

Investigation of the Informal Sector in South Jakarta

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Introduction:

Fieldwork Question:

Does the variety and number of street vendors (informal sector) increase or decrease with increasing distance from the Central Business District (CBD)?

Jakarta's informal sector employs roughly 70% of the megacity's labor force. (Osborn) It is also a major pull-factor in Indonesia's growing trend of centripetal movement, causing people to move from undeveloped rural areas to densely populated urban cities in the hopes of economic prosperity. This study was carried out in order to better understand the informal sector, which is evidently a significant aspect of life for Jakartans. In this study, street vendors are selected to represent the informal sector.

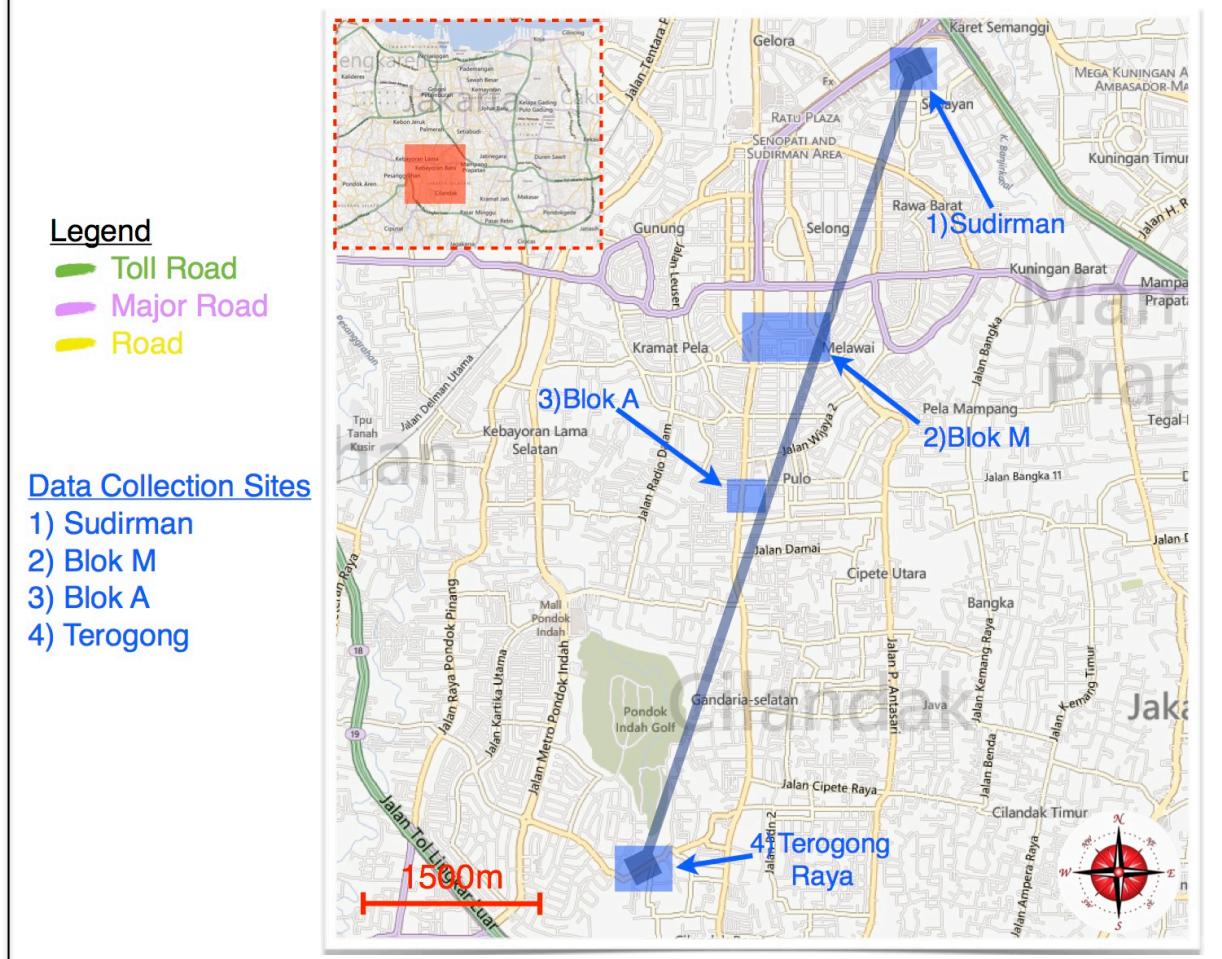
Figure 1: Aerial map of Jakarta indicating area of interest for this study.
("Jakarta, Indonesia")



Legend

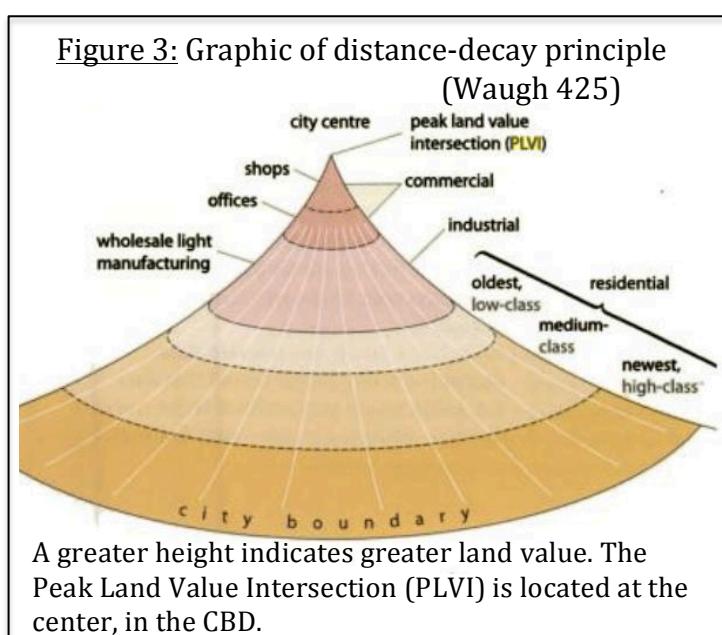
- Toll Road
- Major Road
- Road

Figure 2: Data collection sites forming a transect radiating out from the CBD to suburban South Jakarta. ("Jakarta Selatan, Jakarta")



Hypothesis:

With distance from the CBD, the quantity and variety of street vendors increases.



This investigation was carried out at four locations – Sudirman, Blok M, Blok A and Terogong – as annotated in Figure 2. The purpose of choosing points along a transect was to investigate the distance-decay principle and bid-rent theory. These theories suggest that the value of land declines with increasing distance from the CBD (Figure 3). This ties into the inference that residents who earn lower incomes

mainly reside on land of lower value, located further away from the CBD. Furthermore, it is inferred that these people who earn low incomes, and live at a distance from the CBD, create greater demand for the cheap goods and services that are provided by street vendors. These theories are incorporated in the IB syllabus under the Urban Environments (Option G), Urban Land Use sub-topic, Areas of Economic Activity.

