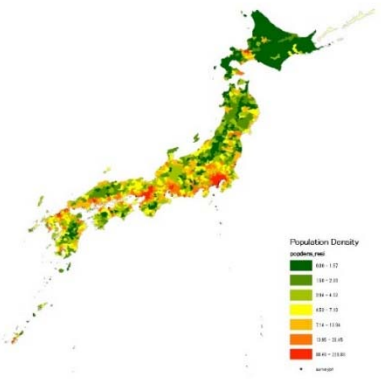
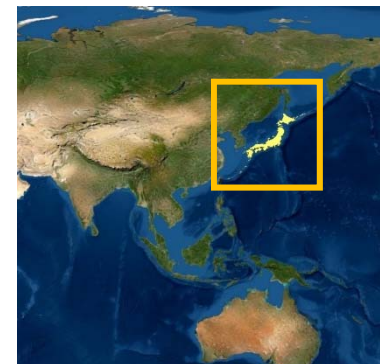
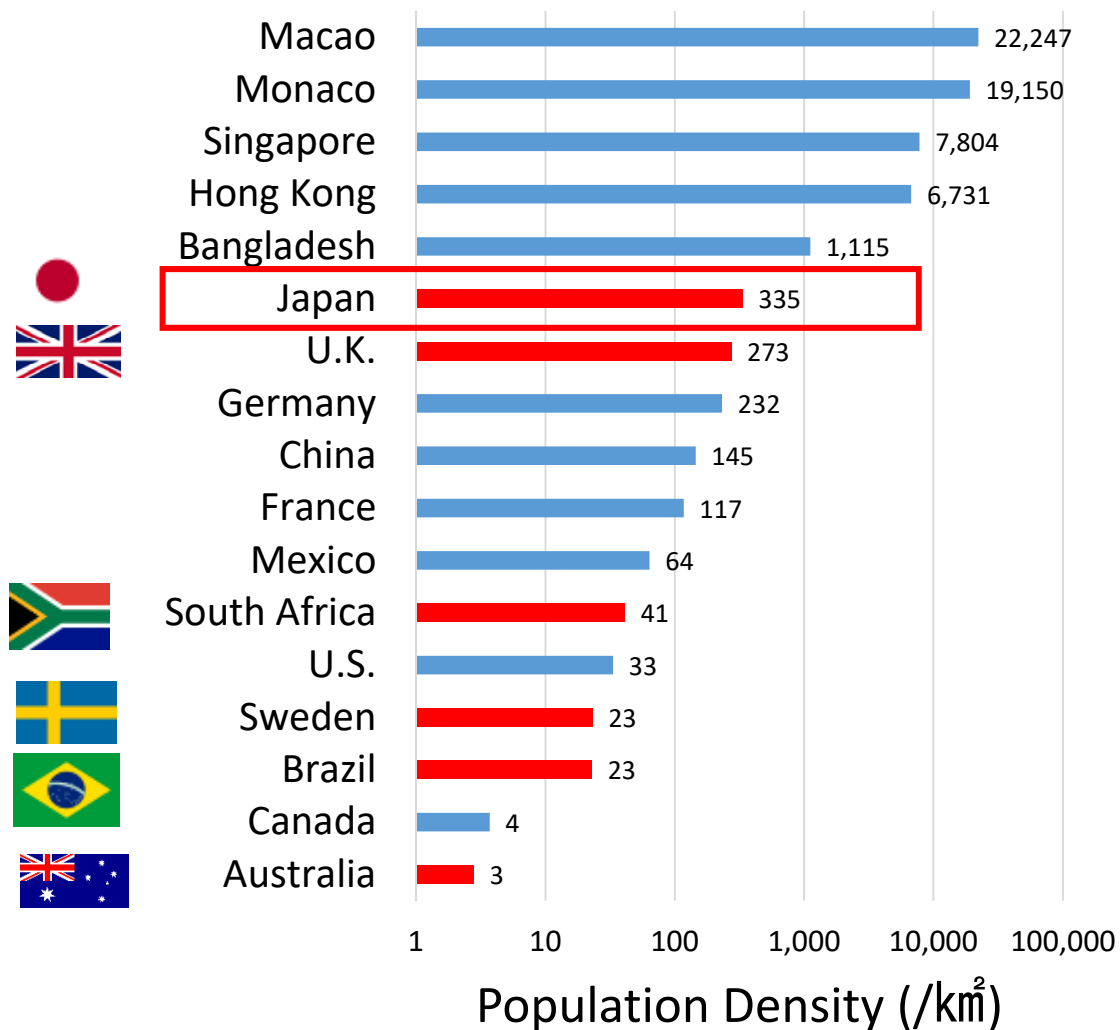


