WORKPLACE ACCESSIBILITY AND SPATIAL INEQUALITY
The case of Östra Sjukhuset, Göteborg

Erik Eldér, Ana Gil Solá, Anders Larsson
Department of Human and Economic Geography, University of Göteborg, Sweden

1. Uneven conditions for mobility and workplace accessibility

Travel opportunities are unevenly distributed between different groups in society, as well as across space. Gender and income are two important factors to explain this pattern (Church, Frost & Sullivan 2000). As indicated in figure 1, women are more likely than men to use public transport, walk or bicycle, and less likely to drive a car in order to get to work. This has time-spatial implications since car allows for less time to be spent on commuting. The different modal choices made by women and men are also reflected in the fact that Swedish women commute at considerably slower speed than men, which further enlarge the gender differences accounted for in figure 2 (Gil Solá 2009a). Furthermore, women and men have different labour markets, with different spatial characteristics (Gil Solá, 2009b), that influences the spatial commuting patterns. Women more often work in central parts of the city and at health-care sector establishments, while men are overrepresented in, for instance, peripheral industrial areas.

2. Workplace accessibility: the case of Östra Sjukhuset

By using data on individual workplaces and places of residence this poster aims to analyse the interrelation between mobility and spatial accessibility. We have selected the single largest place of work in a typically female dominated sector, in this case a hospital (Östra sjukhuset) with 4500 employees. It has a majority (85%) of female workers. There is furthermore a clear income difference where the average income of women is 57% of the male average. It should be emphasized that this is a specific case and that workplace accessibility, space and gender is a highly complex issue where transport is only one of many factors of explanation (Gil Solá 2009b).

3. Results and discussion

- The spatial pattern on map 1 illustrates a concentration of commuters close to the place of work. Within walking distance (3 kilometres) we find 19 % of the employees. One observation is that commuting is reduced drastically with increasing travel time.
- Map 2 illustrates that there is a relatively small area in which employees without access to a car may live without having to spend significantly longer time commuting with public transport. For groups with limited mobility resources, this creates spatial restrictions on the home-workplace accessibility dynamics.
- As illustrated in figure 3, the calculated travel-time indicates that 30% of the employees save up to 30 minutes return trip and another 50% save between 30-60 minutes per day by using car instead of public transport.

References

Methodological notes
A GIS-based model is implemented, based on the database GILDA holding data for every individual in Sweden including the coordinates of residence and work. The custom made software T300 is used to calculate travel time between cells of 300x300 meters. Travel time estimates by car and public transport use inputs from the Swedish national road database (NVDB) and public transportation travel time data. In this specific case, the methodology allows analysis of detailed potential travel time between the place of residence and the place of work of all individuals employed at Östra sjukhuset.