Figure S1: Correlation between employed variables
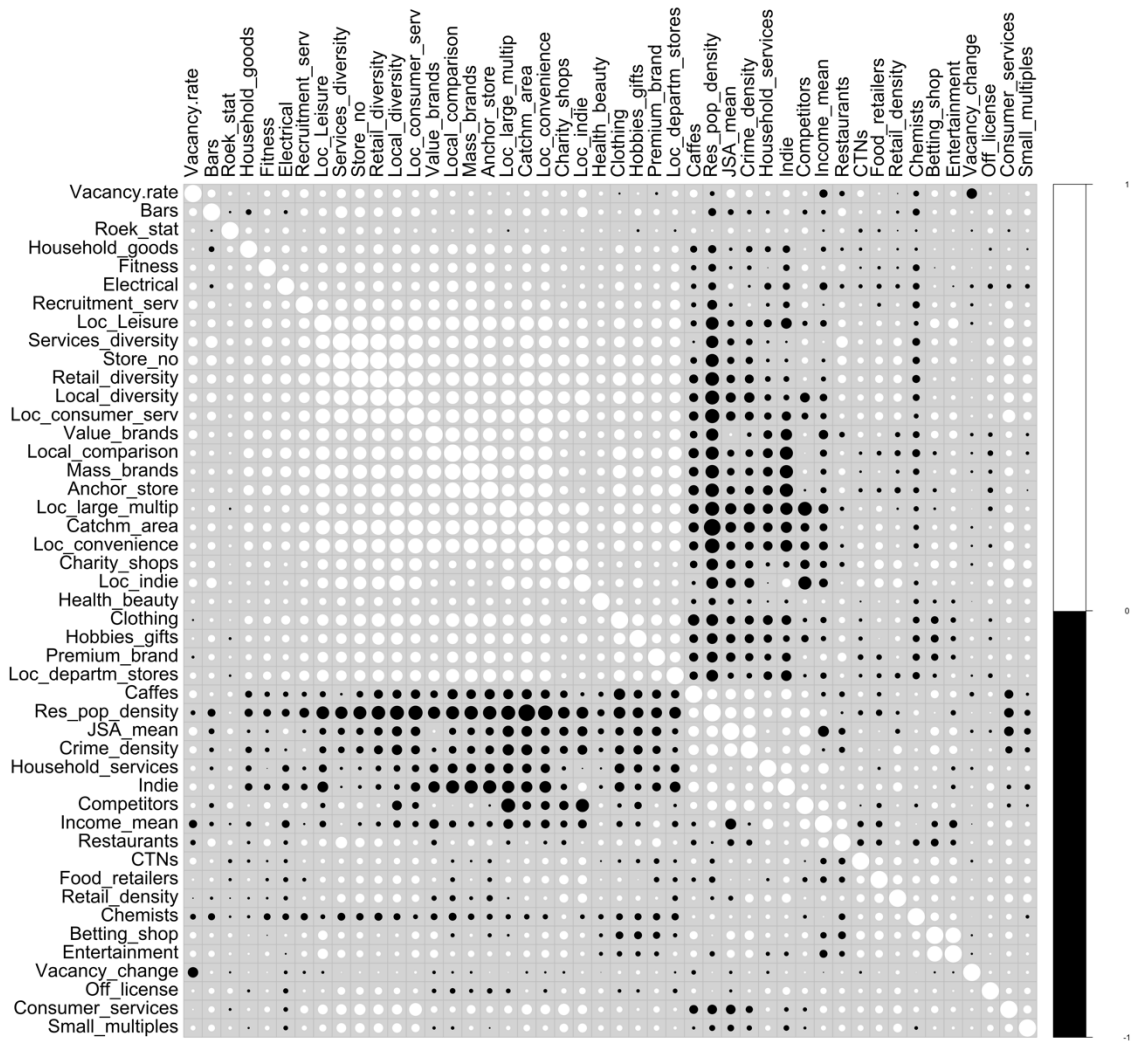
Figure S2: Supergroups (a) and the nested groups of Cluster 3 (b) in Greater Manchester
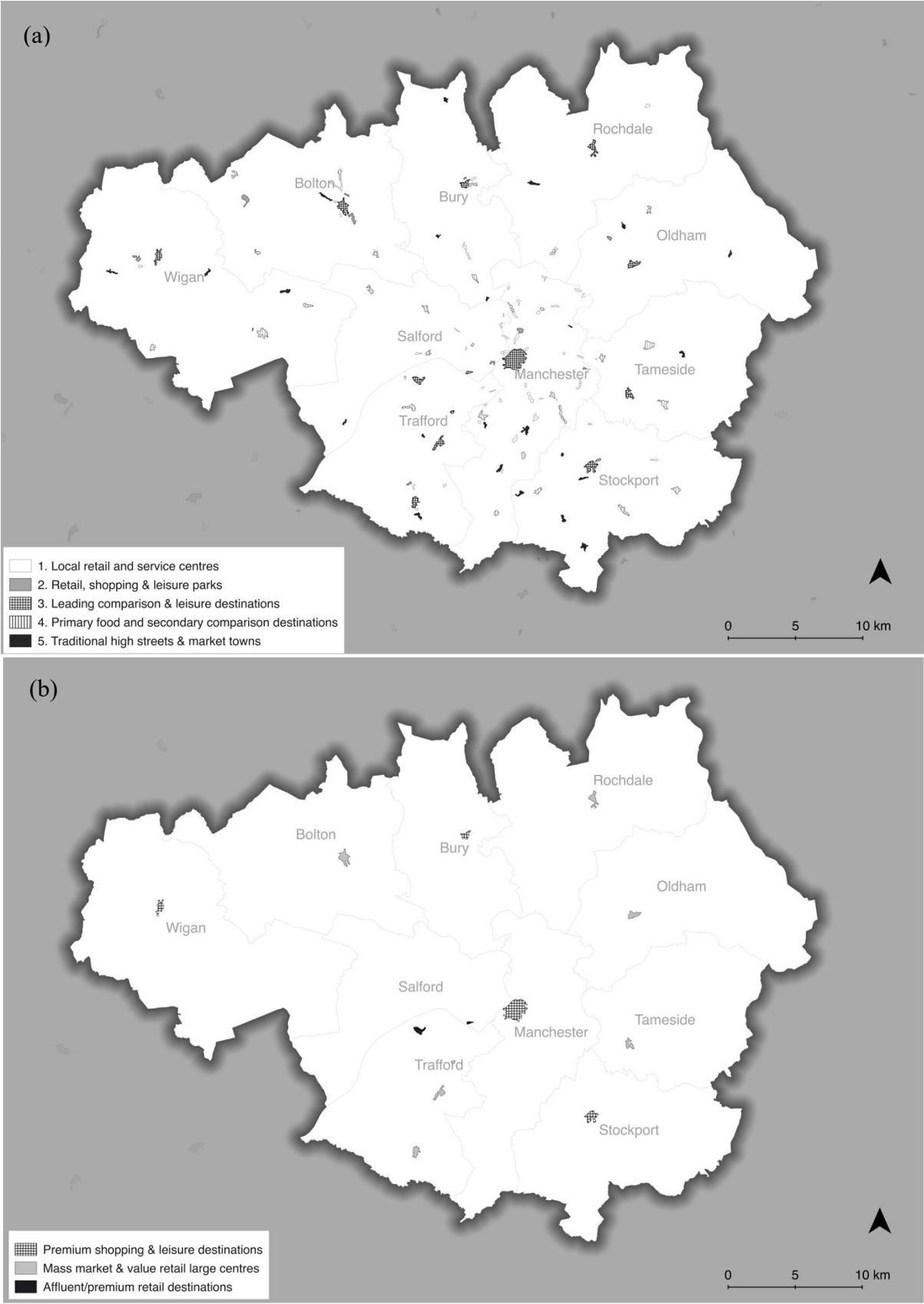

