities on a rest day
- Geocoded activities on working day 1&2

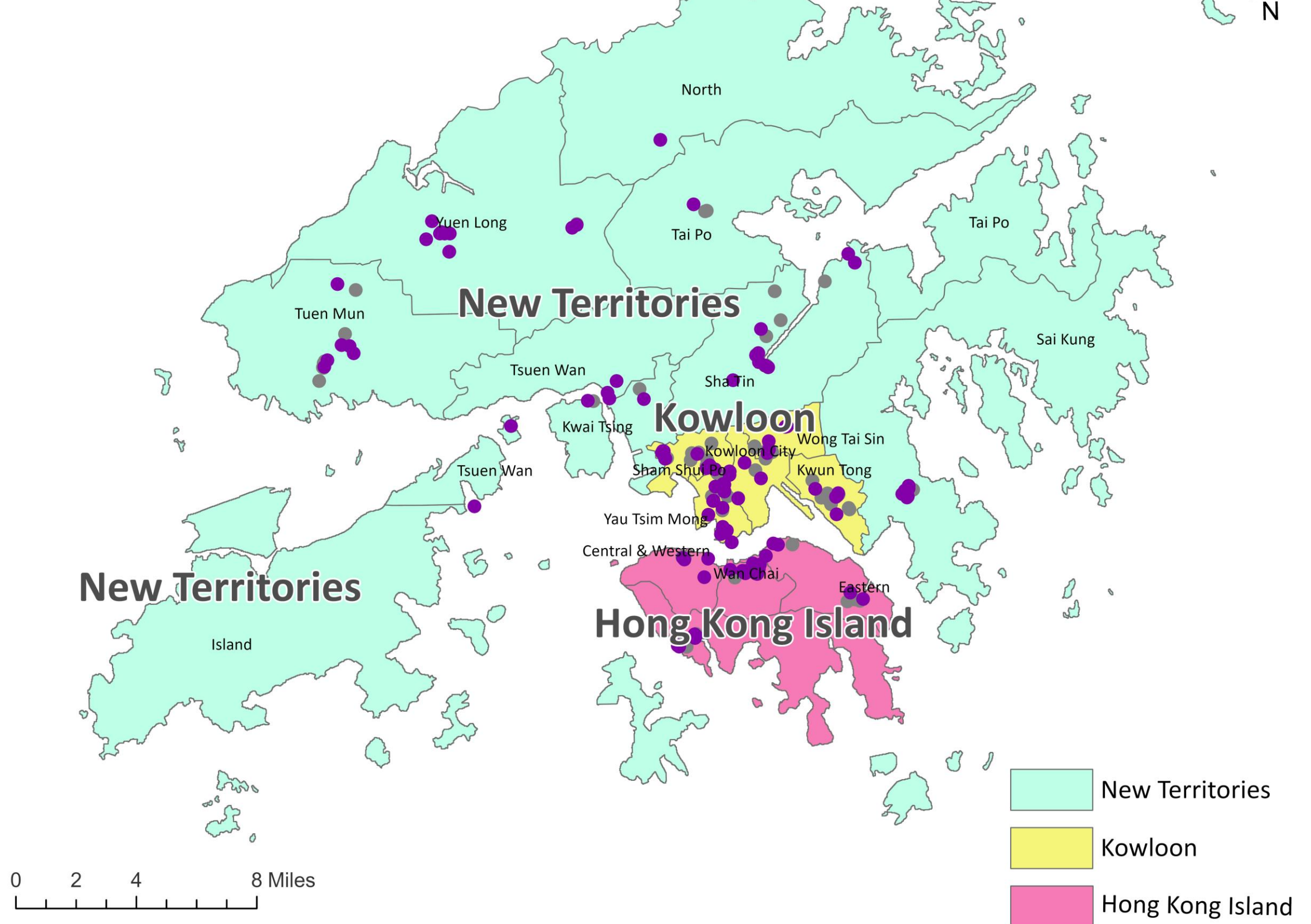
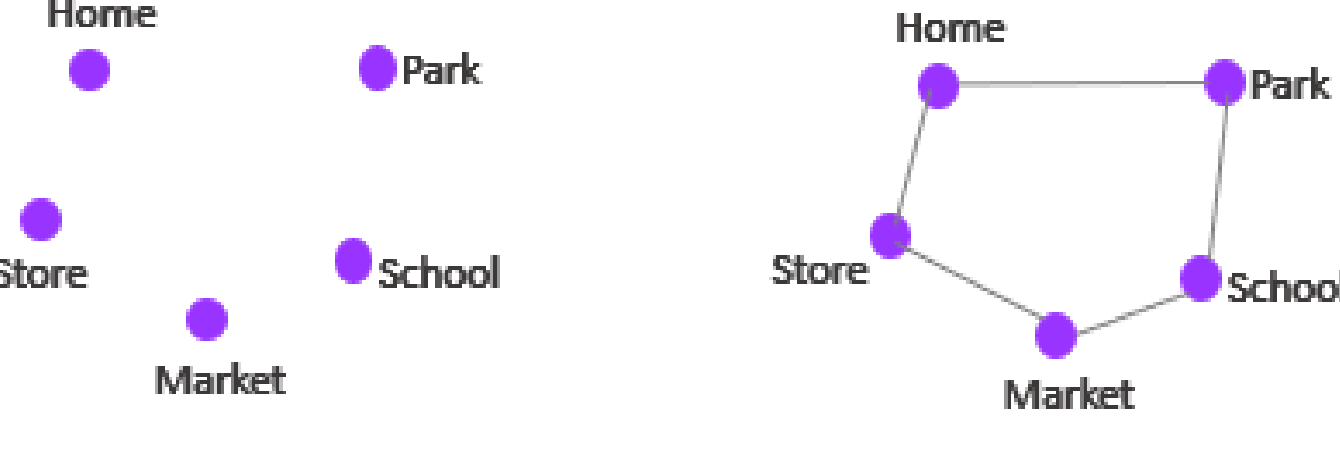


