



Agencia Uno

Valoración de las estaciones de bicicletas públicas en la ciudad: Un estudio de preferencias declaradas

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Santiago, octubre 2019

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facultad de
arquitectura,
arte y diseño



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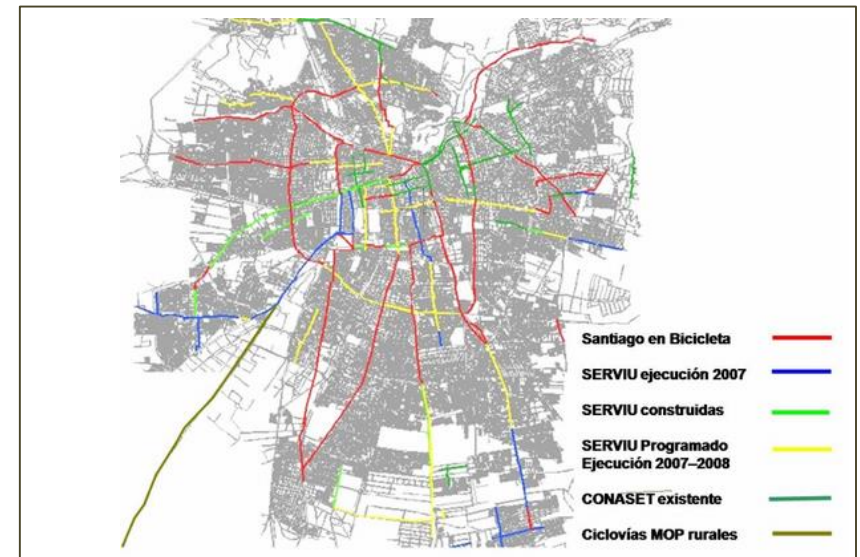
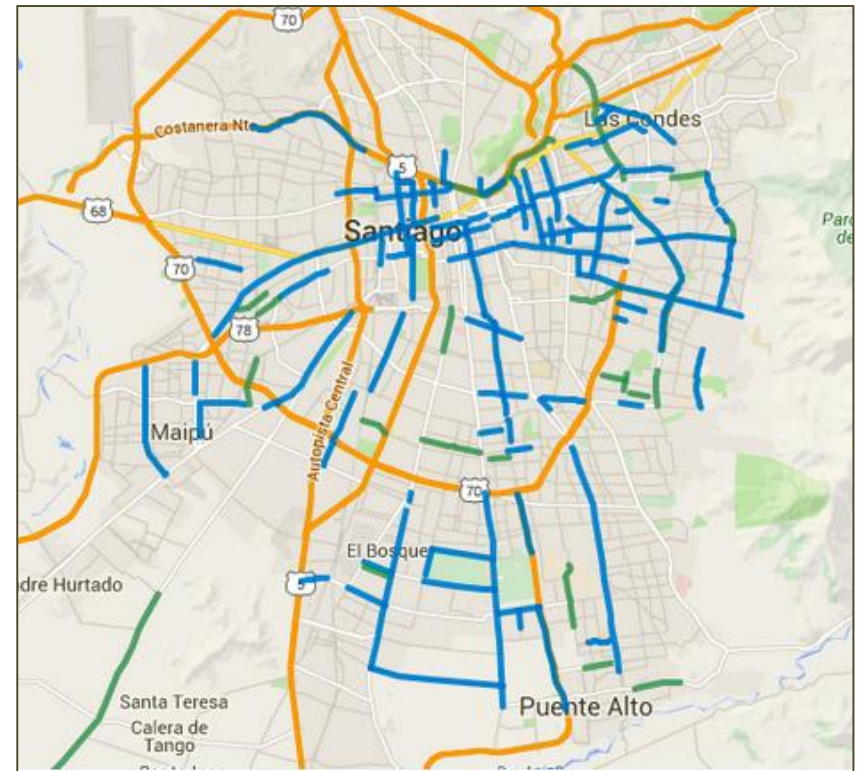
_Discusión y conclusiones