(a)

1. Local retail and service centres
2. Retail, shopping & leisure parks
3. Leading comparison & leisure destinations
4. Primary food and secondary comparison destinations
5. Traditional high streets & market towns

0   5   10 km

(b)

Premium shopping & leisure destinations
Mass market & value retail large centres
Affluent/premium retail destinations

0   5   10 km

Table S1: Domains, sub-domains and variables considered for the modelling process

Domain	Sub-domain	Variables
Composition	Comparison hub	Proportion of clothing and footwear, DIY & household goods, electrical, recreational (toys, books and sport), and other comparison goods
	Convenience hub	Proportion of food retailers (grocers, butchers, bakers), CTNs, off licences and chemists
	Hospitality services	Proportion of leisure outlets (restaurants, bars, and pubs, cafes, fast food) and other hospitality outlets (entertainment, fitness centres and health & beauty)
	Other consumer services	Proportion of consumer services (travel agents, banks, estate agents), household services (laundrettes, household & home, locksmiths, car showrooms) and business services (recruitment agencies, wholesale, legal services)
Diversity	National diversity	Proportion of independent retailers, small multiples (max 10 stores), and large multiples; national diversity index for retail and services; Proportion of the most popular comparison, convenience and leisure chains
	Local diversity	The equivalent of the above calculated for local scale
Size and Function	Upmarket destinations	No of units, centre morphology (Roeck measure of compactness), attractiveness score, catchment size, Proportion of anchor stores, premium mass and value retailers, charity shops, less desirable occupiers (pawnbrokers, betting shops)
	Mass/general shopping	
	Value destinations	
	Specialist destinations	
	Ancillary & emerging	
Economic health	Robust performers	Effect: Vacancy rate, structural vacancy rate, change in vacancy rate, tenant mix (retail/service ratio) Cause: crime rates, unemployment rates, exposure to online shopping, income, day time/night-time population, no of competing centres within specified distance
	Stable performers	
	Weak performers	
	Fluctuating performers	