COST Action TU1209

Transport Equity Analysis: assessment and integration of equity criteria in transportation planning (TEA)

WS1 N° 1
Workshop on equity challenges in the decision making process

Minutes

Date:
11-12 December 2013
Venue:
TECHNION Israel Institute of Technology
Grand Water Research Institute building
Haifa City
Haifa, Israel

Local host: Yoram Shiftan (shiftan@technion.ac.il) & Bat-hen Nahmias-Biran
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Wednesday Dec 11 (14:30 – 18:00)

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Wednesday Dec 11 (14:30 – 18:00)

1. Welcome

Yoram Shiftan welcomed to all the Action Participants and stakeholders to the workshop

2. Outline for the first TEA Action Workshop

Floridea di Ciommo presented the status of the Action to the WS participants (see annex WS1-1), focusing on the objectives of the action, the theoretical framework the action is developing, and the different traditional methodologies applied in transport planning that are not applicable in the equity analysis or need be corrected or improved. She also explained the structure of the workshop: scientific sessions and panel groups.

3. Plenary presentation on “results on the equity statements definition: new steps”

Karel Martens presented “results on the equity statements definition: new steps”. It included the three statements of equity which were studied in Madrid, during the WGs meeting 1. He enunciated each statement and the observations made by the TEA Action panel groups in Madrid. After that he reformulated each statement (the presentation by Karel Martens and Sigal Kaplan is in annex WS1-1).

4. Breakout session 1: scientific papers by young and senior researchers.

Three Scientific parallel sessions were held. The sessions were: “transport use and equity: some methodological approaches”; “private and public transport: debating some equity issues”; and “moving costs and accessibility: dealing with equity”. (Presentation abstracts are in annex WS1-2).

5. Report of parallel sessions by moderators

Elisabete Arsenio presented the main topics of each parallel session and introduced the moderators.

Imre Kerseru (moderator in "transport use and equity: some methodological approaches") reported the outcomes of the session:

The objective of this scientific breakout session was to help to identify equity transport indicators which can then be presented to the stakeholders. The papers were submitted in response to the internal call for papers circulated in November 2013. The papers were related to methodological approaches to transport use and equity. The following five papers were presented in this session followed by a discussion:

- Karel Martens, Floridea Di Ciommo, Anestis Papanikolaus "Incorporating equity into transport planning: utility, priority and sufficiency approaches"
- Bat-hen Nahmias–Biran and Yoram Shiftan: “Incorporating equity considerations in transport projects evaluation: developing a new measure"
- Pierluigi Coppola “The marginal access cost: a new indicator for sustainable urban development”
- Bat-hen Nahmias–Biran, Karel Martens and Yoram Shiftan: “A justice-theoretic approach to the distribution of transportation benefits: Consequences for project assessment"
- Floridea Di Ciommo, Daniel de la Hoz and Luis Angel Guzman: "Exploring users intertemporal preferences for measuring transport social equity effects"

In his presentation, Karel Martens questioned the widespread notion that the objective of transport planning is to support economic growth. Transport planning should instead improve the ability of people to participate in social activities. He presented three approaches to transport equity. The utility rule values improvements in accessibility irrespective of the already achieved level of accessibility; according to the sufficiency approach, improvements are not a priority for those above the sufficiency line (satisfactory access to participation in social activities); while the priority rule considers improvements more beneficial
for those with lower accessibility. He recommended using the cost effectiveness analysis instead of the cost-benefit analysis for the evaluation of transport projects. A debate was sparked off over the role of income as a proxy for equity and considering environmental issues when dealing with equity.

Bat-hen also criticised traditional CBA for being susceptible to optimism bias due to the lack of differentiation between population groups with different levels of mobility. They proposed a new indicator that reflects the improvement in accessibility based on the theory of justice. ‘The value of accessibility gains’ can replace the value of time to ensure the equitable distribution of resources. She also presented a case study that demonstrated that the new measure gives more weight to lower income people with low accessibility.

Pierluigi Coppola presented the marginal activities access cost as a new indicator to measure accessibility. The indicator is less complex and provides a clear unit of measurement that is easy to understand for stakeholders. It is based on the land use and transport interaction (LUTI) framework and considers both internal and external costs. A case study of Rome was presented to demonstrate the application of the indicator on the accessibility of Rome’s city centre. During the debate it was remarked that it still needs to be clarified how this measure could be related to equity.