Intro: 269 words

Methodology:

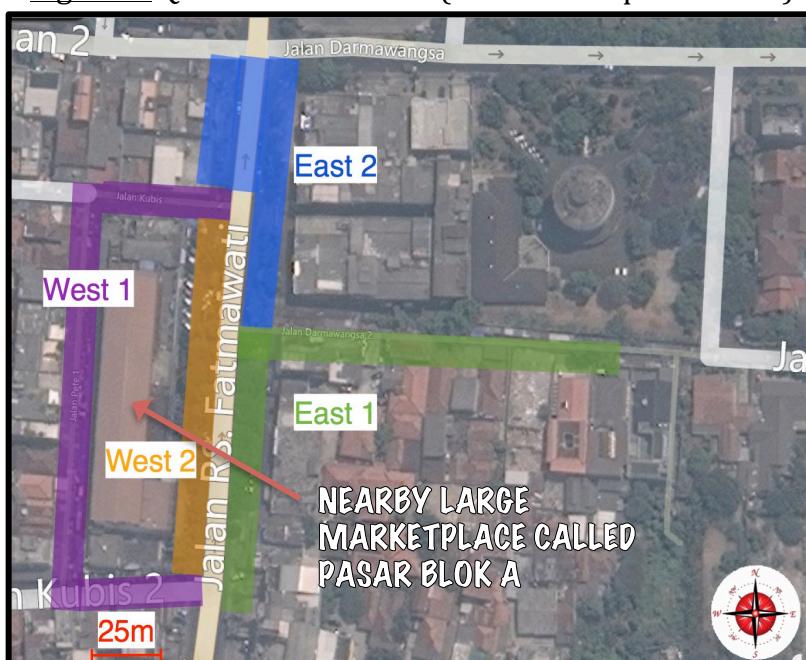
The transect line in Figure 2 is located near a large arterial road running north-to-south. The selection of these four data collection sites is an example of the line sampling technique, aiming to include each section of the transect line using representative locations. (Bowen and Pallister) The survey was conducted in the following order (see Figure 2 for locations on map):

- 1st. Blok A
- 2nd. Blok M (part 1)
- 3rd. Sudirman
- 4th. Blok M (part 2)
- 5th. Terogong

This route attempts to minimize delays due to Jakarta's notorious traffic jams. Furthermore, the survey of Blok M was split into two parts because two-way road access there is especially congested.

Our class split into four groups (namely East 1, East 2, West 1 & West 2) investigating four distinct quadrants of each data collection site. Each group consisted of up to 5 students and it was ensured that at least one person in each group could speak Indonesian. In theory, splitting up for more diverse and efficient data collection over a greater area would enable the survey to accurately represent the informal sector. Figure 4 illustrates an example of these quadrants.

Figure 4: Quadrants in Blok A ("Satellite Map of Blok A")



Example of how each location was split into quadrants

Firstly, each group tallied the number of vendors observed at each location, categorizing by the vendor types seen in Figure 5. This allowed for data to be collected on the type of informal sector activity taking place (transportation, fast food, etc.)

Each group also conducted 5 interviews at each location following the questionnaire in Appendix 1. They collected quantitative data on age, gender and the number of hours the street vendors worked and qualitative data about their work history. This data was organized in shared tables and spreadsheets.

Each group was also responsible for following a stratified sampling technique when conducting interviews. (Bowen and Pallister) This meant that the relative proportion of vendor types in each quadrant was taken into account when selecting which street vendors to interview.

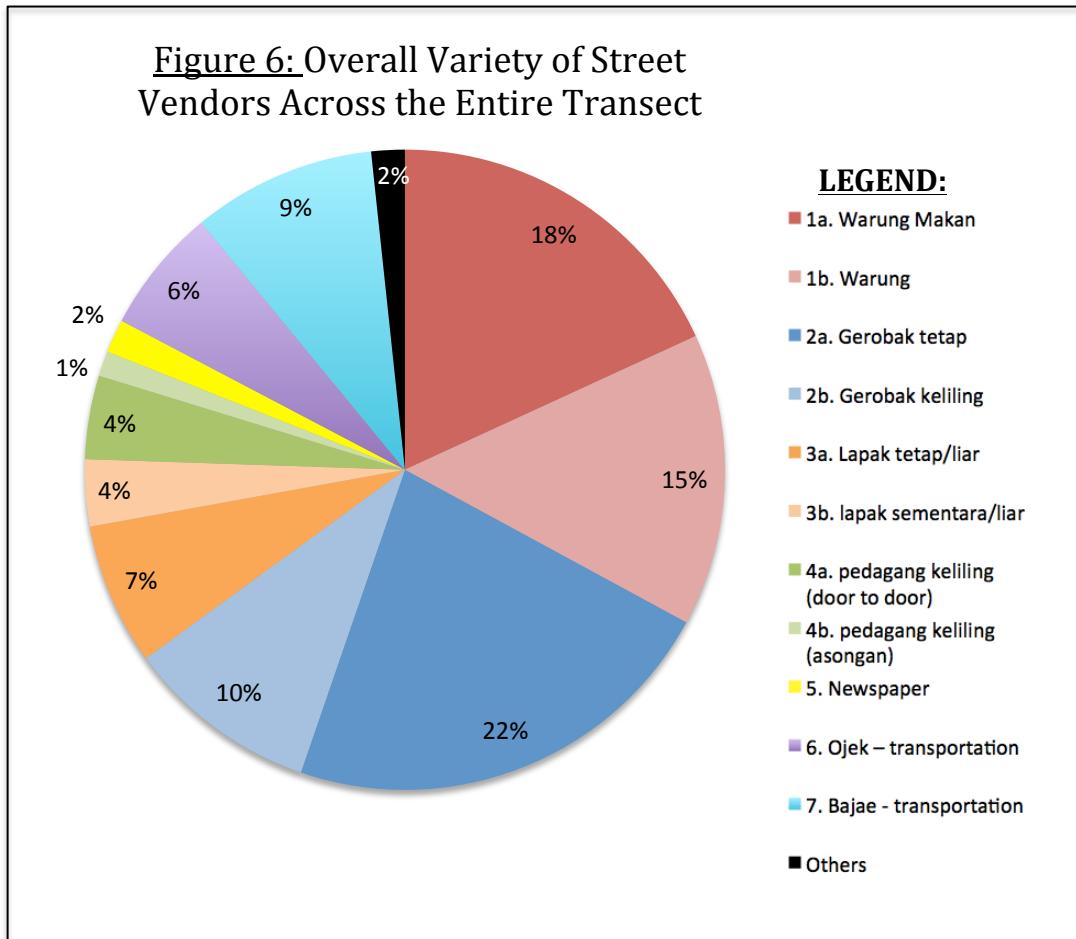
Figure 5: Illustrated table of street vendor types

| | | | | | |
|--|---|--|--|--|---|
| 1a. Warung Makan (cooked food) |  | 3a. Lapak tetap/liar (sale on a mat on the ground) |  | 5. Newspaper stall |  |
| 1b. Warung (other than cooked food) |  | 3b. lapak sementara (temporary, quick sale) |  | 6. Ojek (motorcycle taxi) |  |
| 2a. Gerobak tetap (push cart in the same place) |  | 4a. pedagang keliling (door to door) |  | 7. Bajae |  |
| 2b. Gerobak keliling (roaming push cart) |  | 4b. pedagang keliling asongan (standing sale, in one place) |  | 8. Other | N/A |