- Santiago (7.7 m)
- 18 m de viajes al día
- Viajes en bicicleta (EOD 2012) 3-4%, 1.2 m viajes diarios
- Hoy 7% / Providencia y Santiago centro 12-15%

Ciclovías en Santiago

- 2003: 20 km
- 2011: 195 km
- 2013: 214 km
- 2014: 243 km
- 2016: 287 km
- 2018: más de 300 (368 a sept 2019)
- 2021: 499 km
- 2032: 952 km (938 M US\$)





Me gusta 21 Compartir Twitter



15 de Mayo de 2018

Publican Ley de Convivencia Vial en Diario Oficial

El jueves 10 de mayo de 2018, se publicó en el Diario Oficial la nueva Ley de Convivencia vial que tiene como objetivo mejorar la relación de los distintos modos de transportes que circulan en la ciudad, equiparando el espacio vial y evitar los conflictos que se generan a diario entre ciclistas, peatones y conductores cuando se mueven por la ciudad.

La Ley apunta a un cambio de conducta de las personas. Por eso, el ministerio de transportes y telecomunicaciones y las agrupaciones de los diversos modos de transportes trabajaron desde que se creó la iniciativa en distintas campañas de difusión para poder concientizar a la ciudadanía de la importante de regular los modos transportes.

2

SERIE ESPACIOS PÚBLICOS URBANOS



CONSTRUCCIÓN DE CICLOVÍAS



ESTÁNDAR TÉCNICO



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Bicicletas Azules Providencia (2013)

16 estaciones



BikeSantiago (2013, diciembre)
En 2016 llegó a tener 50,000 usuarios

Tembici (2018 diciembre)
227 estaciones, 20,00 usuarios aprox.



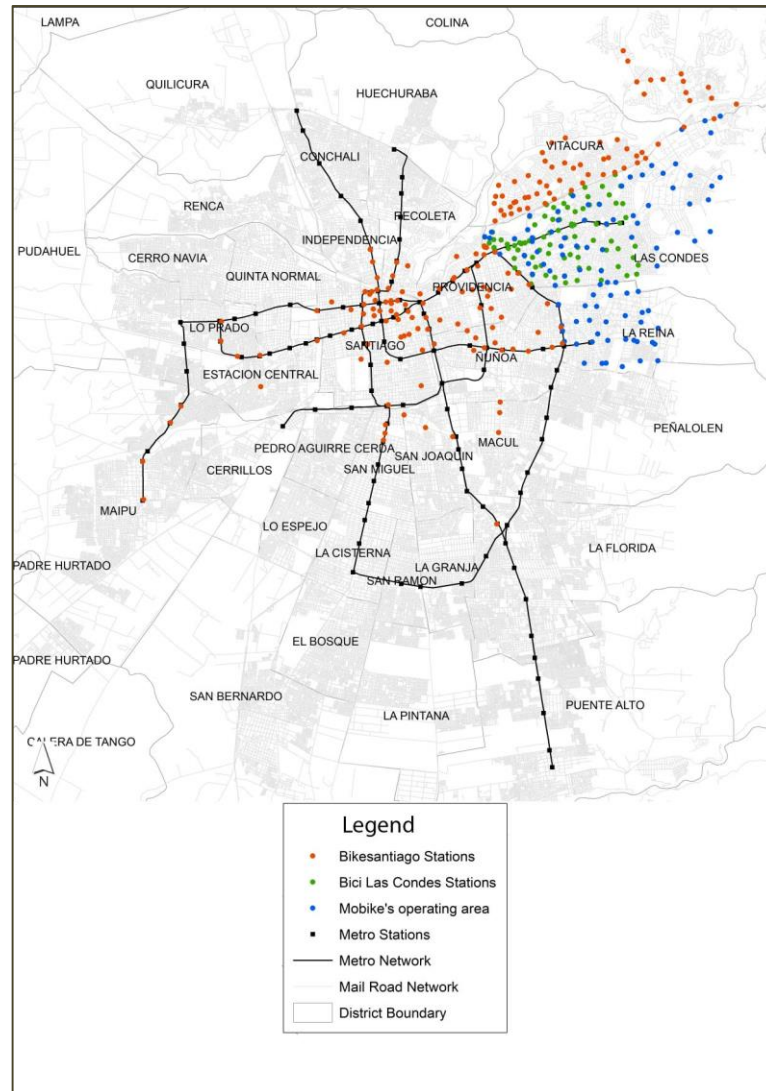


Bicicletas públicas de Las Condes
(2015)