Crime prevention behavior and property crime victimization in urban/rural area in Japan



Japan: high population density nation

2



Urban/Rural and property crime

3



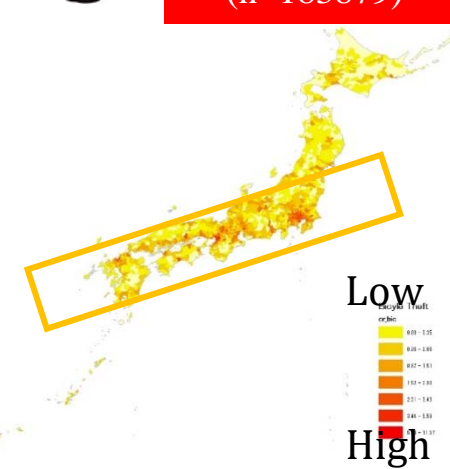
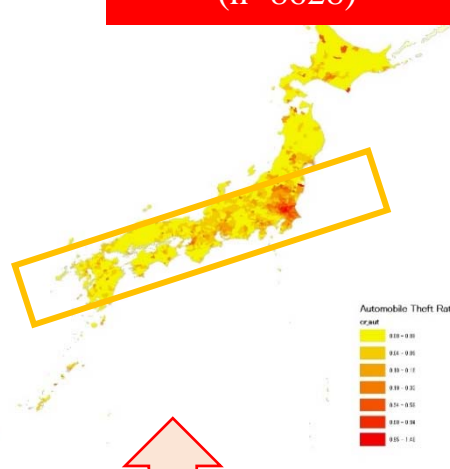
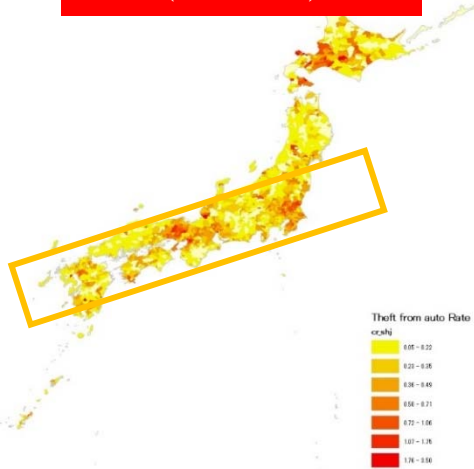
Theft From
Automobile
(n=44969)



Automobile
Theft
(n=8628)



Bicycle
Theft
(n=183879)

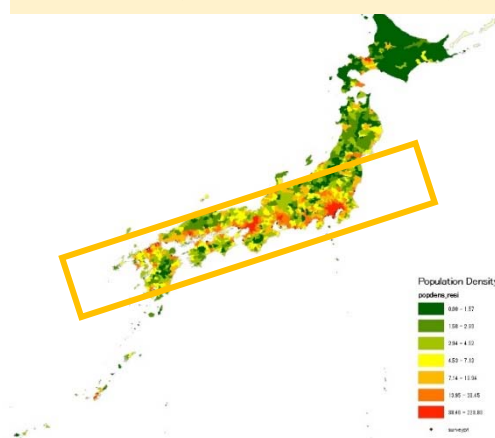


$r=.031(n.s.)$

$r=.120 **$

Population Density

$r=.749 **$



Low

High



Rural & Urban in criminology

- According to routine activity/Life-style (RALS) approach, Rural areas can be characterized as follows (+/- impact to crime) :
- Rural areas are less densely populated than urban areas.
 - fewer motivated offenders(-)/ capable guardians (-) / suitable target(-)
- Daytime population declines in rural areas as people commute to urban areas.
 - more suitable target(+)
- Communities are more stable.
 - more personal network (-)
 - high collective efficacy (-)
- People are less vigilant.
 - lower perceived risk (+)
 - less crime prevention effort (+)



This presentation aims to examine the rural-urban differences in crime rates among municipalities from the perspectives of offenders, victims, and environment/backdrop.