In the fourth presentation, Bat-hen presented an ongoing research on the justice theoretic approaches to the distribution of transportation benefits. Utilitarianism, Égalitarianism, Rawls’s approach, Walzer’s approach, Sufficienitarianism, and the Capabilities approach were presented. The consequences to transportation and project assessment were highlighted.

In the final presentation, Floridea di Ciommo also proposed a redefinition of the CBA. Instead of using a unique discount rate, different discount rates could be used for various transport stakeholders with different intertemporal preferences (operators, society, users). This way the winners and losers of transport interventions can be highlighted. In this research, benefits have been calculated for different income groups. A new welfare function has been defined using different social rates.

Each presentation was followed by a lively debate where some of the statements were challenged and recommendations for further consideration were given to the paper authors.

The following conclusions can be drawn from the breakout session concerning equity indicators:

- One of the major themes of the papers was to redefine cost-benefit analysis by replacing the value of time and using differentiated discount rates. It was also suggested that CBA is not at all appropriate to assess equity and it should be replaced by the cost effectiveness analysis.
- The relationship between equity as well as land use and transport interaction was considered as paramount since accessibility depends on the land use system to a large extent. Therefore an integrated approach has been suggested that considers the relationship between land use characteristics and equity.
- Some novel and radical approaches have been suggested to break traditional methodologies: e.g. the sufficiency and priority approaches.
- Accessibility is key in the assessment of equity. It is closely related to the ability of participation in social activities. The way we can measure accessibility has consequences for the way equity can be assessed.

Joseph N. Prasher moderator of the session “private and public transport: debating some equity issues”. highlighted the main contributions of the papers presented:

- Karen Lucas and Floridea Di Ciommo: "Evaluating the spatial and social equity effects of road pricing in the European urban context"
- Jean-loup, BOUCQ Elise, CORNUT Benoît and HIVERT Laurent: Social diffusion of car ownership and use in the metropolitan area of Paris since the mid-70's
Karen Lucas studied the equity effects of road pricing in Europe. Jean Loup Madre presented the saturation levels of car ownership in different groups. Claire Papaix presented a comparison of carbon emissions among Lille and Stockholm and finally Sigal Kaplan summarized the first stage of a future research about how young people afford transit and an approach to measure young people's behaviour.

Andrés Monzón moderator of the session “moving costs and accessibility: dealing with equity” reported the main themes of 4 papers related with the application of equity policies.

- Arsenio, E.; Nahmias-Biran, B.; Shiftan, Y.: “Equity in Public Transport: an intractable policy problem or a set of methodological challenges?”
- An Neven “Development of a Business plan for an Accessible Mobility System Flanders”
- Eran Ben-Elia and Yodan Rofè “How to Measure Accessibility Inequality”
- Itzhak Benenson, Dmitry Geyzersky, Karel Martens “Transport Accessibility from a Human Point of View”

The first one, presented by Elisabete Arsenio discussed that equity has different dimensions to look at: short term and long term visions. Forecast analyses are needed to estimate the effects of policy measures in future scenarios. In the second presentation (by An Neven) proposed a new approach for evaluation: equity footprint. The third presentation (combined 2 papers) was a complete paper of different methods used to assess transport equity in Utrecht.

Thursday Dec 12 9:00-18:00

1. Welcome

Yoram Shiftan welcomed the participants to the workshop

2. Expected results from the Equity indicators Workshop

Floridea Di Ciommo presented: TEA Action: expected results from the Equity indicators workshop.

3. Plenary presentation: “How to define equity indicators”

Karen Lucas presented “How to define equity indicators: where we are?”. The main points she addressed were (the complete presentation is in see annex WS1-1):

- Massive social inequalities across countries, but the mobility gap goes beyond the social gap (certain people are disproportionately disadvantaged by the transport system since more money is spent on roads compare to soft modes, benefiting to the richer classes)
- Transport advantages can run against social advantages and vice-versa. Need for defining output indicators, depending on 1-the context/object (the car in itself is not unequal); 2-on the key transport objectives (fair allocation of transport resources, equal opportunity to be mobile; reduce adverse effects of transport, i.e. pollution, etc.; inclusion of equity in transport decision making; provide legal recourse); 3- on the part of travel behavior at focus (number of trips etc. purpose etc.); and on 4- the income, employment status, activities, etc. of the HH (Disaggregate to the maximum the accessibility indicators => consider even the case of old people going shopping at 1pm when there is no bus available)
- Will the defined indicators remain? Are sensible to change?
- Which impact shall be measured by the indicator? Do not confuse problems with employment
(social inclusion etc.) with transport equity indicators. Accessibility is a good start but not the panacea (ex. multiplying the number of bus stops increases accessibility).