Methodology: 311 words

Data Presentation & Analysis:

Variety of Street Vendors:



One pattern in Figure 6 is that the most common street vendors across all sites are the warungs (1a. & 1b.) and gerobaks (2a. & 2b.) These street vendors serve both cooked and pre-packaged food, making up 65% of all informal sector activity in this investigation.

Secondarily, Figure 6 also shows that ojeks (6.) and bajae (7.) together make up 15% of the overall variety of vendors. Both these types of informal sector vendors deal in the transportation of a limited number people for short distances.

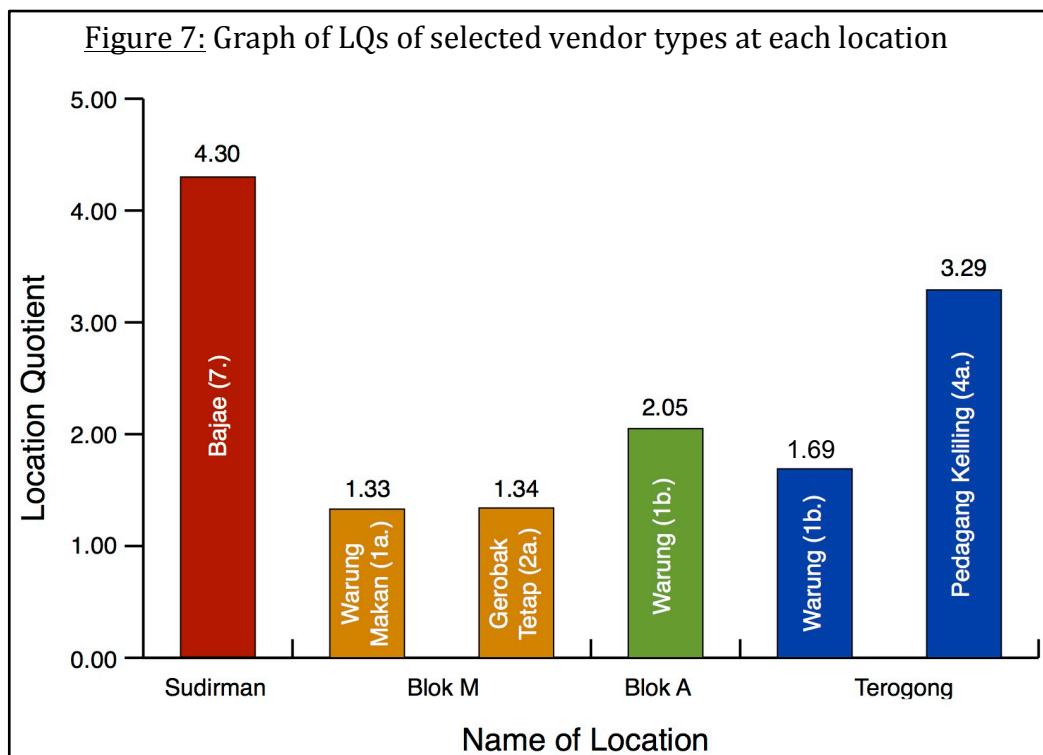
In general, these patterns suggest that the street vendors dealing in food and transportation are more common than others.

The pie chart also reveals the relative scarcity of pedagangs (4a. & 4b.) and newspaper stands (5.) across the entire transect. The 'pedagang' vendors deal in very specific types of goods, such as toys and household goods, while the newspaper stands supply only one product – newspapers. These types of street vendors are somewhat rare because the niche products they provide are easily available from popular convenience stores like Circle-K/7-Eleven.

Location Quotient:

Analysis of the raw data reveals some severely imbalanced quantities or 'concentrations' of certain types of street vendors between locations. For example, the numbers of gerobak tetap (2a.) vendors are spread disproportionately, with 36 vendors in Blok M, but only 2 in Sudirman (Appendix 2). Using the 'location quotient (LQ)' calculation, it was possible to quantitatively compare the concentration of a specific vendor type in a specific location with the average concentration in the whole region.

The raw data in Appendix 2 showed some prominent inequalities between the types of street vendors. These were chosen for further analysis through LQ calculations:



Next, in order to incorporate the element of 'distance from the CBD', measurements were made using the ruler tool in Bing Maps. ("Jakarta Selatan, Jakarta") These measurements were incorporated into Figure 8.

