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Transit Friendly Policy

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DISCLAIMER: THE CONTENT OF THIS PRESENTATION MAY NOT BE CITED. IT IS BASED ON PRELIMINARY DATA.

How can transport planners tackle GHG emissions?

- For city travel: electric transit systems, spatial planning for high densities, proximity, local neighborhood design, mixed landuse development, increase settlement size
- For long distance travel: electric transit systems, **highspeed rail**, car-pooling
- For freight: biofuel, natural gas, higher cargo loads per shipment, location of new freight centers
- Air travel: teleconferencing, airships

Michigan's High Speed Rail

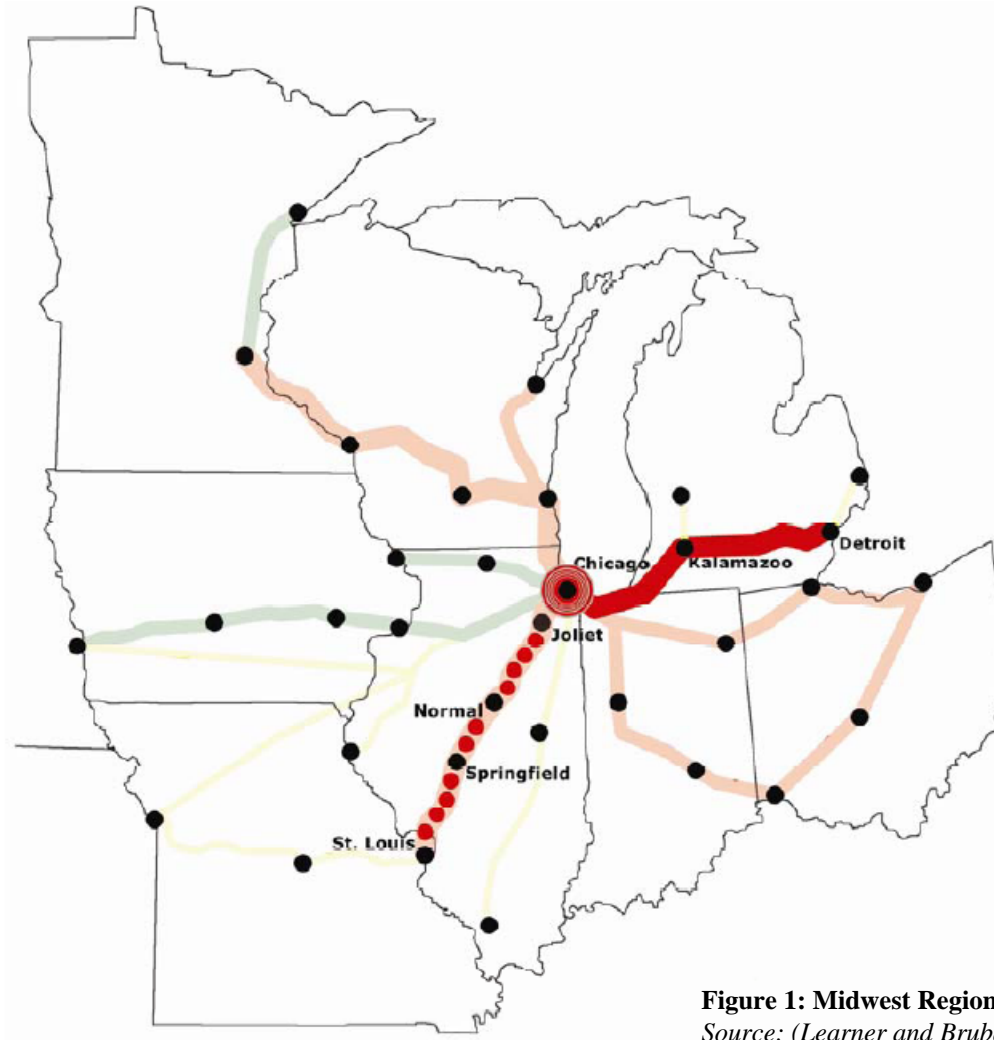


Figure 1: Midwest Regional Rail Initiative
Source: (Learner and Brubaker 2009, slide 5)