- find the right measurement framework (when, what, to which frequency etc.; see Miller and al 2013) => give the simple toolkit to the stakeholders (have different perspectives)
- The larger effects on health or well-being should also be part of the equity in transport’s indicators (but the limit is very thin)
- Does it exist in detail in transport official guidelines?

4. Presentations by stakeholders

Former Deputy General Manager and Director of Public Transport, the Israel Ministry of Transport, Yehuda Elbaz: The Equality Duty and Equality Assessments in Public Transport Planning. (Presentation in annex WS1-1).

Some of the main ideas of his presentation were:

- Target of the policy maker (NB: the ministry of transport at the central government is also the transport authority in Israel; the local administration holds a very limited role) to improve mobility: improving opportunities for all, for a better equality
- The biggest challenge in Israel (as for all developing countries): disconnect economic growth from car use. This is particularly challenging because the mass transit system is not well developed (the country is very small and the population is very concentrated), the increase of motorization in Israel is very large (22% increase in the past four years) and roads are about to reach a saturation point
- Good measure of equity: the strong correlation between HH expenditures in transport (especially fuels) and revenues (especially for the lower deciles). Indeed, only the lower deciles pay the negative externalities while the richer classes are using transport system the most (the car since there is the mass PT system is very weak)
- Raising PT transit fee increase inequality even more and is not a solution
- What the transport administration is doing in Israel:
  - move people to the CBD
  - Increase PT subsidies (in order to absorb the increase of the fuel cost and to keep the recovery cost ratio constant). A new Flat fare system has been implemented in 2010 (the periphery is winning from the system and individuals from the central area are paying)
  - Improve PT access to disabled persons (new law for that)
- The second set of objectives deals with the adaptation of the system to people’s need: Israel is a melting pot of populations from all over the world (especially Ethiopia and America) with very particular needs from the PT point of view (Arabic minority, ultra-orthodox Jews, Bedouins, students and social aspect of mobility: the line to the technical college was very quickly crowded, elderly people, gender situation: women do not work because they don’t drive and vicious circle, religious status, night life: 15% new passengers in the night bus patronage every year, rural area, etc.)
  - How to make the travellers’ ultra-specific needs compatible with the PT system?
  - NB: management of induced demand?

Rebecca Shliselberg presented: Transport and equity: a civil society perspective (the presentation is in annex WS1-1)

5. Open discussion on the stakeholder’s perspective

Yoram Shifman moderated this discussion. The main discussions were:

- Activists’ principles: diversity of ideas and opinion (allowing people to make their own choices, to be able to get around is as basic as health or education; democratization of knowledge)
- PT is a regulated industry □ the government should focus more on what the public needs rather
than on what the bus operators are fighting for; and all the stakeholders should be involved in the decision process to emulate it (the system is too centralized in Israel) => need for a value based policy that learns to listen (people would just like to cross the street sometimes)

- Spatial justice component of transport policy: impact housing (housing mean access to jobs, activities, etc.) and land use planning (what’s the interest of moving people away from their jobs for then making them going back and forth every morning => needs for policies to be more integrated)
- Budget aspect: new long distance project (delivers attractive cities, close the spatial gap)=> but increase expenditures for the ministries (at the expense of other social expenditures)
- Short trips mobility in Israel: 10% of the car trips in Israel accounts for 50% of the vehicle km in the EU: penalizing shorter trips by car is a priority;

Outcomes of the discussions:

- Increasing the mass transit system to level up accessibility to Tel Aviv but when the decision goes to the decisional level (local) it gets very hard to bring it up; not accepted from local communities => how can we bring up to the politicians the question of short trips? (Not a priority for them, leading to massive waste of money).
- The focus should be first to make cities “livable” and transport policy should derive from this (not only on a project basis).
- Communication is key (Politicians only care if the medias do): public opinion and journals talk louder than the ministry (or transport researchers and consultants). Regional political authorities should be embedded (as done in the US) so that they will better influence higher levels (politicians). Larger projects (ex. high speed rail in the UK) can be extremely expensive and this is not equitable, since it benefit mostly to the business.

