Table S1 - List of the reviewed papers.

Nº	Author(s)	Year	Study area country	Spacial scale	Region classification	Number of indicators	Reduction of indicators		Normalization method	Aggregation method	Weighting method	Uncertainy and sensitivity analysis	Validation
1	Abbas and Routray	2014	Sudan	Household	Urban and rural	20	None	Before	Categorical scale	Linear	Equal weighting	No	Yes
2	Abbas et al.	2018	Pakistan	Household	Rural	15	None	Both	Min-Max	Linear	PCA – weighted by factor scores	No	No
3	Abebe et al.	2018	Canada	Neighborhood	Urban	7	None	Before	Unspecified	Bayesian Belief Network (BBN)	Equal weighting	Yes (sensitivity)	Yes
4	Ahmad and Afzal	2019	Pakistan	Household	Both	36	None	Both	None (All indicators in the same unit)	Geometric	Equal weighting	No	No
5	Amadio, Mysiak and Marzi	2019	Italy	Neighborhood	Both	7	None	Before	None (All indicators in the same unit)	Non- compensatory aggregation	Equal weighting	Yes (fuzzy)	No
6	Andrade et al.	2018	Brazil	Neighborhood	Urban	11	None	Before	Categorical scale	Linear	Equal weighting	No	No
7	Antwi et al.	2015	Ghana	Neighborhood	Rural	22	None	Before	Ranking	Linear	None (selected by authors)	No	No
8	Armenakis et al.	2017	Canada	Neighborhood	Urban	15	None	Before	Distance from the group leader	Linear	None (selected by authors)	No	Yes
9	Aroca-Jimenez et al.	2017	Spain	Neighborhood	Urban	46	PCA	Before	Other (to porcentage or per capita)	Linear	PCA – weighted by factor scores	No	No
10	Aroca-Jimenez et al.	2018	Spain	Neighborhood	Urban	28	PCA	Before	Other (to porcentage or per capita)	Linear	PCA – weighted by factor scores	No	No
11	Baeck et al.	2014	South Korea	Group of cities	Urban and rural	16	None	Both	Z-score	Linear	PCA – weighted by factor scores	No	Yes

N°	Author(s)	Year	Study area country	Spacial scale	Region classification	Number of indicators	Reduction of indicators		Normalization method	Aggregation method	Weighting method	Uncertainy and sensitivity analysis	Validation
12	Balica et al.	2009	Romania, Germany and Cambodia	Various	Urban	66	None	Before	Distance from the group leader	Geometric	Equal weighting	No	No
13	Barros et al.	2015	Brazil	Neighborhood	Urban	13	None	Before	Min-Max	Linear	Equal weighting	No	No
14	Beringer and Kaewsuk	2018	Tailand	Household	Urban	48	None	Before	Min-Max	Linear	Equal weighting	No	No
15	Bertilsson et al.	2019	Brazil	Neighborhood	Urban	5	None	Both	None (All indicators in the same unit)	Geometric	Equal weighting	No	No
16	Carlier et al.	2018	France	City	Rural	17	РСА	After	Ranking	Linear	PCA – weighted by factor scores	No	No
17	Chakraborty and Mukhopadhyay	2019	India	Neighborhood	Both	16	None	Before	Ranking	Linear	Analytical Hierarchy Process (AHP)	No	Yes
18	Chaliha et al.	2012	India	Household	Rural	37	None	Both	Min-Max	Linear	Public opinion	No	No
19	Chen and Chen	2012	China	City	Urban	20	None	Before	Min-Max	Linear	Analytical Hierarchy Process (AHP)	No	No
20	Chen and Leandro	2019	Germany	Neighborhood	Urban	7	None	Before	Unspecified	Linear	None (selected by authors)	Yes (sensitivity)	No
21	Daksiya et al.	2017	Indonesia	Neighborhood	Urban	7	None	Before	Min-Max	Linear	PROMETHEE- MCDA technique	No	No
22	Dandapat and Panda	2017	India	Neighborhood	Urban and rural	17	None	Before	Min-Max	Linear	Analytical Hierarchy Process (AHP)	No	No

Table S1 - List of the reviewed papers.