The challenge of sustained ridership

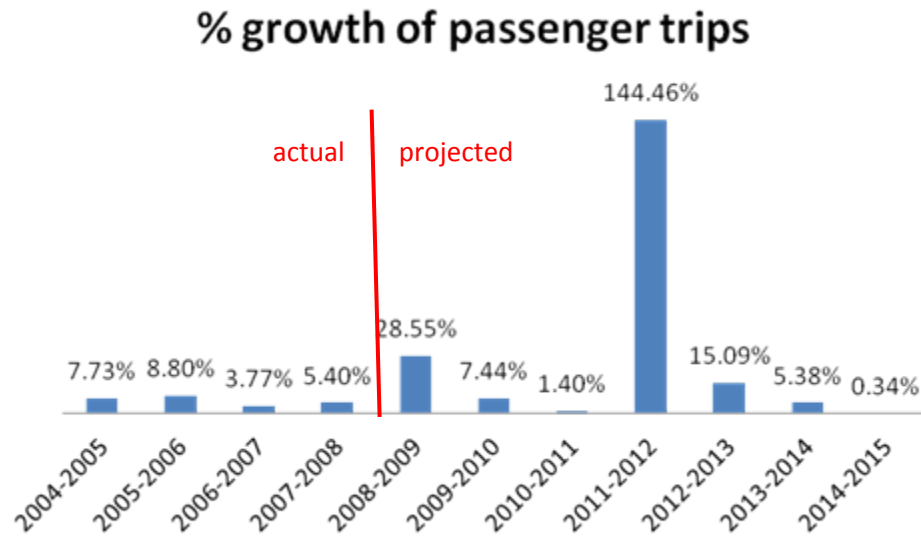


Figure 2: Comparison of actual vs. projected ridership^[1]

Source: (*Transportation Economics and Management Systems 2004, Appendix p. 2; Hundt 2009*)

^[1] To note: The actual percentages are drawn directly from the Wolverine line, whereas the projected percentages are estimated for the entire network. However, in comparing percentages, one can assume that the entire network denotes the average expected growth rate.

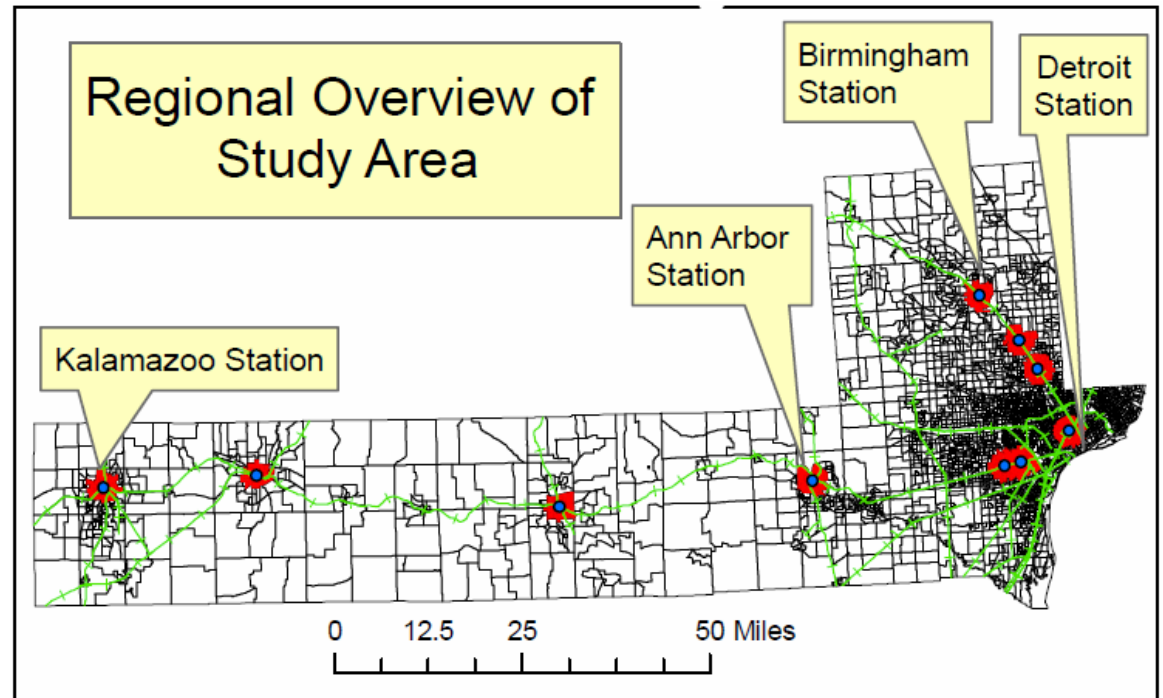
Research Goals

1. Test the current and expected ridership
2. Identify local incentives on how to increase the ridership and sustain its growth in the long-run
3. Expected impacts of the rail route improvements on the community level around rail stations
4. Leverage the local investments for sustainable communities