Final remarks:

- Are the equity tools ad hoc in your profession? Or do they exist on beforehand? (Y. Shiftan)
- The same movement has occurred in Madrid (F. Di Ciommo), but contrarily to Israel (where it actually came from the street) transport was a really marginal argument.

6. Breakout session 2: panel groups discussion on TEA Action case studies

The Workshop participants participated into four parallel panel groups (PG).

7. Plenary Session of breakout session 2

PG1: Equity and transport at national scale lead by Zeev Shadmi (Israel Ministry of Transport) and Karen Lucas, Conny Louen rapporteur.

Introduction of Mr. Zeev Shadmi (Israel Ministry of Transport) Mr. Shadmi presented some current transport projects. Based on a debate about social justice in Israel especially high speed railway systems are discussed. Therefore this panel group focused in their discussion mainly on high speed railways in different national contexts.

Based on this debate the lacking definition of equity was raised and that it should not be about economic balance (so that paying more taxes means to get more services). Instead it should be about an minimum of accessibility for everyone and that we than should speak more about walking and cycling, which are modes where more people have access to and especially low income groups. We then discussed that it is about the allocation of transport in general and the role of policy makers to reallocate resources to achieve equity – in the specific context (e.g. cultural/national specific situations). So the national context influences the necessity on the national scale and requires specific policies. Therefore it would be interesting to have also national case studies additional to the case studies on city level.
PG2: Madrid, lead by Carlos Cristobal and Sigal Kaplan, Anu Siren

Carlos Cristobal (representing the public transport authority in Madrid region) did a presentation of the Madrid case. The presentation was followed by a discussion on ‘How to integrate equity issues in planning in Madrid?’

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Summary highlights of the presentation:

- Madrid area - 179 municipalities that vary in size
- Transport modes available are metro, urban buses (Madrid municipality, other municipalities), suburban rail, metropolitan and regional buses, light rail system, big bus interchanges – highly integrated system
- Daily 15.2 million trips. Modal split even between walk/car/PT. Walking is important as sidewalks and public spaces are culturally central arenas of various social acts and interactions. In Madrid, there are 3 rush peaks.
- Financial crisis has affected the trip destination as well as mode use.
- Unemployment rate ca. 19% (for foreigners ca. 32%); employment 64% in 16-64 yrs; population 65+ makes up 15.4% (forecasted 19.3% in 2021); 22.3% not completed basic education;
- Travel card – reductions are age based (under 23/23-64/65+). Young -1/3 reduction; old 12.30 euro pr month
- Social fares: large families 20-50%; disabled people 20%; those with low-cost housing
- At the times of economic crisis, benefits are not omitted but fares are increased. Equity is a difficult topic during economic hardship
- 97.7% of the Madrid municipality population lives max 300m from a bus stop. And 91.2% lives max. 900m from metro stop.
- Accessibility
  - 66% metro
  - 100% all buses (urban (madrid&others), metropolitan, regional)
  - 55% suburban train stations
  - 100% light rail stations
  - 100% big bus interchanges
  - Mean headway: metro 4 min, urban buses 80% less than 10 min;
- Subsiding travel cards: 67.19% young; 62.58% normal; 76.23% old
- Older persons have a high use of travel card

Discussion points:

- Tel aviv system similar to Madrid (price reductions, better coverage)
- An interesting view would be an analysis who gains who loses. The more time you buy, the larger discount you get. Discussion of e.g., large family discount.
- Madrid case/new perspectives: how to measure equity; subsiding tickets for which groups?
- Is there focus on deprived groups or is the aim to produce a system for all? As a consequence of the crisis: the definition of minimum level of network as a basis.
- The discussion was short due to lack of time

