Smart Megacities in Developing Countries: Karachi Megacity Resident Survey and Policy

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Megacities, Smart Cities, and Public Opinion

• Smart cities – applying IT/ICT and managing megacities

• Vision –
  • Measure parameters in real time; at various intervals – days, months, years
  • Dashboards
  • Identify problems and formulate hypotheses
  • Drive management strategies - optimize urban system performance

• Measuring public opinion and decision-maker opinions should be a key data element feeding into smart city dashboards

• Will discuss our public opinion survey of Karachi residents
Just ten years back, Karachi was known for bomb blasts, suicide attacks, target killing, and street crimes. Today, the city has truly become the Uroos-ul-Billad, the Bride of all cities, as it successfully hosted the #HBLPSL and is ready for #PSLfinal. #10YearChallenge #Peace

Karachi in 2009

#10YearChallenge

Karachi in 2019
Karachi and the China-Pakistan Economic Corridor
Karachi Public Opinion Survey Themes

• Education
• Transportation
• Health
• Schools and school choice
• Entrepreneurship
• Youth civic participation
• Water supply
• Political leadership
• Managerial leadership
• Wellbeing
Background – Karachi Megacity Resident Survey

• The capstone of a sponsored research project supported by the U.S. Department of State 2012-2016 – George Mason University

• Goals:
  • Strengthen social science & public policy research capacity at the School of Administrative Sciences and Public Administration, University of Karachi
  • Develop curriculum for Master’s degree program in managing megacities
  • Focus on young faculty and doctoral students
Background Continued

• Project Methods
  • Workshops conducted at University of Karachi & George Mason University
  • Managing megacities M.A. curriculum for Department of Public Administration
  • Karachi Resident Survey
  • End result: Research papers by faculty and students – University of Karachi

In public transportation

‘55% women in Karachi face harassment’

Speakers share research papers, discuss issues related to metropolis

OUR CORRESPONDENT

In a megacity like Karachi, 55% of female commuters who use public transport face sexual harassment, said University of Karachi (KU) public administration department Professor Syeda Hooria Ali on Wednesday.

She was presenting figures and findings of her research ‘An empirical review of Karachi’s transportation predicament: from personal attitudes to public opinion’ at the second day of the international conference ‘Managing Megacities 2016’ at IIJ Auditorium in KU.

The research was conducted under ‘Karachi Megacity’ project, by the public administration department in collaboration and George Mason University, United States. The conference was organised by KU’s public administration department, Shar School of Public Policy and Governance, George Mason University.

Referring to the issue of sexual harassment that women face, Ali said there used to be a similar situation in Colombian capital Bogota. According to her, the mayor of Bogota, Enrique Penalosa, addressed the situation by deploying undercover police force to arrest such harassers.

Ali believes that in our society, women are unable to report such cases due to the poor justice system. She said women cannot go and file an FIR against such incidents at police stations. “In reality it [sexual harassment in public vehicles] has become an ordeal our women face daily,” she said.

Road fatalities

Speaking about the road accidents, KU geography department’s Dr Salman Zubair said that according to a survey, 35,671 residents of Karachi were injured in accidents in 2012, of which there were 1,179 fatalities, 7,292 severe injuries and 27,105 minor injuries. Based on the reported data the port city has lost $486.7 million due to Road Traffic Accidents (RTA) in the year 2012 and nearly 65% of the RTA victims belong to a young age-group, he said.

Zubair further said that recent road geometrical change has made the traffic flow unimotor up to some extent. He believes that proper placement and designing of U-turns can reduce the rate of increasing road accidents.

POOR SAFETY MEASURES

Karachi residents were injured in accidents in 2012, according to a survey.

Meanwhile, Professor Mir Shabbir Ali from NED University of Engineering and Technology said that traffic congestion is a result of not just too many cars on the road but also the financial policies that encourage vehicle ownership. The inability of civic agencies to control road tax into road improvement is one such cause, along with improper enforcement of heavy-vehicle restriction in urban roads during busy hours.

Deputy mayor speaks

While speaking to the audience, Karachi deputy mayor Arshad Volta said that the basic issues of all megacities are almost the same. “Karachi is the seventh biggest megacity of the world,” he said.

According to Volta, Karachi produces 12,000 tonnes of garbage every day, whereas their municipalities have the capacity to lift trash at 4,000 tonnes per day. For this purpose the provincial government will have to release special funds to lift all the garbage, Volta said.
Karachi Megacity Resident Survey

• Importance: The first of its kind for large/regions in developing countries.
  • Karachi ranked among the top 3-7 megacities in the world
  • Karachi population (2018): 16.6 million; metro 21.2 million
  • One of the most rapidly growing megaregions globally (5%/year)

• A scientific survey: implementation in two stages
  • 24 towns/cantonments in Karachi
  • Stage 1: 1% random sample of blocks in each strata (towns or cantonments)
  • Stage 2: 1% random sample of households in sampled blocks for interviews
  • All members of a sampled household interviewed (directly)
  • 1,980 households interviewed: 11,127 individuals interviewed (children by proxy).
Major Results by Topic