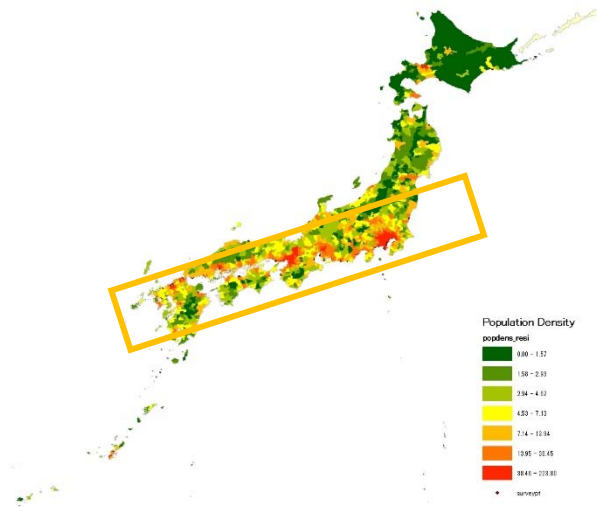
Data & Variables

5

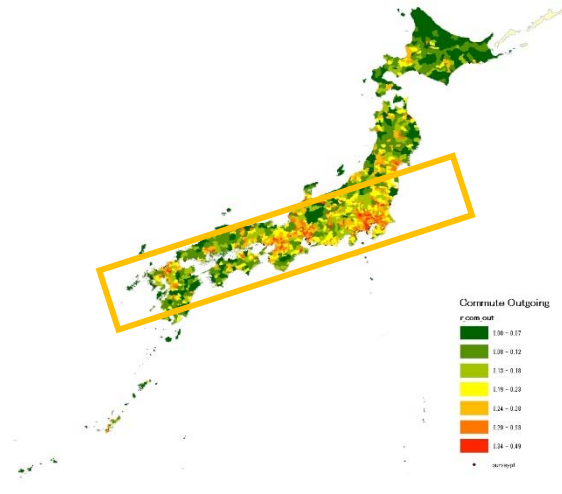
- 3 Property Crimes occurred in 2018
 - Theft from automobile (n=44969), Automobile theft (n=8628) , Bicycle theft(n=183879)
 - The data includes victims' use of lock when the properties were stolen.
- Unit of analysis
 - Municipals: 792 cities, 23 wards, 743 towns, 183 villages
- Precautionary measures:
 - Use of lock

Variables	Measurement	Source	Coverage (# of municipals)
Dependent Variable			
Crime rate	# of crime / population	Crime open data (2018)	1898
Independent Variables			
Offender			
Target selection			
No lock use	(# of crime without lock + 1) / (# of crime with lock + 1)	Crime open data (2018)	1898
Control			
Male to Female	Male poputation / Female Population	Census (2015)	1898
Average Age		Census (2015)	1898
Environment/Backdrops			
Population density	Population density in dwelling area		
Ambient population			
Outgoing	% of population commuting to other municipals	Census (2015)	1898
Incoming	% of population commuting to other municipals		
Residential stability			
Housing tenure	% of residents living > 5 years in the municipals		
Household members	Average household members		
Potential Victims			
Perceived risk	Subjective probablity of victimization in next 1 year (0: not at all, 1: somewhat, 2: moderately, 3: probabley)	Survey on fear of crime in Japan (2018) by Foundation for promotion of safety society (Nikkouso-syakai-anzen-kenkyu- zaidan)	150
No lock use	Self-report of no use of lock while parking automobile/bicycle in a previous month (0: no, 1: yes)		