Figure 2. Study area including geocoded activities during working & rest days

Activity space approach: calculating convex hull size



Convex Hull: the minimum bounding geometry encloses each input feature or each group of input features (Esri, 2021)

Multilevel modeling approach

Multilevel modeling: to evaluate the effects of FDWs' characteristics on activity space size and time spent outside the workplace and to analyze differences between work and rest days (→ Individuals are nested into the day).

Model	Dependent variable	Independent variables
Model 1	Hours of being outside	Age, length of working & living in Hong Kong, distance and time to the closest public transit.
Model 2	Number of places visited	
Model 3	Convex Hull	

- lmer function (Linear mixed model fit) by REML (Restricted maximum likelihood) in R
- t-tests use Satterthwaite's method

RESULTS

Table 1. Demographic characteristics of participants

Demographic characteristics	Median (Min; Max) or Percent	
Age	38 (25; 50)	
25 – 30	19.05%	Younger domestic workers are mostly new-comers and are still figuring our living and working in Hong Kong.
31 – 35	14.29%	
36 – 40	28.57%	
41 – 45	23.81%	
46 – 50	14.28%	
Year length of working in HK		Older domestic workers have known various activities, places, and people in Hong Kong.
< 2 years	9.52%	
2 - 5 years	28.57%	
6 - 10 years	28.57%	
> 10 years	33.33%	

FDWs who have lived longer in Hong Kong have familiarity with places and have built connections with other FDWs.

Table 2. Common activities during working & rest days

Working days	Rest day
Grocery shopping at the market.	Meeting other Indonesian domestic workers at the park and other places.
Accompanying employers' children to school, tutoring centers, and ballet class.	Visiting any places (beach, mall, pier, etc)
Accompanying elderly to the park, restaurant, club house, and hospital.	Attending social and religious activities.
	Attending language classes.
	Relaxing
	Hiking
	Shopping for personal needs.
	Exploring Indonesian foods.