Figure 8: A graph representing number of street vendors with distance from CBD

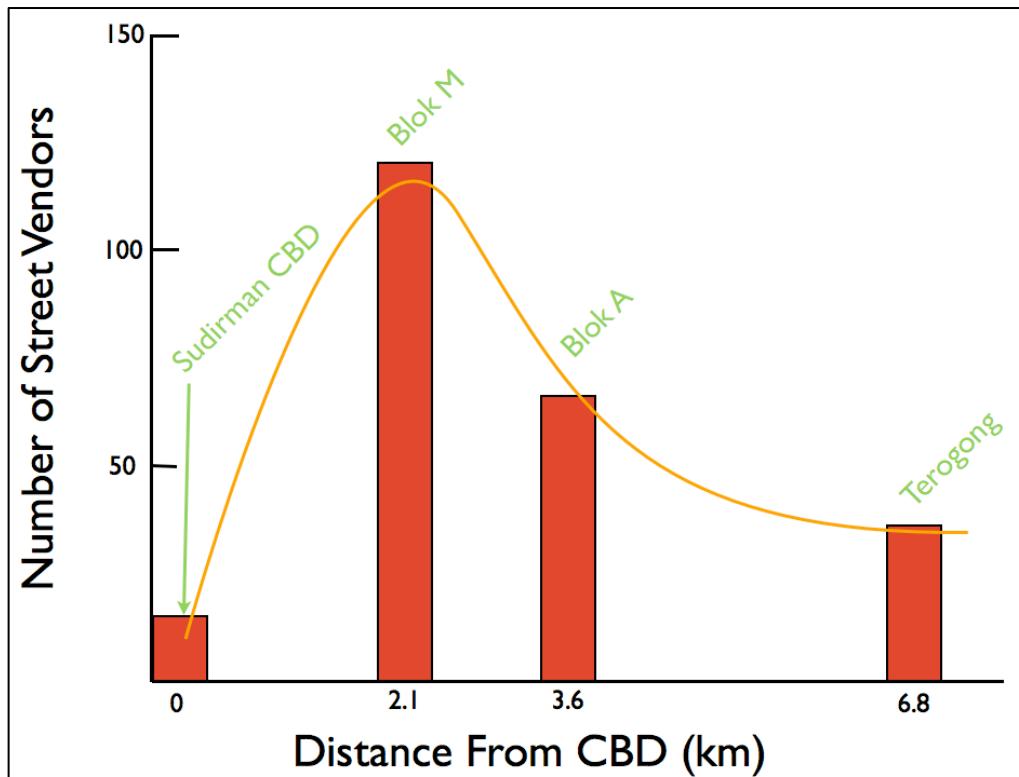
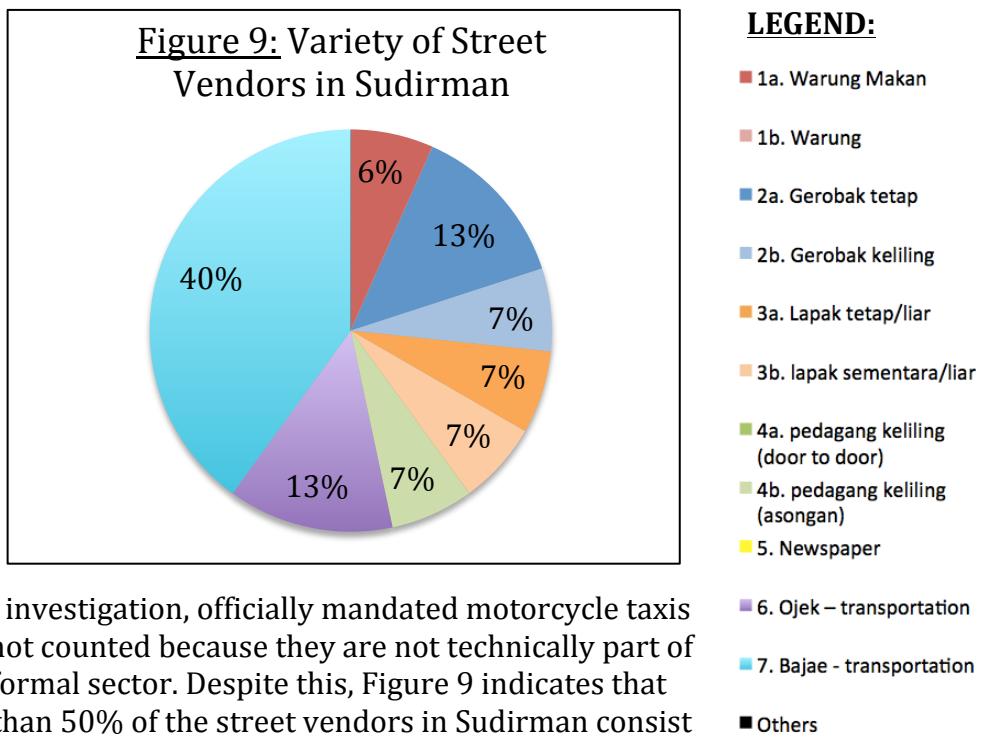


Figure 8 shows that the maximum number of street vendors was found at Blok M (120 vendors), which was located 2.1km away from the CBD. Conversely, the minimum number of street vendors was found at Sudirman (15 vendors), in the CBD itself.

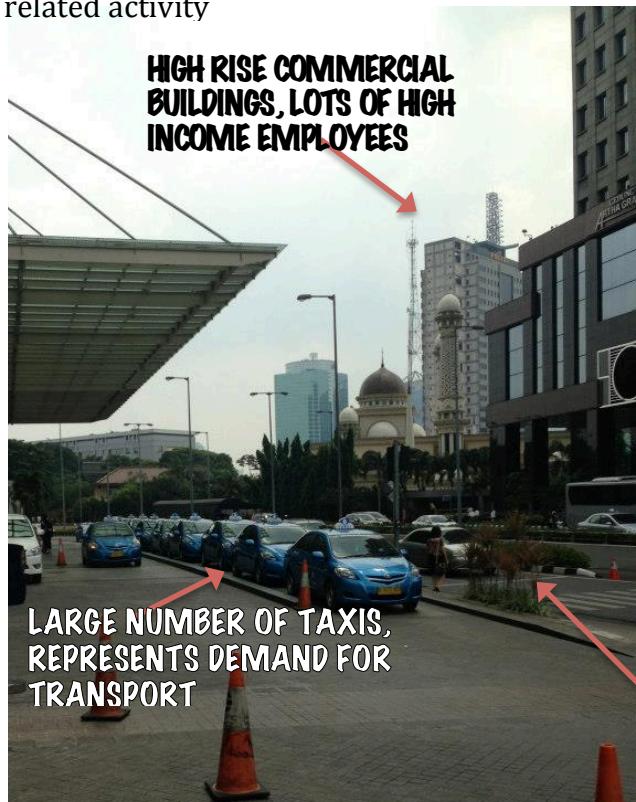
Figure 8 also shows a trend across the entire x-axis, as the distance from the CBD increases. The trend is that the number of street vendors sharply increases, reaching a peak at roughly one-third the length of the transect line. With a further increase in distance, the trend changes to a gradual decrease in the number of street vendors. The orange trend-line represents this pattern in a general sense.

Sudirman



In this investigation, officially mandated motorcycle taxis were not counted because they are not technically part of the informal sector. Despite this, Figure 9 indicates that more than 50% of the street vendors in Sudirman consist of ojek's & bajae's dealing in transportation. In fact, according to the LQ, the concentration of bajae's was more than 4 times greater than the average across the entire transect (see Figure 7).

Figure 10: A photograph of Sudirman showing the high level of transportation-related activity



Being the CBD, there is a great volume of commuters and business people moving in, out

and between commercial buildings in Sudirman for short-distances, which ojek's and bajae's are optimal for. While a great deal of this demand can be satisfied with the formal sector taxis (Figure 10), there still is some need for cheaper alternatives for low-income earners. In addition, there is generally very heavy traffic congestion in the CBD, which these informal sector alternative 'taxis' can cut through with ease. Logically, Sudirman is an attractive location for ojek's and bajae's to do business compared to other locations.