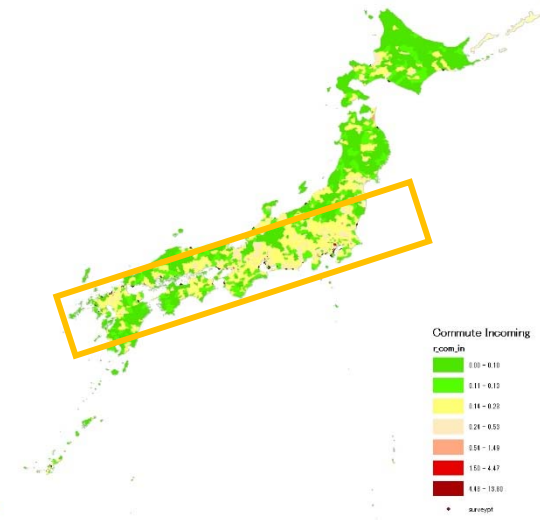
Population Density



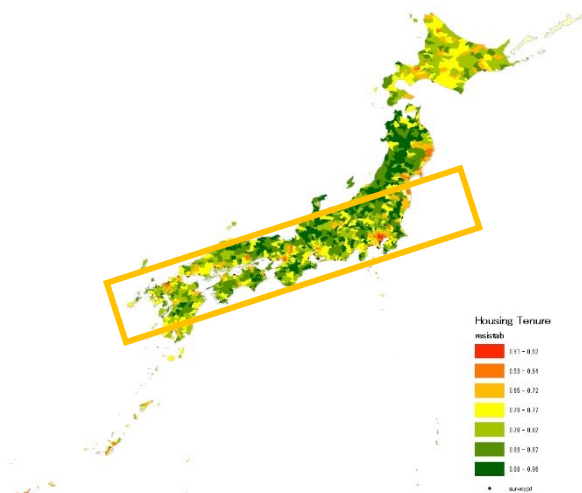
Commuting outgoing



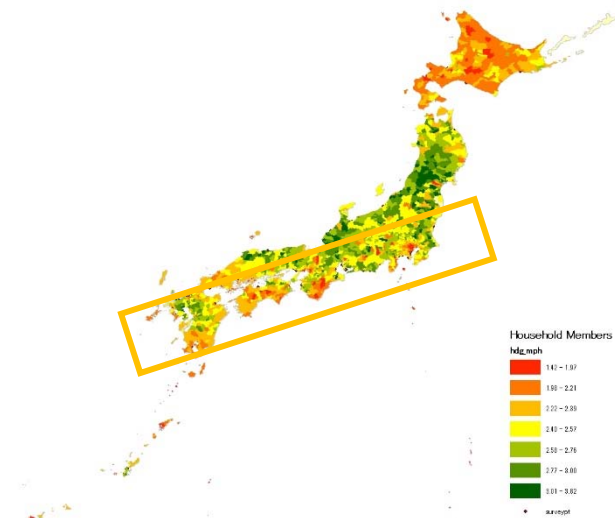
Commuting Incoming



Housing Tenure



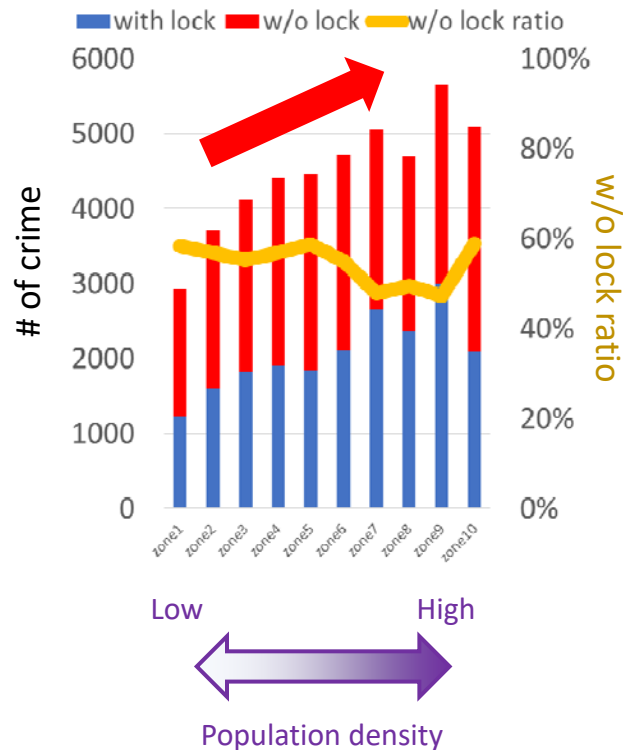
Household Members



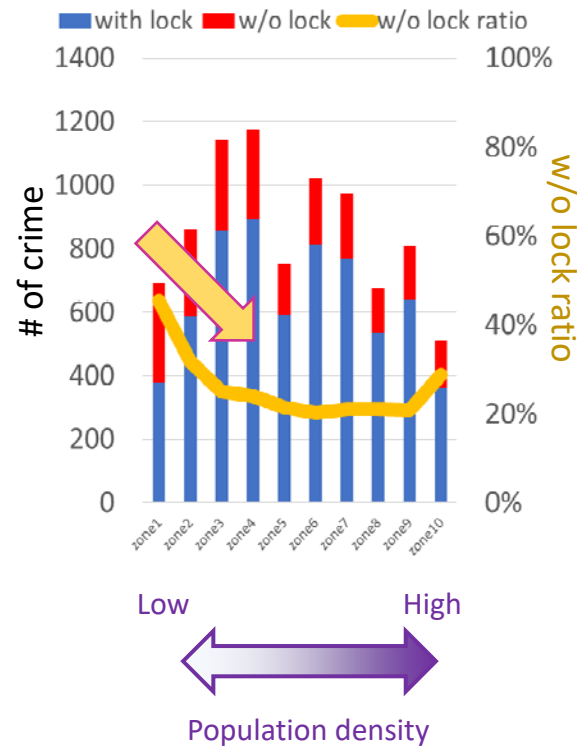
Result: population density and property crime / use of lock while victimization



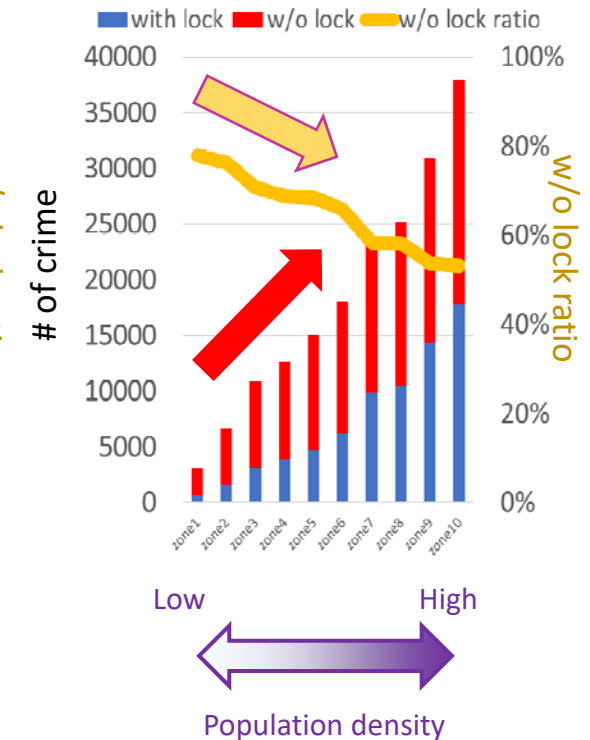
Theft From Automobile



Automobile Theft



Bicycle Theft



Result:

Predicting Municipal's Crime Rate



Theft From
Automobile



Automobile
Theft



Bicycle
Theft

		Theft From Automobile			Automobile Theft			Bicycle Theft		
		Model 1 (n=1898)	Model 2 (n=150)	Model 3 (n=150)	Model 1 (n=1898)	Model 2 (n=150)	Model 3 (n=150)	Model 1 (n=1898)	Model 2 (n=150)	Model 3 (n=150)
Variables		β	β	β	β	β	β	β	β	β
Offender										