50 estaciones, 500 bicicletas



Mobike (2017 diciembre)



Estaciones de bicicletas en Santiago

Experiencia Internacional

- BBPP aumentan participación modal de bicicleta en 1, 1.5% en contextos de baja participación de bicicleta (de Maio 2009), pero muchísimo mayores en lugares de alta participación (Vogel et al 2014)
- Sustitución de viajes en auto es variable: 7 a 19% en ciudades norteamericanas (Fishman 2013), pero solo de 0.5% a 4.6% en ciudades chinas (Yang et al 2010)
- Aumenta actividad física (Murphy 2010, Fuller et al 2011)
- Beneficio neto de salud expresado (Woodcock et al (2014)



Serious Disadvantages and Problems Still Exist in the Bicycle Sharing Industry

Being an avid shared bike user who grew up in China, I am truly impressed by how fast dockless bike sharing industry has expanded globally and how much potential this bicycle sharing business has. After all, it is just a concept several years ago and suddenly comes into our life, bringing up more convenience to people. I have seen a blog post before that has thoroughly analyzed the advantages of the dockless bike industry. The main reason that it has successfully expanded so fast is the exploration of our application connectivity, easily pay for the use by downloading application on the phone. The shared bike business owners who create such a billion-dollar project are smart and can easily track people's daily activities by collecting data from the daily use of the bikes distributed around the cities. By doing some collection, they can learn the possibility of their investment in each city



China's bike-sharing frenzy is collapsing



Wolf Richter, Wolf Street Nov 27, 2017, 11:46 PM

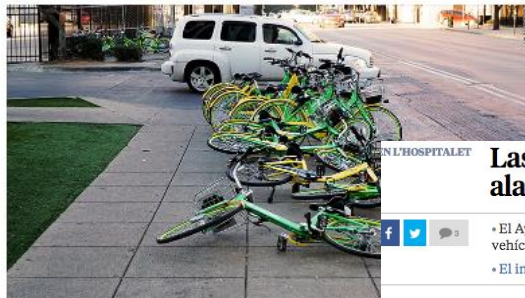


Andy Zwilke

- Chinese bike-sharing services have gotten billions of dollars in venture funding in the past 18 months.

Serious Disadvantages and Problems Still Exist in the Bicycle Sharing Industry

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OSE POLO,
HOSPITAL ET DE
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Las bicicletas compartidas sin anclaje dan alas al incivismo

- El Ayuntamiento descarta sanciones y tampoco considera una nueva tasa para los vehículos compartidos como ha hecho Barcelona
- El incivismo y la inseguridad desbordan a la policía



Una Mobike impidiendo el acceso a través de una rampa (María Isabel Vergara)

En medio de la acera dificultando la circulación de los peatones, en rampas impidiendo el paso de las personas con movilidad reducida, incluso a las puertas de centros de atención primaria o en zonas para

China's bike-sharing frenzy is collapsing



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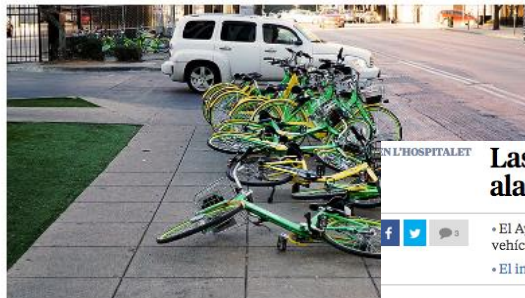


