Housing & Transportation Affordability Index:

A new tool for measuring the true affordability of housing choice

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Background & Purpose



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- Affordability is about housing costs and other costs of living associated with housing unit location, especially transportation costs
- Due to development patterns and lack of transportation choice:
 - Transportation is the 2nd highest expenditure after housing
 - For working families, housing and transportation consume >50% of household budgets

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Background & Purpose



- While local housing costs are known, household ^o transportation costs, by neighborhood, were not—until now.
 - ----This **new** "Affordability Index" models transportation costs by neighborhood
- Knowing transportation costs provides another tool in the strategies to improve affordability for households; the affordability index helps to answer:
 - where to build or live?
 - what are the trade-offs?
 - who benefits, and by how much?



Background & Purpose

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- The "H&T Affordability Index" is based on the "location efficiency" research we began in 1994. The key findings were:
 - Neighborhoods are "location efficient" when they have convenient and accessible transportation and include or are proximate to jobs, services, retail, schools, and other needs
 - Households who live in "location efficient" neighborhoods--regardless of household size and income--own fewer vehicles and drive fewer miles and therefore have lower transportation expenditures

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Model Overview and Methods



Model Overview



• The H+T Affordability Index adds known housing costs to modeled transportation costs to identify the percent of income that households spend on "H+T":

Affordability = <u>(Housing Costs + Transportation Costs)</u> Income



Reported Housing Costs



- The model uses existing values for housing costs:
 - Home Ownership Costs:
 - Census reported "Selected Monthly Owner Costs"
 - Rents:
 - Census reported "Gross Rents"

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Modeled Transportation Costs



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Independent Variables			
Variable	Source	Model Use	
Households/ residential acre	Census 2000	Provides a measure of density whi influences auto ownership and use	ich 9
Households/ total acre	Census 2000	Provides a measure of density whi influences auto ownership and use	ich 9
Average block size in acres	Census/ TIGER/Line®	Block size contributes to walkabilit which influences auto ownership a use	y of the area, ind transit
Transit Connectivity Index	FTA 1995 Bus Routes Transit DB, transit agencies	Availability and extent of transit inf transit use	luences
Distance to Employment Centers	2000 Census Transportation Planning Package (CTPP)	Distance to nearby jobs influences ownership and auto use	auto
Job Density- jobs per square mile	Jobs and locations from CTPP 2000	Number of nearby jobs influences working at the nearby employment	probability of t center
Access to amenities	Service jobs in CTPP 2000	Access to services in walking dista influences auto use and ownership transit availability and use	ance o, as well as
Household Income	Census 2000	Influences auto ownership and use	e
Household Size	Census 2000	Influences auto ownership and use	9
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Dependent Variables

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Variable	Source
Auto Ownership Costs	Modeled from independent household
(vehicles per household)	and local environment variables
Auto Use Costs (annual miles driven per household)	Modeled using the 2001 National Household Transportation Survey reported Vehicle Miles Traveled fitted to the independent variables
Transit Costs	Modeled from independent household
(Rides per day)	and local environment variables

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Model Mechanics

• Used multiple regression modeling to "fit" each dependent variable to the independent variables and then controlled for household size and income







Where can a 3-person household earning 80% of the Twin Cities AMI afford to live?



Traditional view: Housing Price alone



New view: Housing + Transportation



Model Summary



- The total transportation costs can now be:
 - Mapped by neighborhood
 - Combined with housing costs and mapped together by neighborhood
 - Studied to see how development patterns and investments in transportation choice impact household transportation costs

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> Using the Model: Twin Cities Pilot Results & Implications for households



Background on the Twin Cities

- Developed around street cars and had one of the best systems in the country
- But transportation choice diminished:
 - bus service declined and highway development and auto ownership flourished
 - New growth areas "opt out" of transit tax, and low density development can't support quality transit
- By 2003: 50% of Twin City households spent >\$9,200 on Transportation, and 40% earn <\$45,000
- Between 1982-2000, Twin Cities ranked #1 in percentage increase of peak period travel









	Farmington	Fridley	Midway in St. Paul	Longfellow/ Seward in Minneapolis	Seven- county region
Median income ¹	\$43,443	\$59,196	\$39,601	\$32,909	\$54,304
Annual transportation costs ²	\$13,860	\$10,526	\$8,378	\$6,995	\$10,989
Transportation costs as a % of income ²	32%	18%	21%	21%	20%
Average housing cost as a % of income ³	22%	13%	17%	22%	20%
Housing and transportation costs for homeowners	54%	31%	39%	43%	40%
Housing and transportation costs for renters	47%	30%	37%	39%	35%

Cost of Living in 3 Twin Cities Neighborhoods



• Household Budget for a Family of 3 Earning \$56,690/yr



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Cost of Living in 3 Twin Cities Neighborhoods



• Single Person Household Budget Earning \$16,830/yr



Affordable for whom?

Considered Affordable if H+T = 47% of Expenditures

Affordability Index in 4 Areas in Minneapolis-St. Paul



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Proposed Uses

• Community Groups

• Use in campaigns for transit, community reinvestment, and affordable housing, and smart growth

Business Groups

- Common cause between community groups, government, and business for making better choices about development and public investment
- New tool for realtors and bankers to understand, market and capitalize on relative affordability of different neighborhoods

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Proposed Uses (cont'd)

Transit Agencies

- •Savings benefit to households support requests for funding
- •Determine the impact of service cuts
- Promote transit ridership with Savings campaigns

Government Agencies

- •Legislate alignment between and across government jurisdictions: State, MPO, Counties, Cities
- •Cost of Living influences State Housing Plans and Transportation Investment Decisions
- •Support changes to local ordinances that would better support transit use, e.g. parking requirements, building heights, density, etc.

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Smart Growth Benefits of the new Affordability Index



- Foster Transportation Choice, which:
 - Lowers household transportation costs
 - Increases job accessibility
 - Reduces Congestion
 - Channels growth to transit served areas
 - Avoids road and sewer construction
- Build wealth
 - For Households, by lowering costs
 - For Regions, by reducing infrastructure costs and inefficient development patterns

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Expanding the Model to other Areas:



- Because the model uses nationally accessible data bases, it can be replicated in the 49 communities with fixed guideway transit service
- CNT and CTOD are currently working to apply the model in 28 metropolitan areas.
- Information on these areas, and detailed description of the methodology can be found at: <u>www.reconnectingamerica.org</u>

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For more information on the Affordability Index:



- www.reconnectingamerica.org
- www.cnt.org
- www.brookings.edu/metro/umi.htm

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