Raw quantitative data shows that Sudirman is the location with the lowest quantity of street vendors (only 15 vendors, Appendix 2). The main reason behind this is the strong enforcement of the law that bans street vendors in Sudirman. It's also worth noting that in the recent past there have been legitimate security concerns, such as bomb threats. This has warranted the need for very tight security (Figure 11). Lastly, there are several expensive locales in the area, indication that people have disposable income to consume better quality goods and services from the formal sector (Figure 12). All of these factors severely diminish the quantity and variety of street vendors found here.

Figure 11: A photograph of tight security measures that restrict informal sector activities

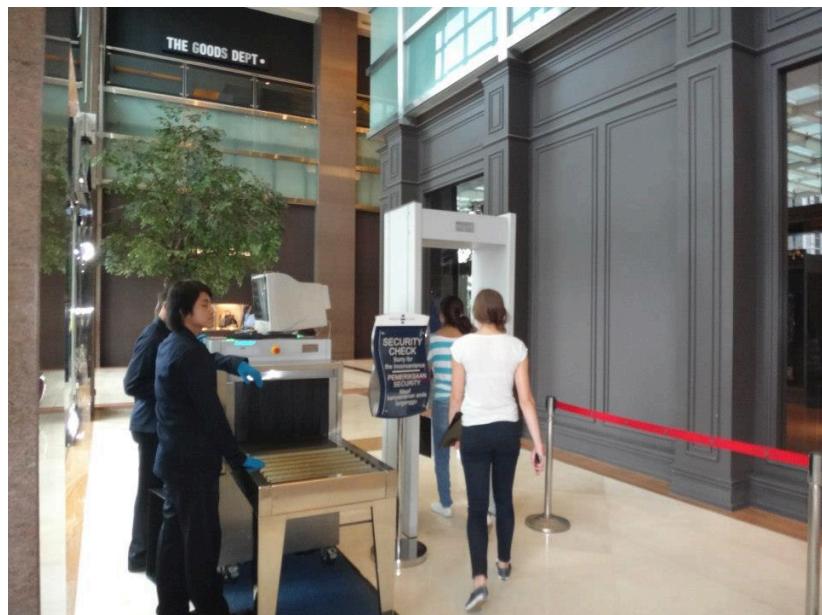


Figure 12: Evidence of capital investment and expensive venues, catering to higher income earners



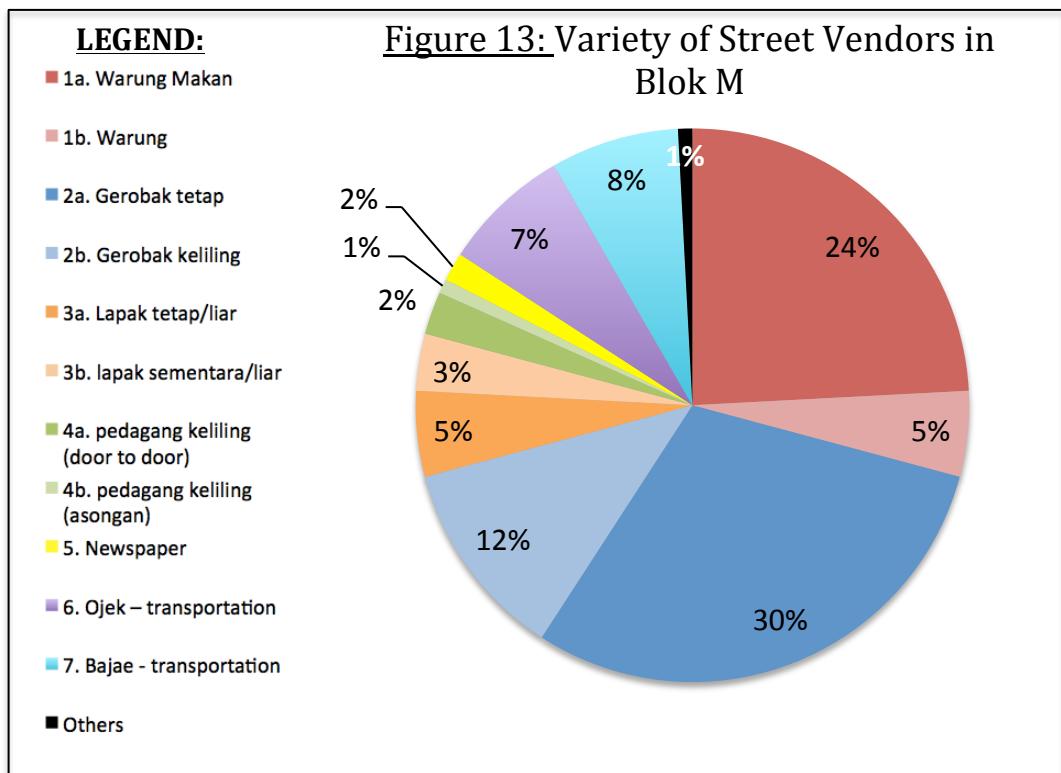
Blok M

Figure 13 illustrates that warung's (1a. & 1b., 29%) and gerobak's (2a. & 2b., 32%) dominate the pie chart for the variety of street vendors in Blok M. In addition, the LQ reveals that the concentration of these vendors is almost one-and-a-half times greater than the transect-wide average (see Figure 7).