PG3: Tel-Aviv, lead by Ruti Amir and Yoram Shifman, Claire Papaix rapporteur

- The CBD has moved by itself to the East of TA (not accordingly to the previous master plan) following the construction of a highway (NB: policy maker should take care of the previous CBD, ex. of serious deterioration in Check republic).
- Presentation of the TOD projects (new BRT routes since 2011 + LRT projects 2014 – 2020) aiming at improving the PT network accordingly to the new needs, reduce urban sprawl and was accompanied by the new flat faring policy (started in 2010; before: one operator (over 100) = one
• Very bad implementation of bus route changes: from one day to the other for over 1000 bus lines (1000 bus stops), information given by PT companies only; problem of coordination between cities (lack of institutional framework).
• Use of an Activity Based-Model (Y. Shiftan) to give insights on the value of accessibility instead of the traditional VoTTTS from the project and faring policy. 97% of public transport users do not own a car in Tel Aviv

PG4 Utrecht, lead by Johanan van Dijk and Karel Martens, Sandra Walter rapporteur

Karel Martens presents the situation of Utrecht, a transport hub in the centre of the Netherlands with a growing population and a growing mobility demand. Besides facing the growing need for mobility the authorities would like to encourage a modal shift to public transport and bicycling. The authorities are however facing a decrease in budget due to economic austerity. The solution is thus to optimize the public transport network, "to do better with less money".

A new network was thus designed. It is less dense than the previous one, but has higher frequency on the remaining lines. A central issue for the transport authority is whether the lower density has incidence for some categories of the population. Another issue is how to justify the selection of town that will keep on being deserved with the new networks. An impact accessibility impact survey was thus mandated.

A tool called “access.city” was used to evaluate this impact. This tool was previously presented in the panel on “Transport Accessibility from a Human point of view”. This tool allows mimicking a public transport trip in every detail. It can measure accessibility from any point 50 m by 50 m.

A first challenge was to identify the public transport need, especially of those who need it the most. A multiple index of public transport need was built to define this population, based on the following criteria (car ownership, income, ethnic, age, housing composition). Based on this index, the patterns of transport were analysed and the transport needs identified. The areas where public transport accessibility should no decrease were then identified. The analysis shows the difference of accessibility between the old and the new network.

The participants raised several benefits and drawbacks about this analysis:

If you want to talk about equity you need to measure accessibility in a precise way, which is allowed by the tool presented.

The analysis does however not tell us why there is a reduction in accessibility. Is it because of the change in the transport network or because of land use changes? Further analyses are necessary to answer these questions.

An issue is the extent to which people’s preferences can be integrated in the tool (for example some people might prefer longer trip with no changes, rather than shorter trip with changes). It should be possible to introduce different groups with different preferences in the tool to have a precise analysis about the impact of the new network. This has not been done yet.

One participant raises the fact that from the equity point of view we cannot look just at average time for accessibility. We need to look at the number of changes or at the differences in transport mode. Karel Martens points out that in regards to this last issue, light rail in the Netherlands is so expensive for low-income groups that they tend to avoid it. They are also usually not compensated for their trips to work like the middle classes are. A participant notes that in other countries, like Germany, where the fair for train or bus is the same, comfort is an important criterion determining the preferences of the transport users.

Other issues:

Yehuda Elbaz notes that the fact that the planning paradigm uses in the transport field is not precise
enough. Public transport planners have been borrowing from the road planners, which have been borrowing from the water planning field. But the terms and concepts used (flow, capacity, etc.) are actually not appropriate to consider some key issues in public transport. Utrecht’s planning director, Jeroen Golstein, agrees that this paradigm might have limits, but notes that to get their share of the national budgets for public transport, they have to show their needs in terms of capacity.

Y. Elbaz still defends the need to go away from measurement. The issue of capacity is not an issue of network design. It is an issue of frequency and volume. We need to design the network first and then allocate the infrastructure to get sufficient capacity. She adds that she is uncomfortable about the tool presented since “every job seems to be equal”. But actually not everybody can access any job and accessibility needs are strongly determined by the location of the jobs people can get. Poor people might leave in the centre with strong accessibility, but not be able to access any job in that area. We have the same problems with, for example, inexpensive shopping facilities that are often inaccessible for bus users. We need also to consider that different jobs imply different working hours. It is however difficult to change the paradigm since there are so many factors to consider and it is difficult to determine which one are the most important one.