Methodology

1. Selection of five cities that have drawn the most passenger numbers in recent years:

- Ann Arbor
- Kalamazoo
- Dearborn
- Detroit
- Battle Creek



Vertalka 2010

2. Literature Review and Interviews with local transport Planners
3. Survey of communities adjacent to railway stations (2mi)

LR: Incentives - Factors

- Ortuzar and Willumsen (2001) identified five factors that influence modal choice:
 - Cost
 - Time
 - Convenience
 - Reliability
 - Comfort
- A sixth incentive for travelers can include security (Crockett and Hounsell, 2005).

LR: Incentives - Convenience

- Crockett and Hounsell (2005) have found six attributes to influence convenience:
 - Access to and from station (Accessibility),
 - Waiting time at stations,
 - Interchange (if necessary),
 - Fare charged to travel,
 - Terminal cost (car or bike at station),
 - Interchanges

Interviews – Incentives

- decrease in travel time between destinations
- reliable, on-time services
- price of gasoline
- connectivity to multi-modal transportation hubs
- transit orientated development (TOD)

LR: Impacts on Communities

Economic Development Caused by High-Speed Rail

- high-speed rails provide regional impacts for economic development (Crockett and Hounsell, 2005).
- Economic development can occur through the enhancement of local areas accessibility to regional jobs (Leck et al., 2008).
- High-speed rails cannot solely create sustained economic stimulation within developed countries (Banister and Berechman, 2001); instead, public and private policies need to act as a catalyst to create additional economic attractiveness (Masson and Petiot, 2009; Martin and Reggiani, 2007).

LR: Impact on Communities

Tourism Caused by High-Speed Rail

- The tourist industry requires similar supplemental policies that accentuate the benefits of high-speed rail. An increase in tourism will not independently be caused by improving transportation; instead tourism requires local or regional areas to establish political and business policies that help integrate various tourist activities (Masson and Petiot, 2009).

Interviews – Impacts on Community

- Several types of impacts the HSR will have on the local communities
 - intangible (increase in rent prices and property values)
 - tangible (include new stations (in selected cities), some have predicted an increase in suburbanization)
 - social (attractive alternate mode of transportation to city centers that offer various events, conventions, or other social activities.)

Interviews – Impacts on Community

- physical layout surrounding the train station
 - Ann Arbor, Dearborn believe that the train will
 - stimulate business development due to the increase of tourists stopping at the location.
 - TOD = perfect opportunity to optimize public and private resources and tourist attractions (museums, restaurants, universities, downtown, etc), whether through the re-location of the station or through policy approaches, that incentivizes movement of people to the attractions.
 - Detroit, Kalamazoo, Battle Creek believe that the train will
 - development will only occur around communities that are major destinations (Chicago and Detroit) because the HSR line is a regional system unlike the TOD which usually encapsulates all rail stations on a commuter rail system.
 - bedroom communities could be constructed in Michigan to serve inner-city Chicago due to the reduced travel time and the timing of the rail services.