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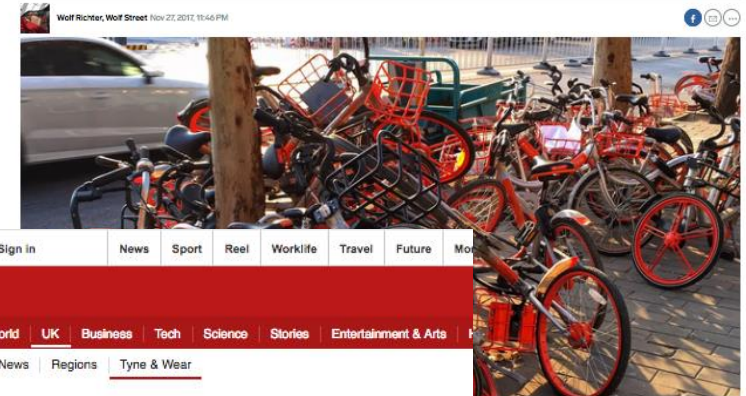
Las bicicletas con alas al incivismo

- El Ayuntamiento descarta sancionar vehículos compartidos como ha hecho
- El incivismo y la inseguridad de los usuarios



En medio de la acera dificultando la circulación de las personas, incluso a las puertas de centros de atención

China's bike-sharing frenzy is collapsing



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Newcastle and Gateshead Mobike scheme suspended

30 April 2019

f t e Share



Mobikes were introduced in Newcastle in 2017, before extending to Gateshead last June.

Bike hire firm Mobike is to pull out of Newcastle and Gateshead.

The firm has confirmed that it will be moving its bikes from Tyneside to London in May to "increase the sustainability" of its UK business.

The Research of Tripartite Collaborative Governance on Disorderly Parking of Shared Bicycles Based on the Theory of Planned Behavior and Motivation Theories—A Case of Beijing, China

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Abstract

With the maturity of mobile payments and internet technology, a new type of travel mode, shared bicycles, was brought out by China's urban transport under the impetus of "the last mile" travel demand. Although convenient travel has been achieved by using shared bicycles, the resulting problems such as disorderly parking and the deposition of bicycles could severely influence urban traffic order and impede the sustainable development of shared bicycles. Based on the quasi-public goods property of shared bicycles, this article established a management system for the tripartite collaborative governance of disorderly bicycle parking by virtue of regulating the bicycle parking behavior of users, the promoting of multiple propaganda and macro-institutional controls of the government, and acquiring technique support of enterprise "entry settlement". Furthermore, considering the influence on the governance effect of user conduct, a structural model for guiding users to regulate bicycle parking to guarantee the governance effect by adopting material incentive and spiritual motivation was established via the utilization of the theory of planned behavior and motivation theories, and multiple hypotheses were also proposed. In this article, users of shared bikes in Beijing, China were selected as the research objects, and a questionnaire survey was adopted as the empirical research method. In addition, the governance validity on disorderly parking of the collaborative governance model was tested via hierarchical regression analysis after the collection and analysis of the factors influencing bicycle parking behavior of users. The obtained results show that the tripartite collaborative governance model could enhance the regular parking consciousness of users and improve the governance effect of disorderly parking. The research conclusion of this article could provide feasible suggestions for the governance of bicycle disorderly parking and propel the sustainable development of shared bicycles. View Full-Text

Keywords: sharing bicycle; disorderly parking; theory of planned behavior; motivation theories; tripartite collaborative governance

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Why Shared Bikes of Free-Floating Systems Were Parked Out of Order? A Preliminary Study based on Factor Analysis

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Abstract

Free-floating bicycle-sharing systems are an important component of sustainable transport. China's bicycle-sharing schemes have experienced ups and downs in the past three years, and there are a lot of related studies, but there are relatively few studies on the causes of disorderly parking of shared bikes. In this study, an open questionnaire is used to widely collect the causes of the disorderly parking of shared bicycles from users. Through factor analysis, six factors and 32 criteria for the causes of disorderly parking are constructed. Factor 1 'supervision and management of enterprises', factor 2 'supervision and management of users', factor 3 'parking space', factor 4 'guidance of parking shared bikes', factor 5 'user self-discipline', factor 6 'operation and maintenance'. It requires the cooperation of multiple parties to solve the problem of disorderly parking of shared bicycles. View Full-Text