1. Transportation – public buses
   - 68% found public buses unreliable, insecure & overcrowded
   - 55% of women bus commuters say they feel insecure & often face sexual harassment
   - 82% in the Eastern District (rated the most unsafe area for women commuters) confirm that they feel insecure & often face sexual harassment
   - 70% of women: say they do not use buses because of limited seating

Possible public policy implications: goals, plans, and programs to improve quality of public transport in general and public buses in particular, with special emphasis on female safety ridership.
2. Road accident frequency (significant factors from regression analysis given as explanations for poor driving)
   - Ignorance of traffic rules
   - Absence of proper law enforcement
   - Road encroachment
   - Public opinion and public policy

**Possible public policy implications:** Policy should emphasize driver and pedestrian education, more consistent police enforcement, and limit encroachment of pedestrian and commercial activity into roadways.
3. Low levels of civic engagement Among Youth
   • 94.7% had not undertaken voluntary work in past 5 years
   • 92.7% had not raised money for charitable causes
   • 98.% were not members of a social or religious organization
   • 96.5% had not participated in street protests
   • 15.5% considered themselves active in community or neighborhood issues

Possible public policy implications: Need for activities and programs to promote stronger role for youth in civic life
Major Results by Topic

4. Parents Education Choice: Public Schools
   • 90% were less likely to express preference for public schools
   • Accessibility most important factor – especially for those that select public schools
   • Security important especially for Urdu vs. non-Urdu speaking parents
   • Strength of findings increases as parental income and education increases

Possible public policy implications: Public schools were clearly the least preferred education option for parents. Those with least resources are left with this choice and concentrated in public schools. Priority must be set by public leaders through plans, budgets, and operational commitment to improve public schools.
5. Water Supply: Quality, Shortages, Distribution, Drinkable
   • 24% obtain water by line to the house daily; 16% on alternate days
   • 82% do not receive clean (drinkable) water
   • 61% receive non-hygienic water
   • 55% corruption is one of the major causes of water supply issues
   • 56% believe that water shortages exist
   • 44% believe that water distribution is mismanaged

Possible public policy implications: An immediate need for improved provision of quality water supply, throughout the city is needed. Need for more detailed data on the water supply system and commitment to improve supply and quality, and combat corruption and mismanagement.
6. Youth Emigration – (15-29 year cohort in Karachi)
   • 47% of youth wish to emigrate
     • Push Factors: unemployment, insecurity, economic issues; lack of social support; lack of career opportunities
     • Pull Factors: employment, greater security; support for career development, especially for the most ambitious and best educated youth
   • 63% of youth fully employed want to leave Karachi
   • 75% of self employed youth want to leave Karachi

Sample public policy implication: There is need for a committed effort to reduce the negative effect of factors that are pushing youth desire for emigration in Karachi. This needs immediate attention as youth are the elementary resources for the future of Karachi.
Major Results by Topic

   • For example, well-being index could combine variables such as:
     • Income
     • Employment
     • Education
     • Living Environment – const. type; # rooms; type of toilet; source of water, electricity
     • Fuel used for cooking
     • Asset Holdings

Sample public policy implication: Data should be disaggregated to the appropriate level of decision-making to avoid the ecological fallacy of thinking all towns are the same.
The Karachi Public Opinion Survey a Model for Other Emerging Megacities

• Enabled disaggregating data and analysis
  • Age cohorts
  • Gender
  • Geographic distribution, in the case of Karchi by town
  • Language group
  • Income
  • Education

• In report format, but also incorporated into real-time dashboards
Public Opinions and Urban Dashboards

• Creating urban dashboards for megacities in developing countries
  • Modern technologies enable relatively direct measurement of critical urban system parameters
  • Especially for those that have been measured for some time already such as aspects of water supply, safety, transport infrastructure, etc.
  • New technologies (IT, GIS) enable measurement aspects in real time
    • Social media flows and level and topic
    • Transportation congestion hot spots; public cluster development and safety/security
  • Measurement of urban public opinions Scientific/representative survey like that conducted in Karachi every 5 years
    • Update possible in between by topical opinion areas using Internet surveys
    • Karachi a model for the study of megacities in developing countries
SoftPoDD: Software Tool for Policy Diagnosis and Dialogue

For an explanation of the colored circles on this page, please click here.

Policy B. Increase production capacity

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To learn more about this issue and access potentially useful tools and resources, please click on the following HRH Framework link(s):

Education

HRH Recommendations for Client #644
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Conclusions and Discussion

• Ideally public policy is informed by data: geophysical and infrastructure data, but also public opinion data

• The Karachi Case shows that it is:
  • Possible to measure public opinions even in a complicated megacity in a developing country
  • Possible to inform, deduce and establish working public policy hypotheses
  • Test working hypotheses
  • Adjust working hypotheses with sequential measures
  • Public opinions should be part of urban dashboards in developing countries

• The cost of a resident public opinion survey is relatively low but provides critical information for learning and management
Thank you!

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Peshawar Business Survey: Surveying in a Difficult Environment

- A pilot study in terms of methods
- Survey of 404 businesses in the old walled city
- Sampling strategy required ongoing modification
- Importance of building rapport/trust with local leaders
- Difficulty in measuring informal economy
- Linguistic diversity needs to be recognized
- Classifying industries is difficult
- Think about sample stratification, in this case needed to oversample larger businesses