8 Plenary presentation on quality measurement and presentations on equity cross-sectors comparison

Ariane Dupont did the plenary presentation on Quality measurement of equity in Health (presentation in annex WS1-1). The main ideas of her presentation were:

- Concept of Qualy:
- Founded on utilitarianism (concept of expected cardinal utility (thermometer of preferences)): way of perceiving fairness in health. Ex. to give the lung to the youngest because he will produce more for the society. To which extent could this be used in transport equity appraisal? Debate whether we should use the experience from the past or not to forecast the future?
- The judge has the veil of ignorance and impartially takes the decision to set the choices for the society=> interpersonal comparisons and before going to the aggregation level (weighted sum of individual utilities)
- However, the principals above make two strong assumptions: to have a judge who have values; and that all individual share the same preferences.
- Conclusion: do not use the Qualy in the cost action; better to consider Sen Harsanyi’s justice definition (question of value and not utilitarianism)

Ariane Dupont introduced three speakers of the equity cross-sectors comparison: Nadav Davidovitch, Lea Rosenberg and Johanan Van Dijk.

Nadav Davidovitch, Center for Health Policy in the Negev: Equity issues in health sector (presentation in annex WS1-1):

- The ministry of environmental protection aims at developing more accurate indicators for equity. Israel is the 4th country in terms of efficient health sector and is rather equitable to talk about equity is already value loaded (could have been called inequity or disparities)
- Beyond the traditional equity principle over presents in the health sector (see the WHO definition of health + declaration of Alma Ata 1978): shall the government (value) decide (duty)?
- An often discussed topic is the cause of health disparities (several channels in practice: individual lifestyle, etc.). Taking into account the specific context of the country is key, but the chain of causality is very complex => to apprehend all the factors to appraise equity (socio cultural disparity, prevalence to obesity depending on the diet and the culture, etc.) is hardly possible. For example, the gap is becoming wider between men and women regarding life expectancy: where should be the emphasis? Decision making should be bottom up (measure inequalities to begin with)
- One key point: the political will to take action (see literature on policy action and mental block, denial, etc.)
- Transport should be seen as a vehicle to reduce health inequality => not only from the disease perspective (accessibility) but also by reducing the more latent cause of health problems (environment, walking and stress, etc.)

Lea Rosenberg, former deputy general manager of the Israel Education Ministry: How to deal with equity in the educational sector

- Education is closely to equity in transport since pedagogy comes from pedagos i.e. the servant who brings the child to school to study. Transport is an enabler of doing the education worth – of moving the child to study (two meaning) and reduce gap and disparities.
- Policy last more than politics but it is subjective to say that more policy should last more => question of budgeting system
- Transport as a first vehicle of (un)equality: if all the parents would pick up their kids at 12 everyday, the one having their voice heard will be more favored by the PT system; the second vehicle of (un)equality is the number of students in the class (need for closing a certain gap: the student time allocation)
- The basic attitudes towards equity or solving the problem in general is usually psychological and do not necessarily relies on the economic language => transport policymaking should imitate this and be more human.

Johanan Van Dijk: Utrecht Regional Authority: How local authorities deal with distributive issues? (presentation in annex WS1-1)

- A lot of transport movements characterize Utrecht (within the metropolitan area; external flows entering the cities; from the cities leaving to external zones)
- The nine municipalities should improve their cooperation to strengthen modal shift. The PT authorities owns the tramway system in Utrecht (+ lot of train connections and high speed trains but not high speed passengers since trains are not running; has the largest bus fleet + cleanest one in Europe (electric) + 33 000 parking spaces for bicycles)
- Distributive issues: Short term - is the PT well distributed? Long term - How to combine social issues and changes (new shops, new destination to take into account in the transport system)?

9. Breakout session 3: brainstorming on cross sectors equity indicators: what can we learn from other sectors that is strictly related with transport domain.

The Workshop participants participated into four parallel panel groups (PG).

10. Plenary Session of breakout session 3

PG1: Lessons from equity appraisal in education and health to tailor indicators for equity in transport: similarities but above all differences between mobility and the two other sectors. lead by Nir Sharabi and Elisabete Arsenio, Claire Papaix, and Nir Sharabi rapporteurs.