Keywords: Free-Floating Bike-sharing Systems; causes of disorderly parking; factor analysis

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Figure 1



Elaboración propia



Elaboración propia



La Tercera

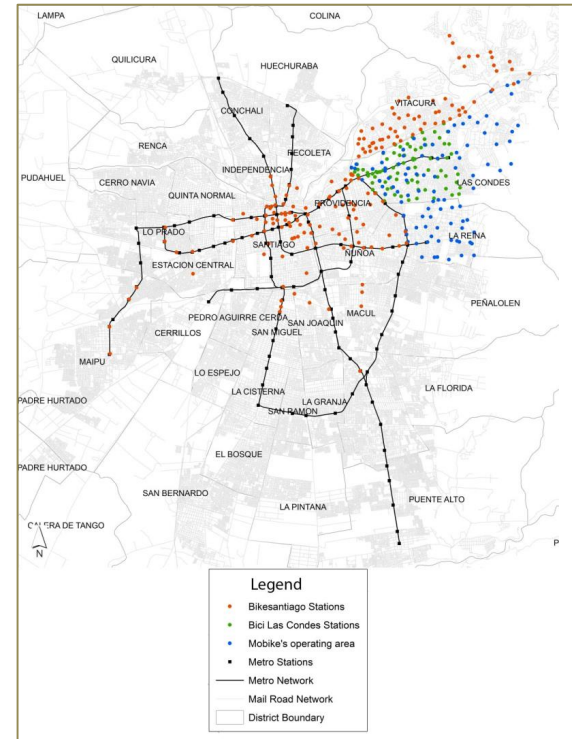


La Tercera





¿Cómo afectan estas estaciones a la imagen urbana de sus barrios?