Figure 14: A photograph of traffic and crowds at Blok M, high population



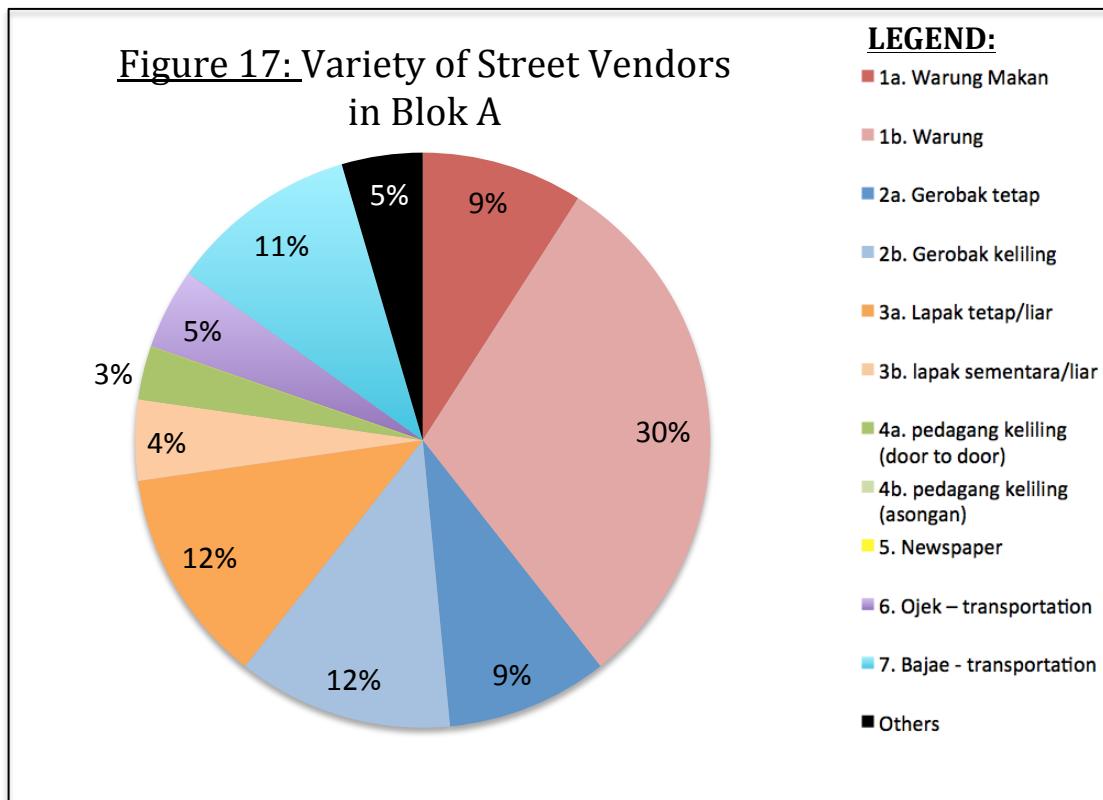
The increased number of food-related vendors is caused by the population of Blok M. The survey this location was conducted from noon till ~1pm, when the midday lunch rush was in full swing. In fact, one particularly enlightening interview with a gerobak tetap (2a.) vendor similar to the one in Figure 15, revealed that his primary reason for choosing this specific location was that hundreds of local office workers and students regularly came to any one of the dozens of food stalls during their lunch break. To his benefit, a queue of hungry employees quickly formed while the interview was being conducted. In addition, there is a regular supply of customers from the nearby bus terminal (Figure 16). From this interview and other observations, it is clear that Blok M attracts a large number of warung and gerobak vendors.

Figure 15: A photograph of a popular food and drink vendor, push cart.



Figure 16: A photograph showing possible sources of customers (R. Christian)



Blok A

The largest portion (30%) of the pie chart in Figure 17 points to the warung (1b.) variety of street vendors, which according to the LQ are twice as prevalent in Blok A than the South Jakarta average (see Figure 7).

Figure 18: A photograph of traffic incoming to the nearby marketplace



One possible reason for Blok A's high concentration of warungs is that this location is officially zoned as a marketplace (Figure 19). It is likely that this marketplace is a magnet for the informal sector to grow around, looking to compete with cheaper alternative goods. Here, there is an overlap in goods provided by the formal sector stores and informal sector warungs, yet both thrive on the large number of shoppers.

Furthermore, Blok A's high quantity of street vendors (66 vendors, see Appendix 2) is caused by the fact that a major 'radial route' across South Jakarta cuts right through here (see Figure 2). As annotated in Figure 18, this street carries a very large capacity of traffic, bringing a large volume of possible customers directly past street-side vendors in Blok A.

Figure 19: A photograph of numerous street vendors, with the famous marketplace in the background. (*Business – Pasar Blok A*)



Terogong

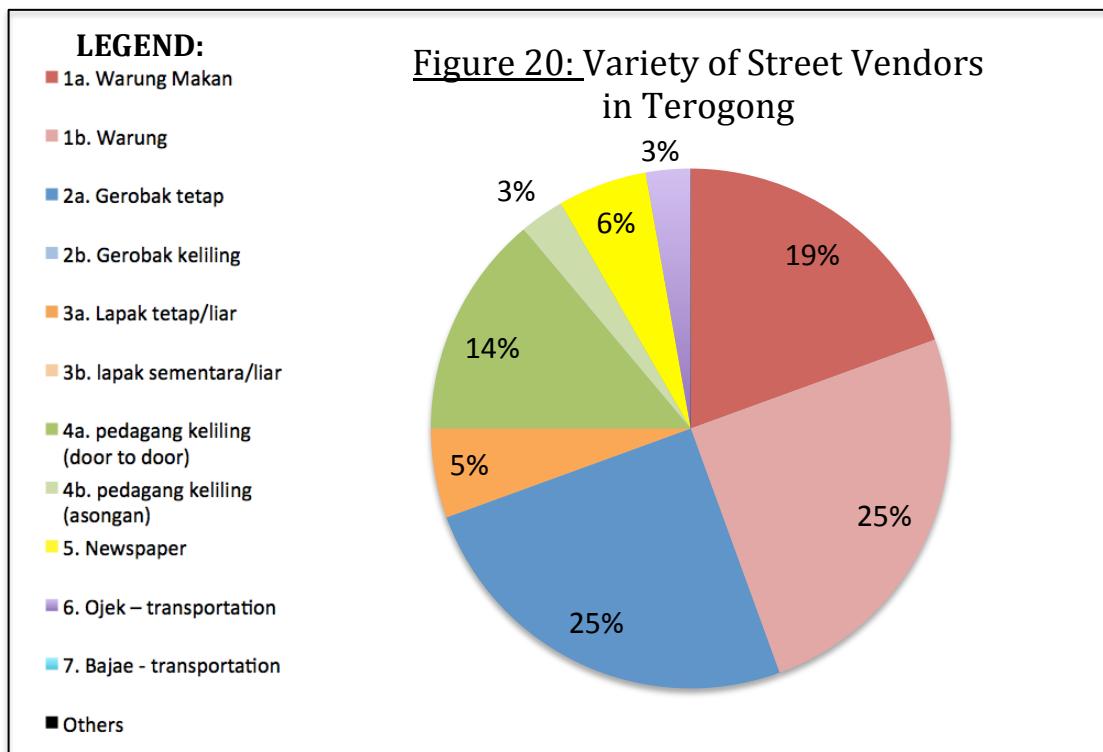
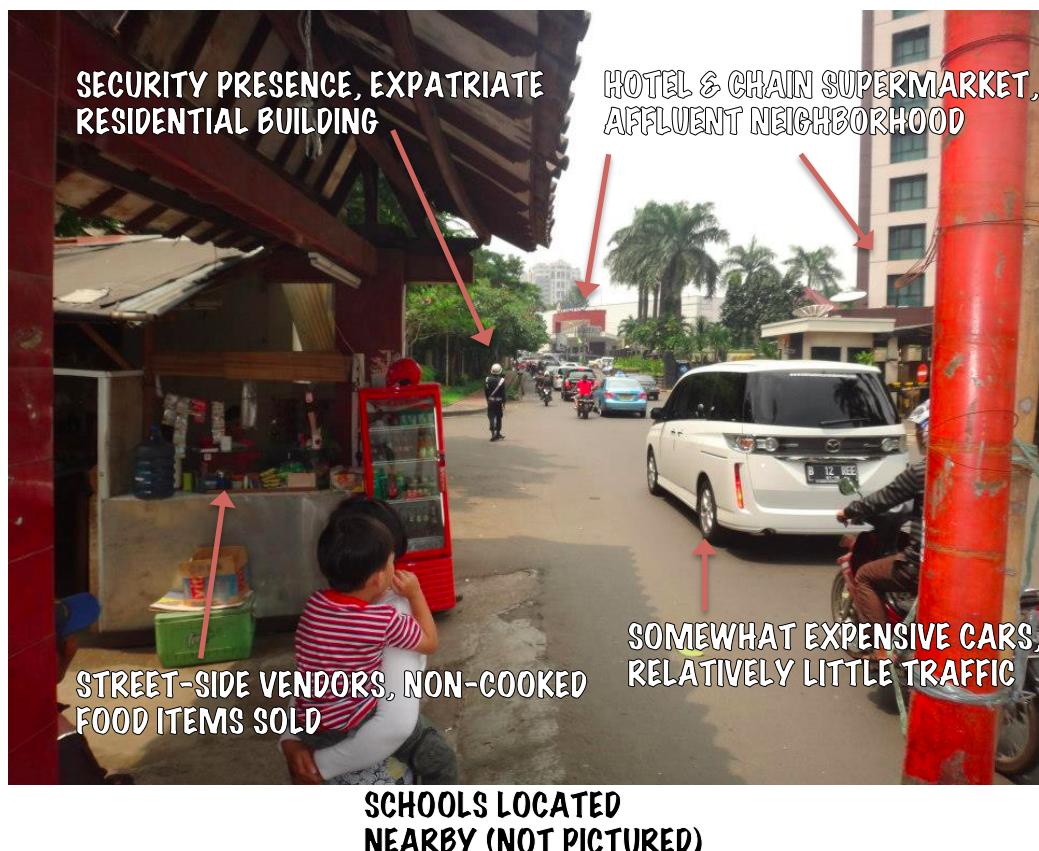