During working days, FDWs' activity spaces and mobilities are primarily dictated by their work tasks

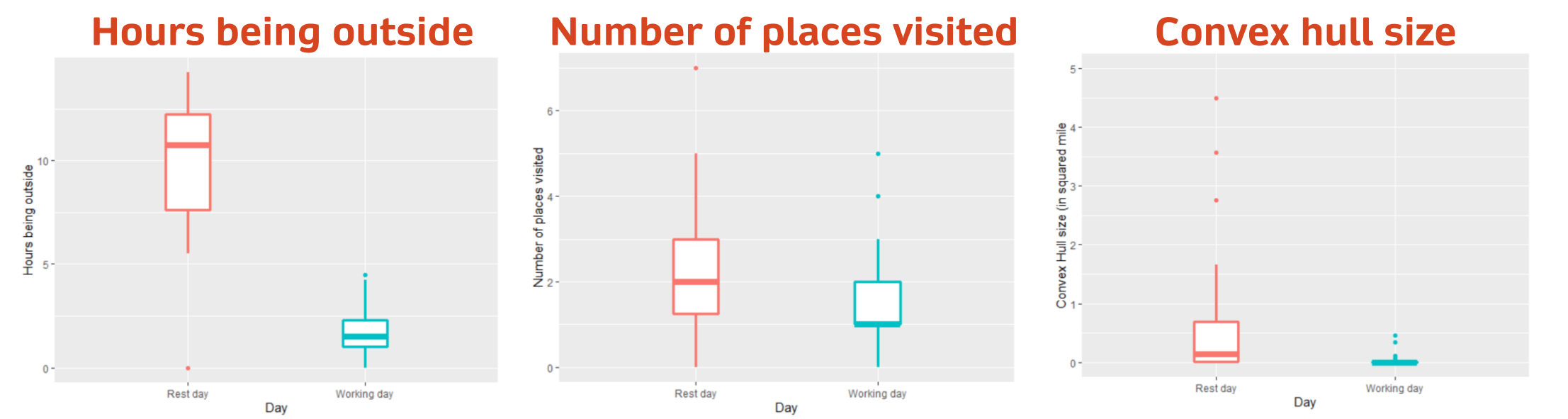
During the rest day, FDWs have flexibility to do whatever they want and to visit any places that they desired

Multilevel modeling results

Table 3. Multilevel modeling results of hours being outside (M1), number of places visited (M2), and convex hull size (M3)

Fixed effects	β (SE)		
	Model 1	Model 2	Model 3
Age	0.007 (0.3)	0.009 (0.02)	-0.11 (0.07)
Length of work (< 2 years)	REF	REF	REF
Length of work (2–5 years)	0.66 (0.65)	0.32 (0.42)	1.49 (1.54)
Length of work (6–10 years)	1.36 (0.66)*	1.06 (0.42)*	0.74 (1.55)
Length of work (>10 years)	1.60 (0.71)*	0.64 (0.46)	2.16 (1.68)
Distance to the closest public transit stop (in meters)	0.0002 (0.003)	-0.001 (0.001)	0.005 (0.006)
Time to the closest public transit stop (in minutes)	0.07 (0.21)	0.15 (0.13)	-0.31 (0.49)

*p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; REF: Reference; β: beta coefficient; SE: Standard



Variable	Working days	Rest day
Hours being outside	4.5 hours	14.25 hours
Number of places visited	5 places	7 places
Convex hull size	0.46 squared miles	41.85 squared miles