Target selection	No lock use	-0.01 **	-0.01 **	-0.01 **	-0.01 †	-0.03 **	-0.03 **	0.02 *	0.00	0.00
Control	Male to Female	0.41 ***	-0.81 †	-0.96 *	0.20 ***	0.08	0.04	-0.51 ***	0.31	-0.14
	Average Age	0.00	-0.03 *	-0.03 *	0.00	0.00	0.00	-0.03 ***	-0.12 **	-0.13 **
Environment/Backdrops										
	Population density	0.00 **	0.00 *	0.00 *	0.00	0.00	0.00	0.01 ***	0.01 *	0.01 *
Ambient population	Outgoing	0.45 ***	-0.24	-0.21	0.18 ***	0.16	0.17	1.05 ***	0.46	0.54
	Incoming	0.00	0.13 †	0.08	0.00	0.03	0.02	0.05 ***	1.22 ***	1.00 ***
Residential stability	% living > 5years	-0.68 ***	0.50	0.50	-0.09	-0.07	-0.08	-2.38 ***	1.61	1.22
	Household members	0.01	0.00	0.01	0.03	0.04	0.05	-0.27 ***	-1.29 *	-1.24 *
Potential Victim										
	Perceived risk			0.01 *			0.00 *			0.03 *
	No lock use			-0.14			-0.01			0.89 *
Constant		0.28 †	2.12 **	2.26 **	-0.12 †	-0.03	0.02	4.84 ***	7.92 **	8.77 ***