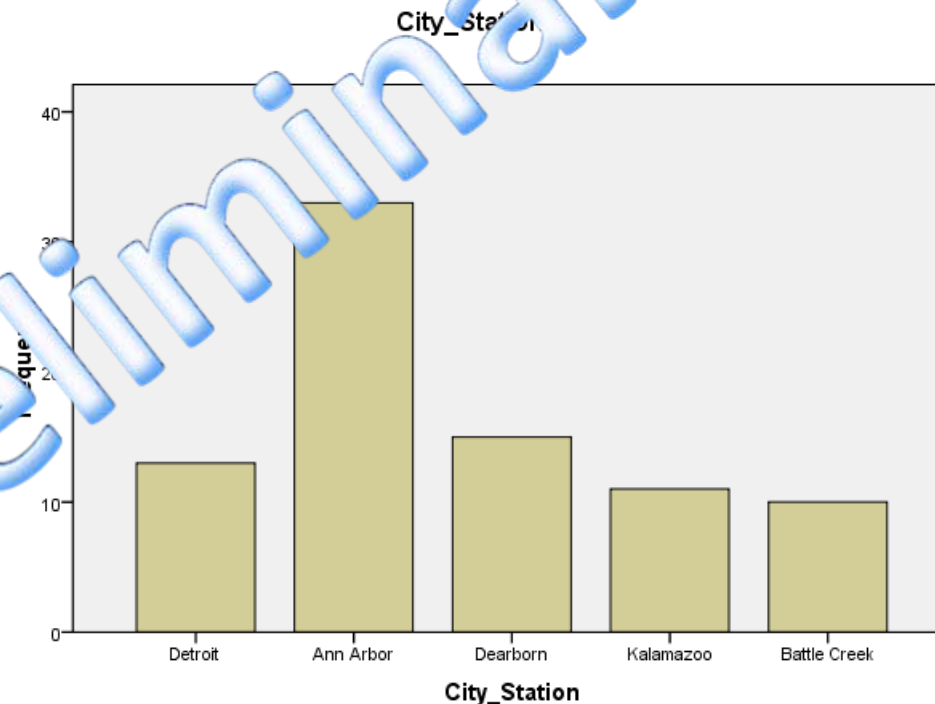
Interviews - Mindset

- all planners agreed that there needs to be a cultural shift in the way Americans think about HSR
- switch in transportation ideology accompanied by a competent and efficient transportation system

Surveys

- Questionnaire intended 600 Detroit (400 in others)
- Current response rate 300/2050 (1st mailing)

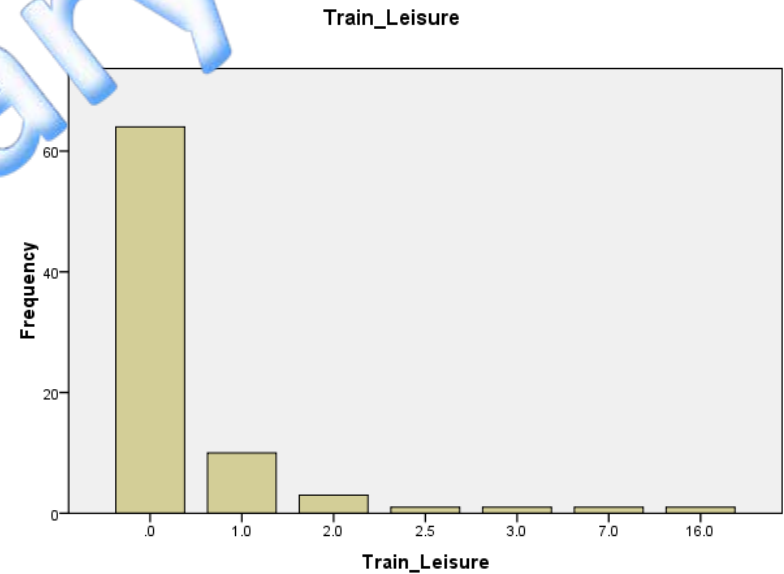
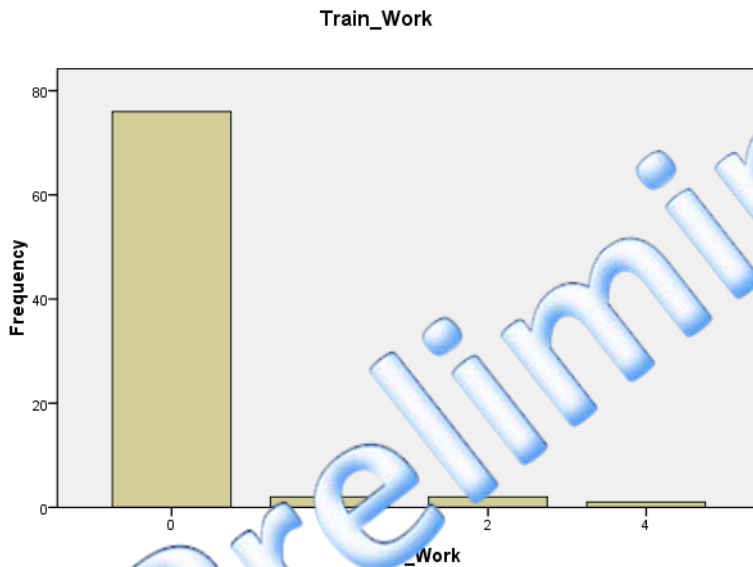
Following analysis based on 80 coded questionnaires as of April 25th 2010