Figure 3. Boxplot comparison between working & rest days

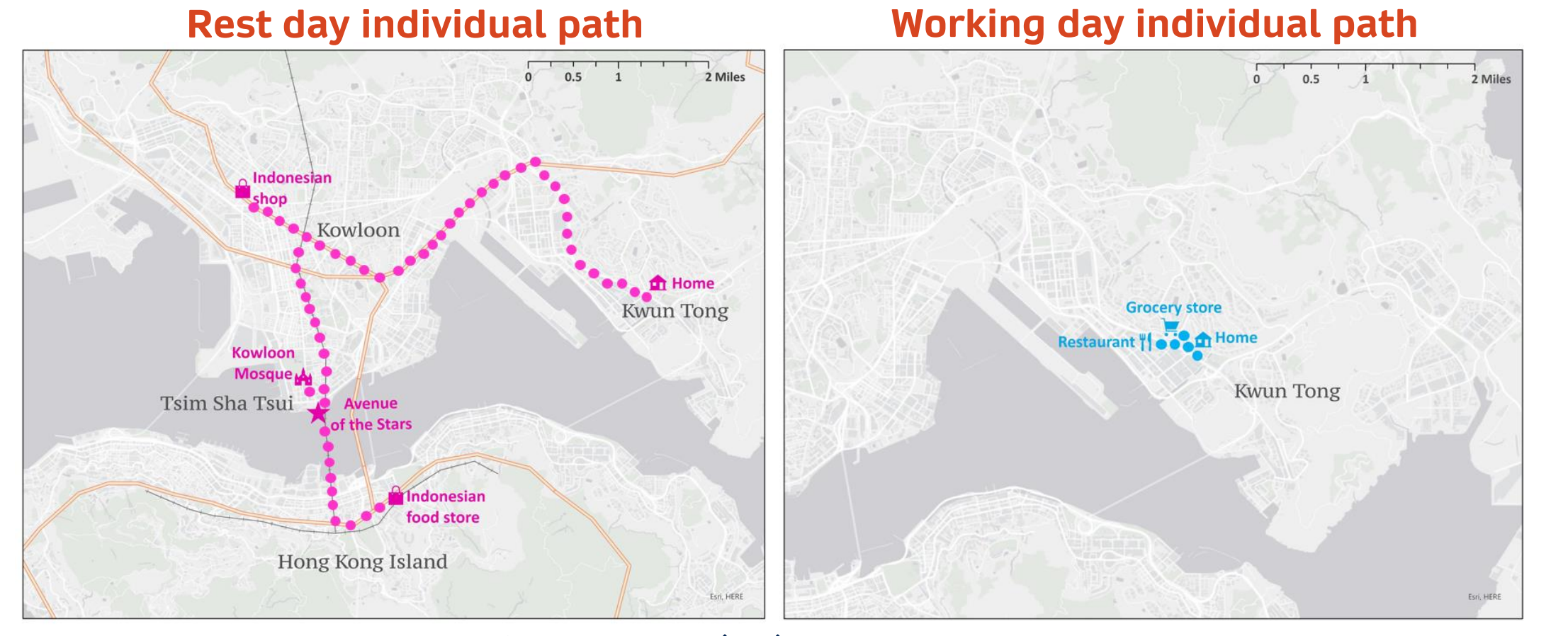


Figure 4. Example of individual (P7) path during rest and working days

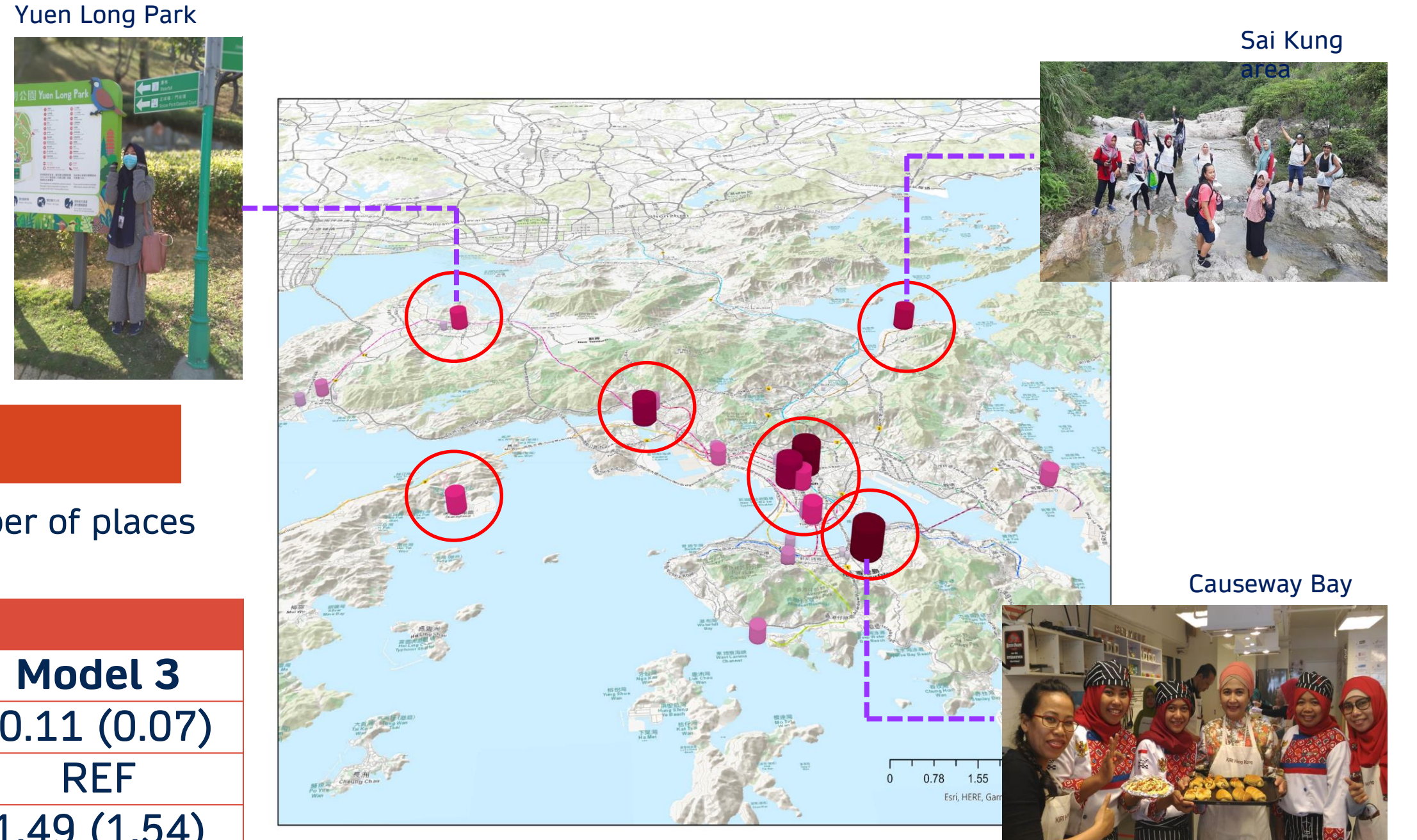


Figure 5. Hours of being outside and FDWs' activities during rest day *Pictures submitted voluntarily by research participants during virtual fieldwork 2020



Figure 6. FDWs' activities during rest day*

THEORETICAL CONTEXT

Space-Time Geography Framework and Gendered Space-Time Constraints