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Bike Santiago



Bici Las Condes



Mobike

- Dock-based

- Robusto

- Panel solar

- Alta visibilidad

- Dock-based

- Liviano

- Tótem

- Baja visibilidad

- Dock-less

- Pintura en el suelo



Bike Santiago



Bici Las Condes



Mobike



Bike Santiago



Bici Las Condes



Mobike

+





Bike Santiago



Bici Las Condes



Mobike

+



Variables
contextuales



barrio central-densidad media
versus
ciudad jardín-densidad baja



Bike Santiago



Bici Las Condes



Mobike

+



Variables
contextuales



barrio central-densidad media
versus
ciudad jardín-densidad baja

Variables del
medio
construido



con ciclovía
versus
sin ciclovía

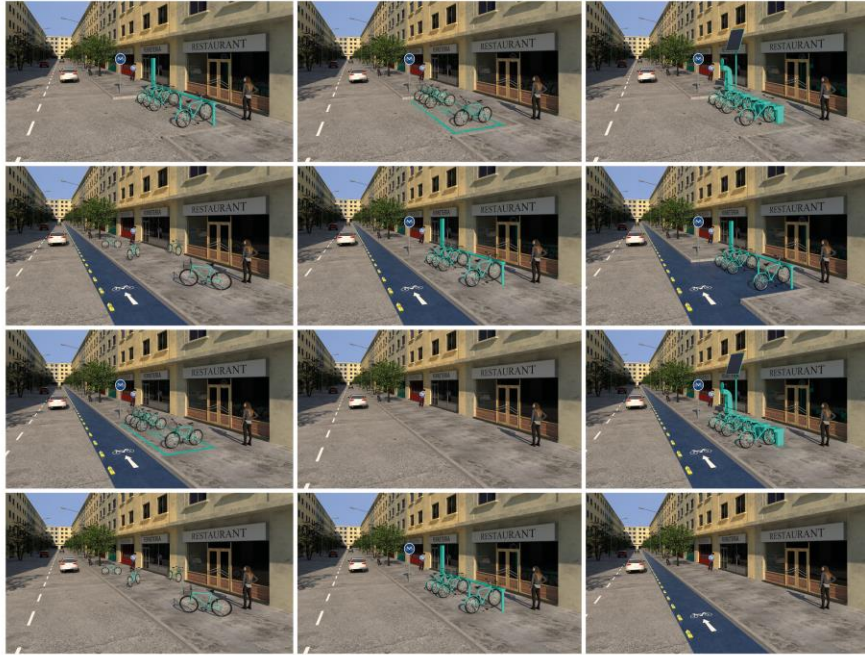


estación en vereda
versus
estación en calzada

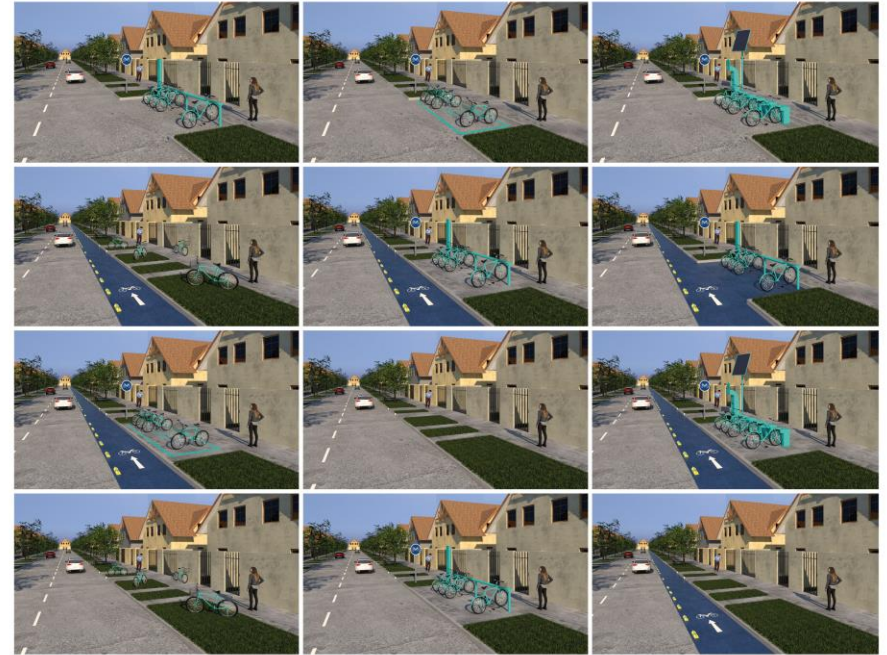
Diseño experimental D-eficiente (N-Gene, Rose et al, 2018)

		scenario alternative1 (left)					scenario alternative 2 (right)				
Block	experiment	bike lane	type of station	disorder	Rent (base +)	road level	bike lane	type of station	disorder	alt1.a	road level
1	1	0	0	0	7%	1	1	3	0	0%	0
1	2	1	2	1	21%	0	0	0	0	0%	1
1	3	1	1	0	14%	1	1	2	0	0%	0
1	4	0	2	0	0%	1	1	0	0	0%	0
1	5	0	3	0	7%	0	0	2	1	1%	0
1	6	1	0	0	7%	0	0	2	0	0%	1
2	1	0	1	0	14%	1	1	2	0	0%	0
2	2	1	1	0	14%	0	0	0	0	0%	1
2	3	1	2	0	14%	0	0	2	1	1%	1
2	4	0	2	1	7%	1	1	0	0	0%	0
2	5	1	2	1	0%	0	0	2	0	0%	1
2	6	0	1	0	7%	0	1	2	1	1%	1
3	1	0	2	0	0%	1	1	3	0	0%	0
3	2	1	2	1	21%	1	0	1	0	0%	0
3	3	0	0	0	21%	1	1	2	1	1%	0
3	4	0	3	0	0%	0	0	1	0	0%	0
3	5	1	2	0	21%	0	0	1	0	0%	1
3	6	1	0	0	0%	0	1	1	0	0%	1

Rose, J.M., Bliemer, M.C., Hensher, D.A., Collins, A.T., 2008. Designing efficient stated choice experiments in the presence of reference alternatives. Transp.Res. Part B: Meth. 42 (4), 395–406.