Current Ridership

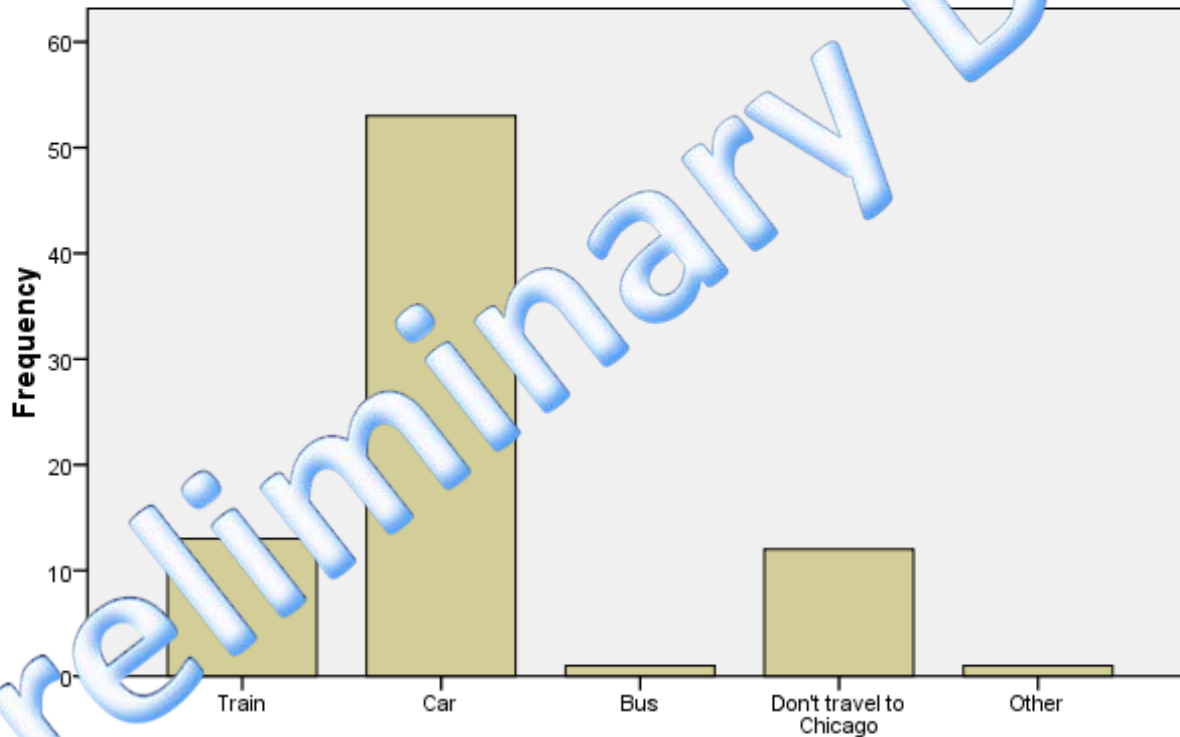
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Train_Work	81	0	4.0	.12	.556
Train_Leisure	81	.0	16.0	.549	1.093
Valid N (listwise)	80				