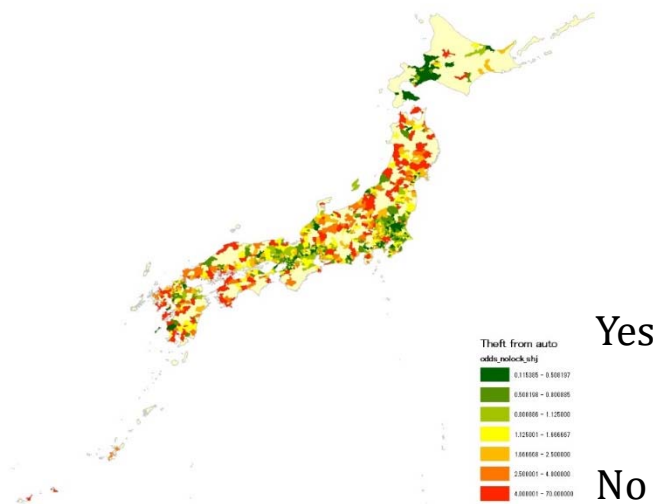
Summary and Conclusion

9

- This study examined the impact of **population density and other city-rural separation variables on property crime** in Japan, a country with high levels of population density.
- The results suggest that population density affects crimes against **high volume targets** / for which **criminals are not specialized**, such as theft from automobiles and bicycle thefts.
- **Commuting to city** was also shown to increase the risk of crime through a reduction in capable guardian in daytime. Furthermore, **residential stability** was shown to reduce the risk of crime.
- **No-use of locks** by the general public was shown to increase the risk of bicycle theft.
- Though the risk of crime victimization is lower in rural areas than in cities, attentions should be paid to **population mobility within a day** and **the lack of crime prevention behaviors** stemming from low risk perception.

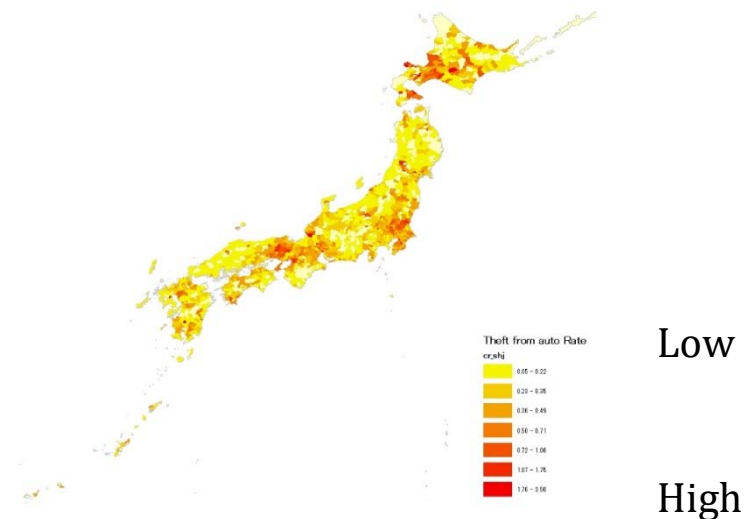
		Theft From Automobile		
		Model 1 (n=1898)	Model 2 (n=150)	Model 3 (n=150)
Variables		β	β	β
Offender				
Target selection	No lock use	-0.01 **	-0.01 **	-0.01 **
Control	Male to Female	0.41 ***	-0.81 †	-0.96 *
	Average Age	0.00	-0.03 *	-0.03 *
Environment/Backdrops				
Population density		0.00 **	0.00 *	0.00 *
Ambient population	Outgoing	0.45 ***	-0.24	-0.21
	Incoming	0.00	0.13 †	0.08
Residential stability	% living > 5years	-0.68 ***	0.50	0.50
	Household members	0.01	0.00	0.01
Potential Victim				
	Perceived risk			0.01 *
	No lock use			-0.14
Constant		0.28 †	2.12 **	2.26 **

lock-use (crime report victims)