Figure 20 indicates that the majority of street vendors in Terogong are warung's and gerobak's (1a. 1b. & 2a., combined 69%), which are food-related vendors. The LQ exposes that the concentration of warung's (1b.) in Terogong is one-and-a-half times greater than the transect-wide average (see Figure 7).

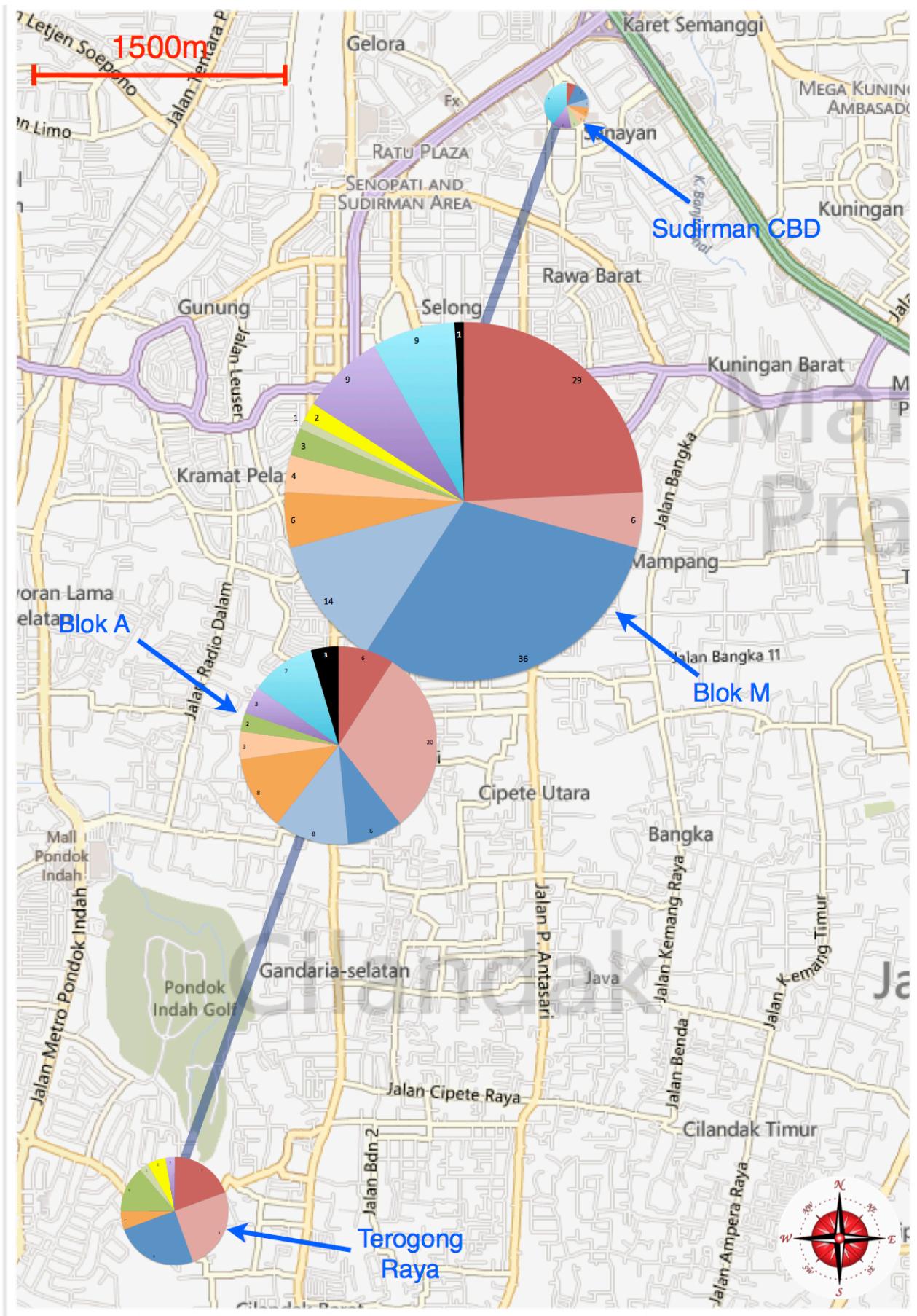
Figure 21: A photograph of the landmarks near this suburban main street



This is explained by features such as nearby schools that drive up the demand for convenient road-side stalls, as seen in Figure 21. During the survey, it was observed that school children had left classes to eat at a small warung makan (1a.) with cafeteria-style seating. A quick interview of the vendor revealed drivers and school staff with a lower income are also customers here.