Strongest Competitor

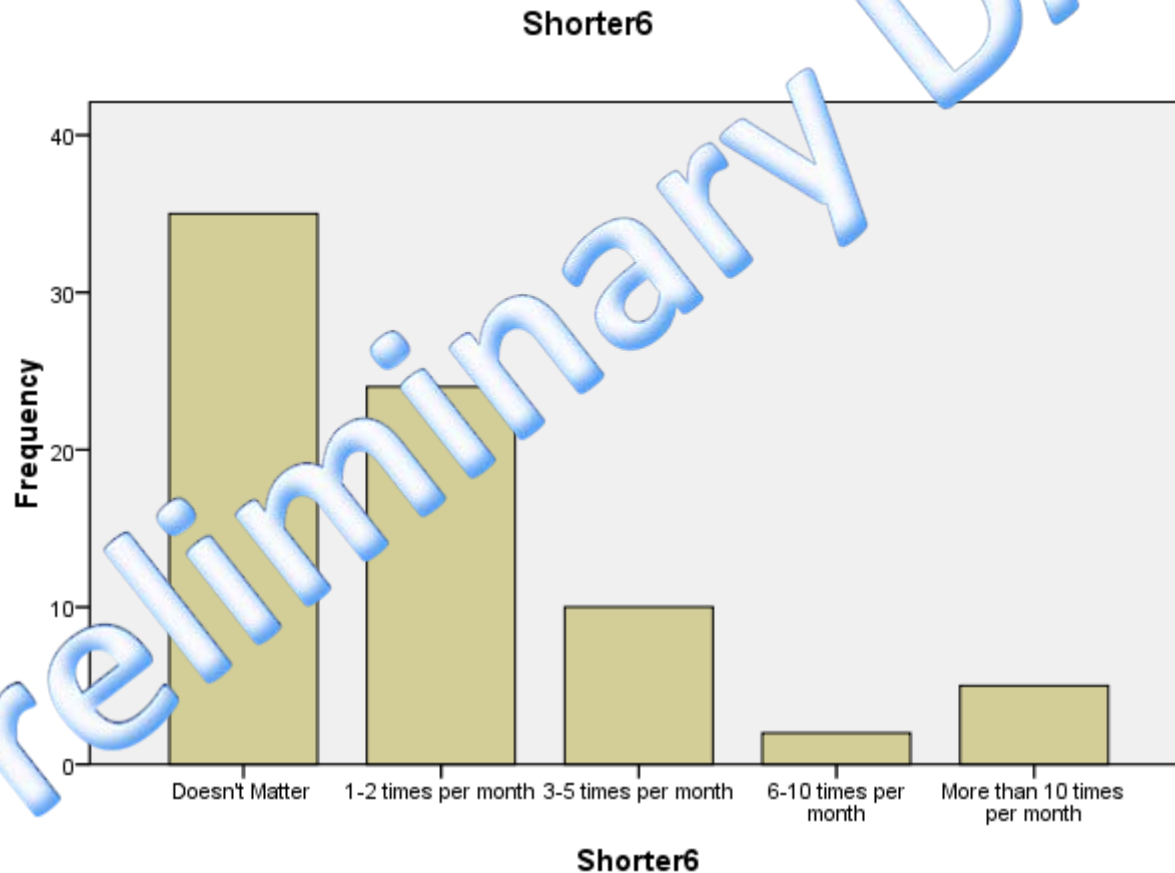
Chicago



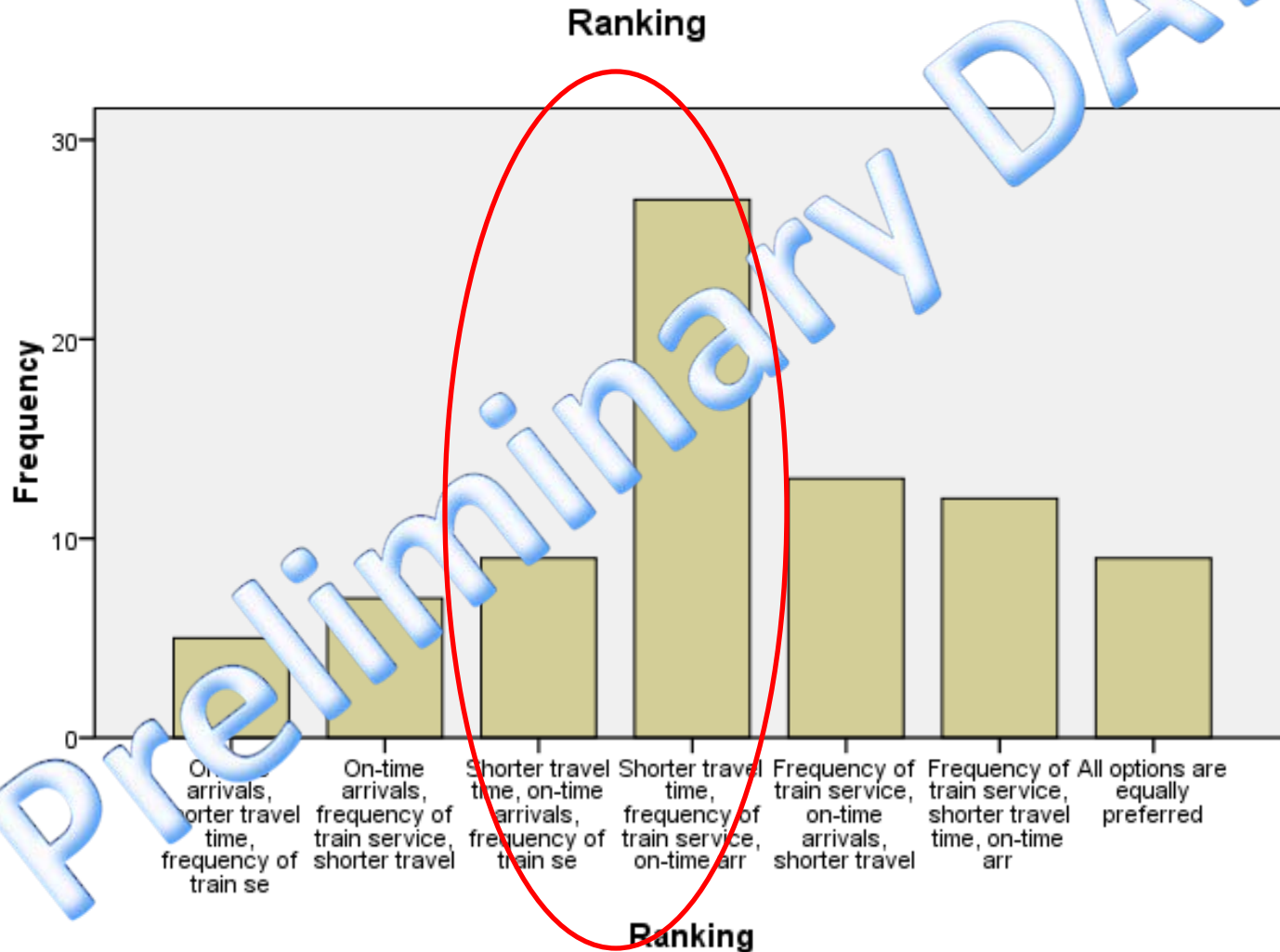
Chicago

Preliminary DATA

Potential Ridership

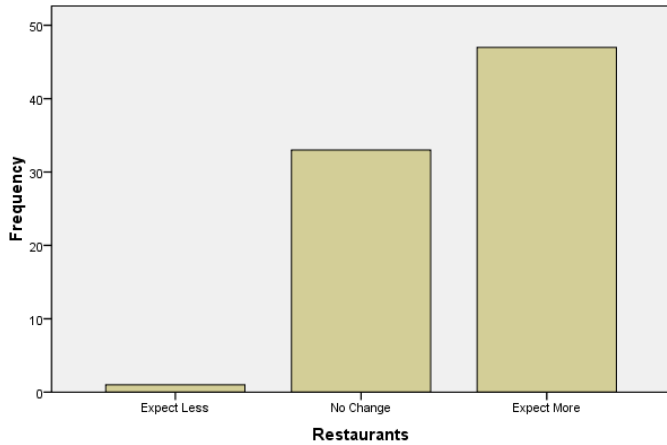


HSR vs. frequency vs. on-time performance

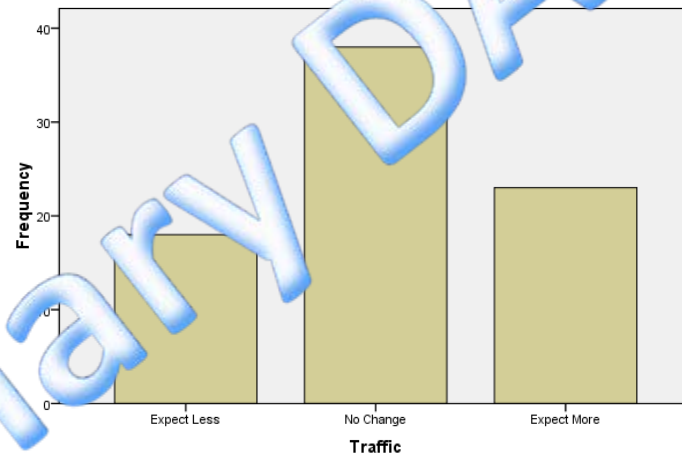


Community Impacts

Restaurants



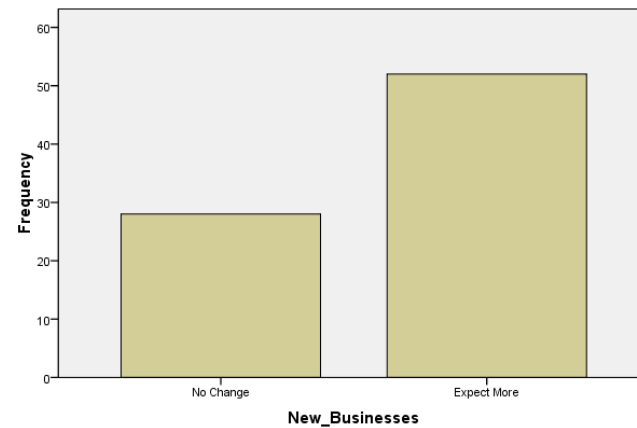
Traffic



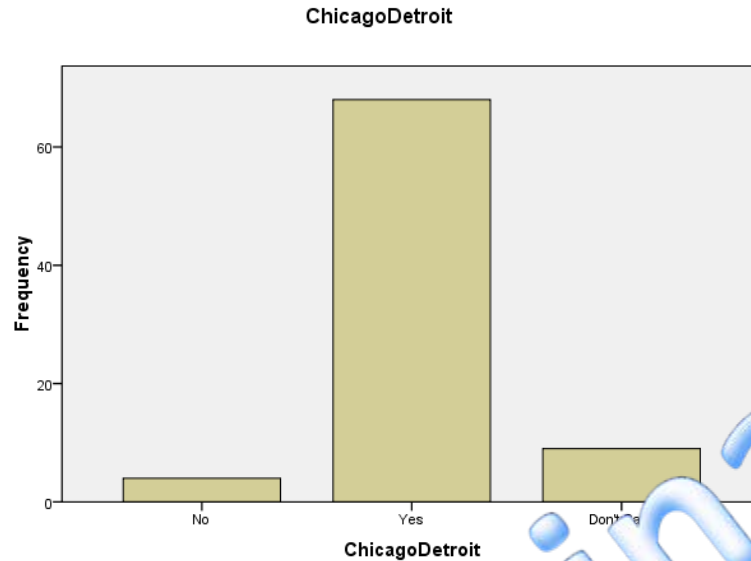
Shopping_Stores