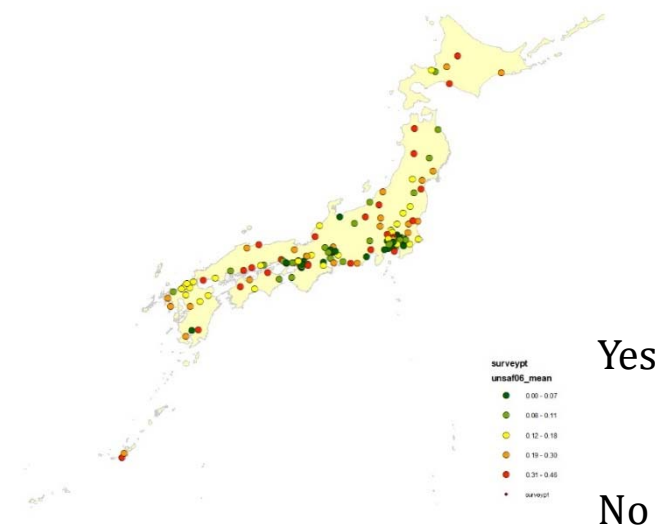


Crime Rate

10

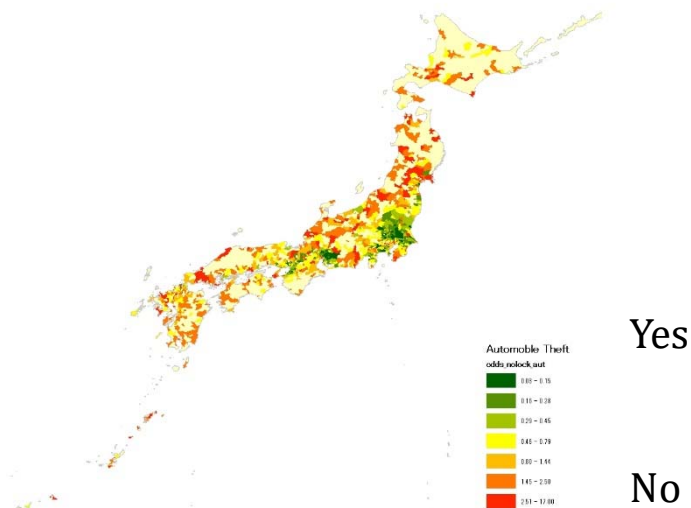


lock-use (potential victims)



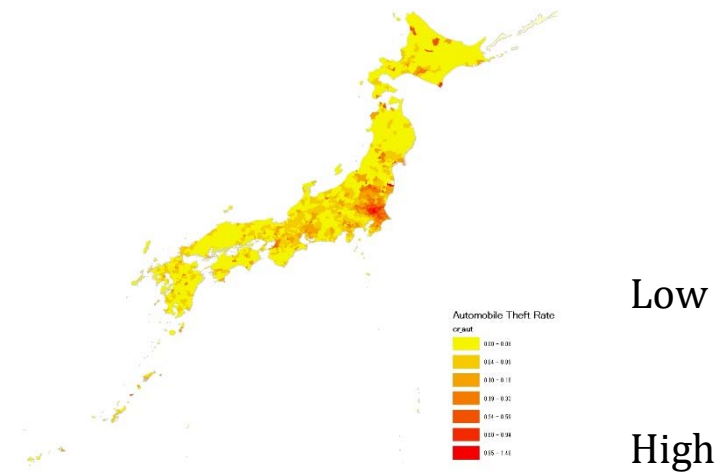
		Automobile Theft		
		Model 1 (n=1898)	Model 2 (n=150)	Model 3 (n=150)
Variables		β	β	β
Offender				
Target selection				
	No lock use	-0.01 †	-0.03 **	-0.03 **
Control				
	Male to Female	0.20 ***	0.08	0.04
	Average Age	0.00	0.00	0.00
Environment/Backdrops				
Population density		0.00	0.00	0.00
Ambient population	Outgoing	0.18 ***	0.16	0.17
	Incoming	0.00	0.03	0.02
Residential stability	% living > 5years	-0.09	-0.07	-0.08
	Household members	0.03	0.04	0.05
Potential Victim				
	Perceived risk			0.00 *
	No lock use			-0.01
Constant		-0.12 †	-0.03	0.02

lock-use (crime report victims)