ciudad compacta



distrito residencial



Rent: \$726.000



Rent: \$600.000

- Utilidad lineal

$$U_{in} = \sum_k \beta_n^k \cdot x_i^k + \varepsilon_{in}$$

- Logit binomial

$$P_{in} = \frac{1}{1 + \sum_{j \in J} \exp(-\mu \sum_k \beta_n^k \cdot (x_i^k - x_j^k))}$$

- Encuesta Online (Instagram/Facebook/Twitter)
- Encuesta PD + otras preguntas sobre percepción de sist de bicis públicas
- 744 participantes (4464 observaciones)
- 50% mujeres
- 63% 18-29 años
- 79% educación universitaria
- 85% posee bicicleta propia
- 66% vive en comuna con sistema de bicicletas públicas
- 17% era o había sido miembro de algún sistema de bicicletas públicas



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Pregunta	De acuerdo o muy de acuerdo
Las estaciones bicicletas públicas mejoran el atractivo de un barrio	79%
Las estaciones bicicletas públicas hacen que un barrio se vea más moderno	82%
Las estaciones bicicletas públicas le suben el nivel a un barrio	67%
Tener una estación de bicicletas públicas significa que vivo en un buen barrio	51%
Las estaciones de bicicletas públicas mejoran la seguridad de un barrio	31%
Las estaciones de bicicletas públicas fomentan el uso de la bicicleta	89%
Los sistemas de bicicletas públicas hacen que la ciudad sea más accesible	87%
La existencia de múltiples sistemas de bicicletas públicas es positivo	48%

	COMPACT CITY			RESIDENTIAL DISTRICT		
Variable	β	t-test	p-value	β	t-test	p-value
Bikesantiago station	2.5	3.68	0	2.43	3.67	0
Bici LC station	2.31	3.42	0	1.97	3	0
Mobike bicycles	2.37	3.47	0	2.19	3.3	0
Rent	-0.675	-7.53	0	-0.613	-8.15	0
Rent x high income	--			0.235	2.8	0.01
Station at road level	-0.344	-3.8	0	-0.231	-3.65	0
Bike lane	1.92	6.45	0	2	8.92	0
Bike lane x presence of station	-1.04	-3.71	0	-1.15	-5.39	0
Disorder	-0.865	-5.81	0	-0.752	-6.53	0

General (both scenarios.

Variable	β	t-test	p-value
Constant (alternative to the left)	0.0912	2.24	0.03
Mobike bicycles x high income	0.241	2.93	0
Mobike bicycles x female	-0.19	-1.69	0.09
Disorder x female	0.261	1.95	0.05
presence of station x age	-0.331	-1.74	0.08
presence of station x frequent user	0.754	2.23	0.03

Conclusiones

- En términos generales, las estaciones de bicicletas públicas son percibidas en forma favorable por las personas.
- Esta valoración se refiere fundamentalmente a temas de imagen urbana y de accesibilidad, pero no necesariamente en términos de seguridad o prestigio urbano.
- La existencia de múltiples sistemas de bicicletas públicas no es valorada por las personas.
- Se valora la presencia de estaciones de bicis públicas. Se detectaron diferencias en las preferencias entre tipos de estaciones.
- La presencia de bicicletas dejadas en forma desordenada fue negativamente evaluada por las personas ("broken window theory", debilitamiento de normas sociales). Esto, sin embargo, no logra "cancelar" la valoración positiva de su presencia.

- Los resultados anteriores muestran que los sistemas de bicicletas públicas no solo pueden contribuir a aumentar la AF de las personas y fomentar modos no contaminantes de transporte, sino también a mejorar la imagen urbana de los barrios.
- Esto es especialmente interesante en ciudades altamente segregadas como Santiago, donde la inversión privada se concentra fundamentalmente en 5 o 6 comunas.
- Evidencia adicional a favor de considerar políticas de subsidio a las estaciones de bicicletas públicas, que pongan el acento en la instalación en barrios vulnerables.



¡GRACIAS!