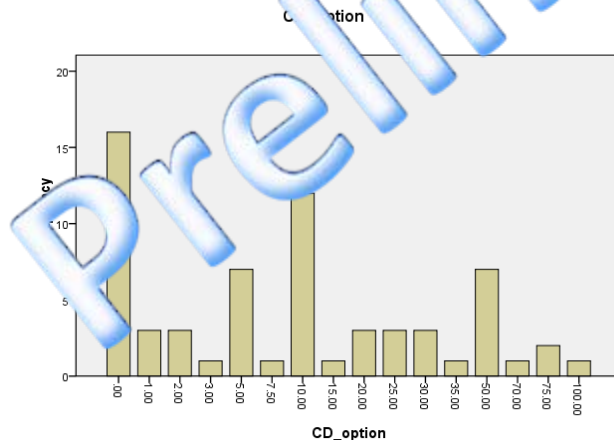
New_Businesses



Do you want HSR service?



- And how much would you pay for it?



Mean = \$17 per month

Thank you.

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INTERVIEWS:

Cooper, Eli; Transportation Program Manager with the city of Ann Arbor (Feb 12th 2010)

Hutchinson, Jerry; transit manager with the city of Battle Creek (Feb 12th 2010)

Murray, Berry; Director Dept. of community and economic development in Dearborn (Feb 5th 2010)

Roseboom, Tim; manager of strategic planning, Detroit Department of Transportation (Feb 5th 2010)

Schomisch, William; executive director for the transportation department for the City of Kalamazoo (Jan 22nd 2010)

SUPPORT:

Kuehne, Bob; MDOT passenger policy specialist in the office of high-speed rail and innovative project advancement (Feb 10th 2010)