Interestingly, the LQ also revealed that the pedagang keliling (door-to-door vendors) (4a.) were more than three times more concentrated in Terogong than average. One possible explanation for this is that Terogong is an upper-class residential neighborhood, as evident in Figure 21. The cooks/maids employed by these households purchase vegetables and other food items from the door-to-door vendors.

Figure 22: Pie charts showing the variety of street vendors, in proportion to the total number of street vendors. (“Jakarta Selatan, Jakarta”)

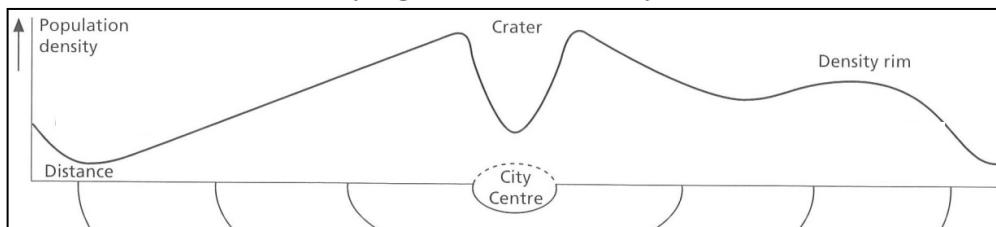


Conclusion:

The aim of this investigation was to examine the quantity and variety of street vendors in relation to distance from the CBD.

In terms of the quantity of vendors, the data collected only partly supported the hypothesis. Moreover, an interesting pattern can be seen in the varying sizes of pie charts in Figure 22 or the orange trend-line in Figure 8. The hypothesis assumes that the quantity of street vendors was dependent on the value of land around it. This assumption is limited because the informal sector works on land that the vendors do not own and do not pay taxes for. Instead, the evidence primarily suggests that the quantity of street vendors is more closely related to the population density of each location.

Figure 23: The theoretical population density curve plotted against distance from the CBD. (Nagle and Cooke 134)



A greater population density in particular locations would increase the consumer demand there. Following this, in locations where there was a strong demand for cheap goods and services (Blok M, Blok A), an increase in the overall quantity of street vendors was observed. This logic is further confirmed by the close resemblance of the trend-line to the theory set forth in Figure 23, albeit for a city in an MEDC. Indonesia is classified as an NIC, so it can be argued that some trends of more developed countries might still apply.

Based on the analysis of the data collected, no conclusion can be reached regarding the relation between the variety of street vendors and distance from the CBD. It was originally hypothesized that the variety of street vendors would increase with increasing distance from the CBD. The data, however, shows no such correlation between the two. Instead, analysis of the data shows that the demographics and physical features of the surveyed area were more important factors affecting the variety of street vendors, not distance from the CBD. For example, the proximity to schools and the wealthy residential neighborhood status of Terogong were factors affecting the types of street vendors found here.

To answer the fieldwork question, the quantity of street vendors begins to increase with distance from the CBD but soon decreases thereafter based on the varying population density along the transect. Meanwhile, the variety of street vendors neither increases nor decreases with distance from the CBD, but instead is determined by other features in the immediate vicinity.

Evaluation:

The conclusion leaves room for a better understanding of Jakarta's informal sector in future investigations.

Future investigations should improve upon the unequal physical area surveyed at each location. The error arises in the fact that Blok M was surveyed twice at two different times of the day. It should be kept in mind that traffic restrictions caused this 'double-dip'. The result of this is that the number street vendors observed at Blok M is much greater than other locations. This is a significant error that undermines the trends in the data, and thus the conclusions too. One way to eliminate this source of error is to treat Blok M as two distinct data collection sites. This would mean that the quantities of street vendors measured here would represent the real-world numbers more accurately. This improvement is definitely more suitable than removing all of the additional data collected at the second stop.

Another improvement for future investigations is to conduct the survey over a longer period of time. On the morning of this investigation, many street vendors had not yet set up their stalls, thus negatively affecting the results collected. Longer survey hours, perhaps over several days, would allow the experimenters to include street vendors that may not be at the sites on a single given day. An added advantage of this is that the surveyors will be better acquainted with the data collection sites, and will be able to conduct more insightful interviews and analyses. Finally, this improvement will also result in more reliable data simply because more data will be collected, particularly in areas such as Sudirman & Terogong where lower numbers were observed (15 and 36 street vendors respectively, Appendix 2).

Conclusion & Evaluation: 665 words

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Appendix 1:

Street Vendor Survey Questions:

Introduction:

My name is _____ . I am a student at Jakarta International School. For my Geography class I have to take a survey. Would it be okay to ask you some questions?

Questions:

Record if the vendor is a male or female and then;

1. How many hours a day are you working?
2. a) What time do you start each day?
b) What time do you finish each day?
3. Why are you located here in this area?
4. If Gerobak (push cart) or Lapak tetap (same place) or keliling (move all the time)?

Bahasa Indonesia Translation of introduction and questions:

Permisi..

Nama saya _____ dari Jakarta International School. Sedang survey untuk tugas Geografi. Boleh saya bertanya?

1. Berapa jam dalam sehari jualan?
2. a) mulai dari jam berapa?
b) selesai (sampai jam berapa)?
3. Kenapa memilih tempat disini?
4. Apakah selalu **tetap** disini atau suka **keliling** ?

Appendix 2:

Raw data table of quantities of each vendor type at the four locations

| Vendor Type | Sudirman | Blok M | Blok A | Terogong | TOTAL # of vendors of each variety |
|---|-----------|------------|-----------|-----------|------------------------------------|
| 1a. Warung Makan* | 1 | 29 | 6 | 7 | 43 |
| 1b. Warung* | 0 | 6 | 20 | 9 | 35 |
| 2a. Gerobak tetap* | 2 | 36 | 6 | 9 | 53 |
| 2b. Gerobak keliling* | 1 | 14 | 8 | 0 | 23 |
| 3a. Lapak tetap/liar* | 1 | 6 | 8 | 2 | 17 |
| 3b. lapak sementara/liar* | 1 | 4 | 3 | 0 | 8 |
| 4a. pedagang keliling* (door to door) | 0 | 3 | 2 | 5 | 10 |
| 4b. pedagang keliling* (asongan) | 1 | 1 | 0 | 1 | 3 |
| 5. Newspaper* | 0 | 2 | 0 | 2 | 4 |
| 6. Ojek* – transportation | 2 | 9 | 3 | 1 | 15 |
| 7. Bajae* - transportation | 6 | 9 | 7 | 0 | 22 |
| Others | 0 | 1 | 3 | 0 | 4 |
| TOTAL # of street vendors at each location | 15 | 120 | 66 | 36 | 237 |

The table above includes total number of street vendors at each location displayed in blue. In addition, the total number of each street vendor type is displayed in green.