Similarities:
- Notion of infrastructure exists in the three sectors
- Public/private feature
- The need for looking at the disaggregated perspective to appraise equity effects: ex. specific health care, educational or transport needs (depending on the time of the day, the region, the individual, etc.) => should the minimal level of service be the same for all?

Differences:
- VoTTS and spatial benefits from the service supply (option value)
- Transport is not a basic need as health or education (+ identity value of belonging to a school for
Not the same externalities from services provision (pollution etc. exist to a lesser extent for education and health); induced demand doesn’t exist for the other sectors to the same magnitude
• Not the same CBA guidelines (least important)

Other sectors can serve as example (ex. the housing sector, but intrinsically related already)
• A long term vision should be built on beforehand on the society goals as such: how to get there? Equitable transport systems will just be a steering mean Major role of coordination of policy action + financing issues (is it better to have a school in one village or bussing the child? Dilemma)
• Health and education are recognized in the United Nations as basic needs and they are measured and compared in all countries. It was suggested that transport sector should also be raised as a basic need and equity measures should be adopted.
• The discussion focused on what we can learn from the similarities and the differences to the fields of education and health.
• An argument was set that transportation network is the same as health and education networks and that equity measures, indicators and methodology should be similar.
• Unique characteristics of space and time of the transport system should be treated. For example:
  o Time of day, day in the week etc. – Transportation equity should take into account differences in service during peak and off peak periods, day of the week (for example no service on Saturday in Israel)
  o Connectivity over the area – Transport sector needs to measure city connectivity as well as connections to other cities etc..
• Minimum level of service (LOS) – Few thought were raised on that topic compared to other sectors:
  o Should transport equity considerations include a definition of minimum LOS?
  o Should it be the same to all groups of people? To all areas?
• As it is better to have few universities to choose from or few different hospitals, it is important to include transport options in the equity measures and analysis (accessibility is better if a person has an option to take a bus or rail as opposed to bus only option etc.)

PG2: Lead by Yehoshua Biroterk and Joao Abreu, Matteo Tabasso rapporteur

Based on the presentations from other sectors, Panel Group 2 participants found out several indicators that can be transposed or considered in Transport sector.

The first discussion was about the use of resources. As it happens inside transport sector, where funds must be allocated taking into consideration different transport modes, the allocation of funds must also take into consideration connections among different sectors. (e.g. closing a school or a health service implies an increase of transport to other services…

The use of transport indicators for specific destinations (schools, hospitals…) are already used and changes in transport services also produces changes in Health (or education) services.

All sectors discussed (transport, health, education) are linked to population number and are linked together as school or health services can be organized accordion with transport and vice versa.

Transport is one of the most important indicators also for health and education.

Four main common concepts were then underlined:
1. Importance of Accessibility
2. Community Justice
3. Life Quality
4. Level of service

A common issue among disciplines is the fact that all need to concentrate resources to the areas with
biggest problems but a difference can be found in efficiency level. In Health care and education sectors increasing the level of service increases equity (as low levels don’t allow poorest to access to private sector) while in transport the advantages from increasing efficiency are more distributed.

The final remark was about the fact that accessibility is a very complex issue as it involves not only transport but also land uses…

PG3: Lead by Nadav Davidovitch and Ariane Dupont, Pierluigi Coppola rapporteur

The first question pointed out during Panel Group 3, was why there is need for developing cross-indicators among different sectors. It was agreed that cross-indicators should aim at:

1. Assessing and developing integrated policies in order to create synergy among different sectors, e.g. promoting walking would reduce the use of motorized modes of transport and related pollutant emissions and, at the same time, could improve health of people;
2. Avoiding negative cross-effects among sectors, e.g. changing time of school opening/closing conceived to reduce number of trips in peak period, might create access-to-job problems to parents having to bring/pick up children at school.

Then, we understood that social equity is an issue in other sector more than it is recognized in Transport sector. In healthcare, for instance, social equity is indeed considered in terms of physical, economic and cultural Access-to-Health. Cultural aspects are those which are often neglected in transports, whereas in some case studies (e.g. multi-ethnic countries) they could be relevant to properly assess transport policies. Another key aspect in assessing social equity is to look at different social groups, e.g. identified by income, age, race, professional condition, etc.