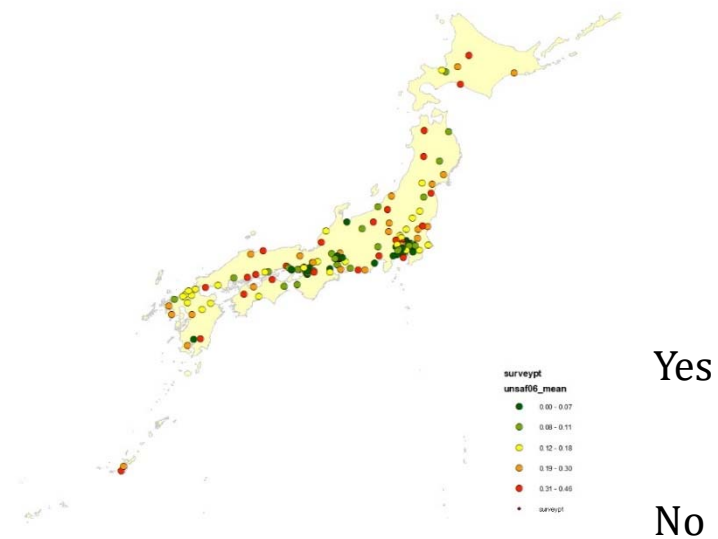


Crime Rate

11

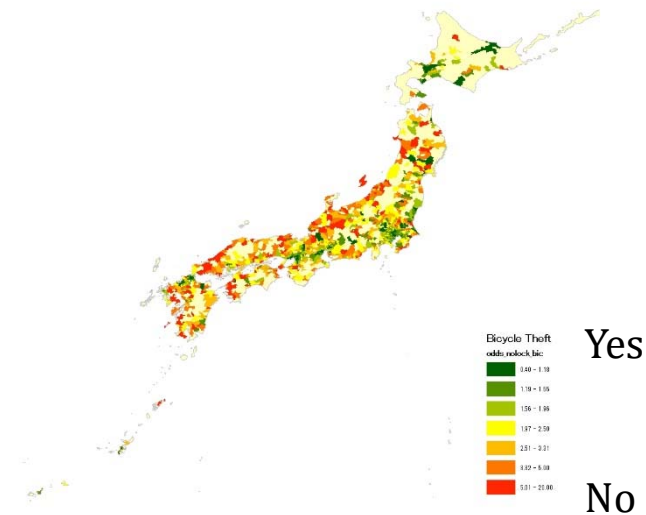


lock-use (potential victims)



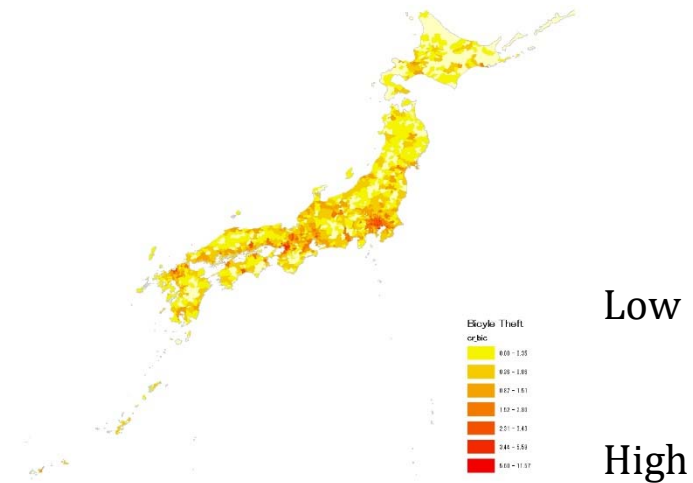
		Bicycle Theft					
		Model 1		Model 2		Model 3	
		(n=1898)		(n=150)		(n=150)	
Variables		β		β		β	
Offender							
Target selection							
	No lock use	0.02	*	0.00		0.00	
Control							
	Male to Female	-0.51	***	0.31		-0.14	
	Average Age	-0.03	***	-0.12	**	-0.13	**
Environment/Backdrops							
	Population density	0.01	***	0.01	*	0.01	*
Ambient population	Outgoing	1.05	***	0.46		0.54	
	Incoming	0.05	***	1.22	***	1.00	***
Residential stability	% living > 5years	-2.38	***	1.61		1.22	
	Household members	-0.27	***	-1.29	*	-1.24	*
Potential Victim							
	Perceived risk					0.03	*
	No lock use					0.89	*
Constant		4.84	***	7.92	**	8.77	***

lock-use (crime report victims)



Crime Rate

12



lock-use (potential victims)