Individual space-time constraints (Hägerstrand, 1970):

- Capability constraints
- Coupling constraints
- Authority constraints

Time geography framework:

- A **fixed** activity is one that is not easy to reschedule or relocate, such as working.
- A **flexible** activity is an activity that may be easy to change such as shopping, recreating, and hanging out.

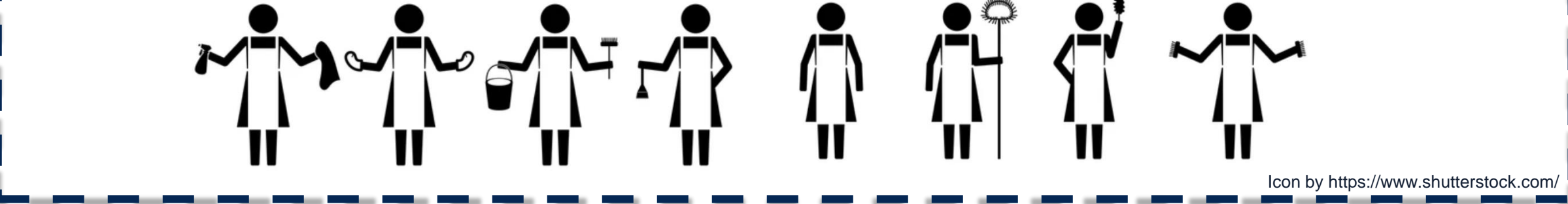


A domestic worker's time geography is dominated by **fixed** activity.