Finally, we try to understand how in other sectors, equity issues are put in practice. We learnt that in healthcare, some indicators are defined to measure political will towards certain policies. Moreover, there is wide use of Public Engagement techniques (e.g. focus group, advertising and information campaign,…) on the one hand, to promote and to maximize policies outcomes, on the other hand, to better identify priorities.

PG 4: Lead by Rebecca Shliselberg and Anestis Papanikolaou, Sonam Plomp rapporteur

This last break-out session of the conference followed a round of presentations about equity questions in other professional fields. Several good examples were given of the different ways in which equity issues are approached and dealt with in different sectors. Although the objective for the subsequent break-out session was to formulate lessons from the cross-sector examples given, the discussion in panel group 4 directly centered on the parallels between our own field of public transport planning and the other fields, identifying the common challenges we face.

Equity measurement

A first parallel was found in persisting measurement problems. Trying to capture the complex reality in models, bias is almost inevitable. Simple, one-dimensional modeling yields understandable, crisp outcomes but mostly fails to describe the whole truth. Detailed, comprehensive modeling efforts may reflect the actual mechanisms more precisely, but are prone to yielding garbage results as many arbitrary assumptions have to be made.

In transport planning, there is no clear consensus about how to measure accessibility. Moreover, it is doubted whether accessibility is the right unit to measure transport equity. As a result, many different measures exist, sometimes leading to almost opposite results. In health care, we observe the same problem: for example, life expectancy is a common way to express the quality level of health care on a national scale. In Israel, as life expectancy is particularly high, the health care system is assumed to be working properly and little action is taken to actively improve it. However, the level of service in health care is generally experienced by patients as being below par and, indeed, not improving. In this case, the
measure of choice seems to be far too skewed, as health comprises much more than only sickness and medicine.

Equity evaluation

A second parallel that was pointed out concerns the problem of choosing the right criteria for equity evaluation. Before evaluating the equity aspect of any system, we need to ask ourselves: When do we regard the system to be equitable? Moreover, as the most equitable system is arguably not the most efficient from an economic perspective, we need to balance both factors to reach a well-considered outcome.

In transport planning, we evaluate system equity either by setting a certain minimal level of service or by choosing a certain maximum accessibility gap between the best and the worst accessible place, group our individual. Over the course of the conference, however, choosing the right criterion and pinpointing the right benchmark level has proven to be very difficult as well as arbitrary. Lots of discussion took place on the balance between equity and other considerations. In the education field, this discussion was also evident: should the education system promote excellence and focus on unleashing the full potential of the few best students (American practice), or should it promote equity and focus on raising the knowledge level of weaker pupils towards the average (practice in some European countries)? It is clear that the ideal system combines both strategies, but how should they be balanced?

Equity promotion

Third and last, a parallel between transport planning and other fields was drawn with regard to our mutual dependency on policy/politics. Although the scientific evidence we deliver is very important for making substantiated policy decisions, in the end our role is predominantly advisory.

Unfortunately, equity tends to receive less attention than wanted in the transportation planning field. In order to promote equity-related considerations, we have to seek media coverage and find public support and participation. In education and health, this strategy is fairly successful as inequity in these fields has a particularly direct and apparent influence on the health and welfare of people. Although transportation inequity can have great social consequences, the direct influence on our life and well-being is far less evident, making it harder to draw attention and support through media. Instead, public debate on transportation in Israel tends to focus mainly on car safety, as accidents are highly emphasized in media and show the influence of transport on people's lives in quite a dramatic way. To overcome this problem, panel group members suggest strengthening and institutionalizing public participation as a part of the policy process.

11 Closing

Floridea Di Ciommo and Ariane Dupont closed the workshop, thanked the participants and the local organizers Yoram Shiftan and Bat-Hen Nahmias-Biran.
Annex WS1-1. Plenary Presentations

TEA Action: expected results from the Equity indicators workshop. Floridea Di Ciommo

Results on the equity statements definition: new steps. Karel Martens

How to define equity indicators: where we are?. Karen Lucas


Transport and equity: a civil society perspective. Rebecca Shliselberg.

Quality measurement of equity in Health. Ariane Dupont

Equity issues in health sector. Nadav Davidovich.

Utrecht Regional Authority: How local authorities deal with distributive issues? Johanan Van Dijk