OBJECTIVES AND HYPOTHESIS

- To examine the space-time constraints in everyday lives experienced by women in domestic employment living in a foreign country.
- To evaluate the effects of FDWs' characteristics on activity space size, the number of places visited, and time spent outside the workplace and to analyze differences between work and rest days.

Hypothesis: (1) FDWs' daily activities and mobilities are predominantly fixed and dependent on their tasks; (2) FDWs' mobilities and activities (within space and time) differ between working and rest days.



CONCLUSION

- FDWs experienced restrictive space-time constraints during working days. **Their mobilities are primarily dictated by their work tasks.**
- During the rest day, FDWs could have **flexibility** to do any activities they want and visit any places they desire. Rest day has an important role for FDWs' lives when they can rest and refresh their minds.
- Hours of being outside, number of places they visited, and convex hull size are **significantly different between working and rest days.**

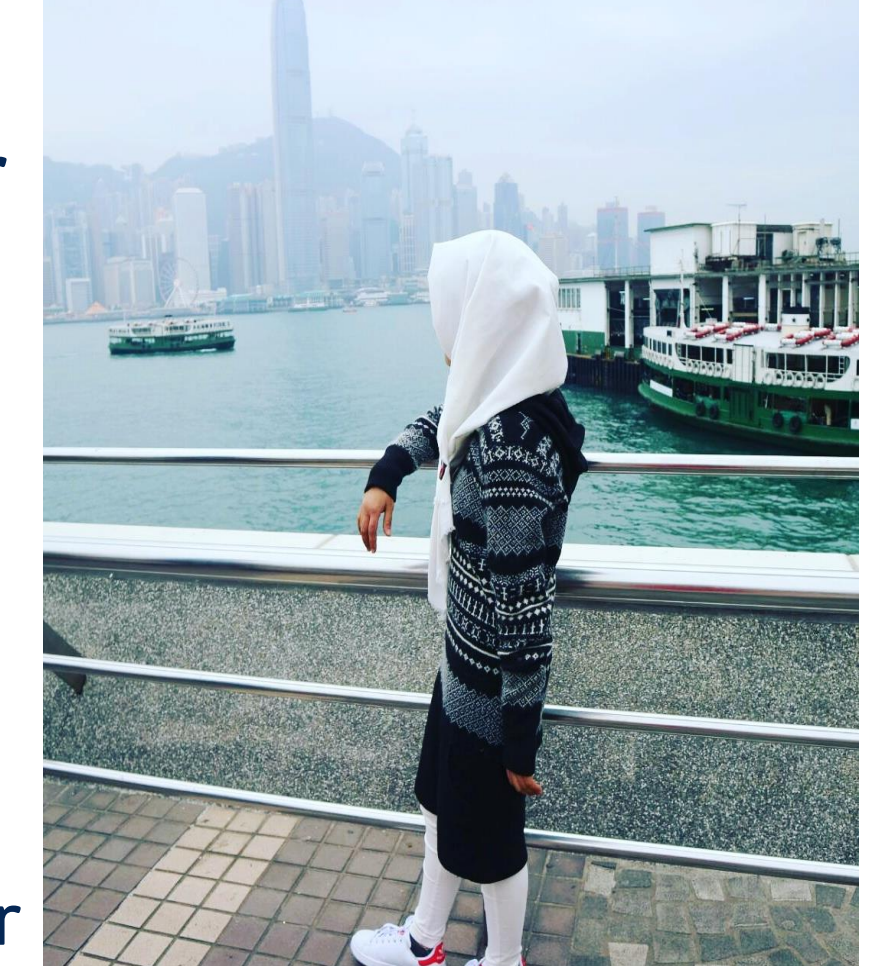


Figure 6. A FDW enjoyed her rest day at the Pier in Hong Kong*

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