Uncertainy Number Reduction Region Study area Temporal Normalization Aggregation Weighting and Nº Validation Author(s) Year **Spacial scale** of of country classification method method method sensitivity dynamics indicators indicators analysis Analytical Based of Hierarchy experts Process (AHP) 23 De Brito et al. 2018 Brazil Neighborhood Urban 11 opinon Before Functions Linear No Yes and Analytical (Delphi Network survey) Process (ANP) Urban and None (selected Unspecified 24 Debortoli et al. 2017 Brazil City 11 None Before Linear No Yes by authors) rural Unequal Erena and 25 2019 24 weighting Ethiopia Household Urban None Before Min-Max Geometric No No Worku method Analytical Feizizadeh and Urban and 26 2017 Neighborhood 17 Hierarchy Austria None Before Min-Max Linear Yes No Kienberger rural Process (AHP) Urban and Equal 27 2009 Neighborhood 41 PCA No Yes Fekete Germany Before Ranking Linear rural weighting Equal weighted and PCA -Yes Neighborhood 13 28 Fernadez et al. 2016 Portugal Urban PCA Before Z-score Linear No weighted by (sensitivity) factor scores Distance from Urban and 29 Frolova et al. 2017 Russia City 10 None Before the group Linear Expert opinion No No rural leader PCA -Fujiki and 30 2018 France Neighborhood Urban 20 PCA Before Z-score Linear weighted by No No Renard factor scores Urban and Binary Equal 31 Garbutt et al. 2015 England Neighborhood 53 None Before Linear No No weighting standard rural United 32 2018 Neighborhood 27 Unspecified Gerrard Rural None Before Z-score Linear No No Kingdom

 Table S1 - List of the reviewed papers.

Uncertainy Number Reduction Temporal Normalization Study area Region Aggregation Weighting and Nº Spacial scale Year Validation Author(s) of of country classification dynamics method method method sensitivity indicators indicators analysis Analytical Urban and Hierarchy Neighborhood 12 33 Ghosh and Kar 2018 India None Before Ranking Linear No No rural Process (AHP) PCA – Urban and Division by 2015 Neighborhood 39 PCA Before weighted by No No 34 Grosso et al. Portugal Linear rural total factor scores PCA – Neighborhood weighted by 35 Gu et al. 2018 China Urban 18 None Before Unspecified Linear No No factor scores Analytical Hierarchy City Process (AHP) 36 Guo et al. 2014 China Urban 16 None Before Unspecified Geometric Yes No and entropy weight method Distance from Equal Hernández-37 2017 23 the group Mexico Neighborhood Urban None Before Geometric No No Uribe et al. weighting leader None (selected 38 Ibrahim et al. 2017 Malaysia City Rural 6 None Before Unspecified Linear No No by authors) None method Division by 43 39 2019 Pakistan Both (select by No No Jamshed et al. Household Rural None Linear total authors) Jha and 40 2019 India District Both 26 Yes Before Min-Max Linear Unspecified No No Gundimeda South Urban and Delphi 2014 City PCA No No 41 Jung et al. 11 Before Z-score Linear Korea rural technique Unequal weighting 42 Kablan et al. 2017 Ivory Coast Neighborhood Urban 13 None Before Min-Max No No Linear method

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N°	Author(s)	Year	Study area country	Spacial scale	Region classification	Number of indicators	Reduction of indicators	Temporal dynamics	Normalization method	Aggregation method	Weighting method	Uncertainy and sensitivity analysis	Validation
43	Kirby et al.	2019	Netherland	District	Both	25	Yes	Before	Min-Max	Linear	PCA – weighted by factor scores	No	No
44	Koks et al.	2015	Netherland	Neighborhood	Urban and rural	10	None	Before	Distance from the group leader	Linear	Equal weighting	No	No
45	Komi et al.	2016	Togo	City	Urban and rural	37	None	Before	Z-score	Linear	Analytical Hierarchy Process (AHP)	No	No
46	Kotzee and Reyers	2016	South Africa	City	Urban and rural	24	Pearson's correlation	Before	Min-Max	Linear	PCA – weighted by factor scores	No	No
47	Kubal et al.	2009	Germany	Neighborhood	Urban	16	None	Before	Binary standard	Linear	Hot Spot analysis	No	No
48	Lee and Choi	2018	South Korea	Neighborhood	Urban and rural	9	None	Before	Min-Max	Linear and geometric	Equal weighting	No	No
49	Lee and Choi	2019	South Korea	District	Both	6	None	Before	Min-Max	Linear and geometric	Equal weighting	No	No
50	Li et al.	2013	China	City	Urban	12	None	Before	Min-Max	Linear	Analytical Hierarchy Process (AHP)	No	No
51	Lianxiao and Morimoto	2019	Japan	Neighborhood	Urban	11	None	Before	Min-Max	Linear	Entropy method	No	No
52	Liu and Li	2016	China	Household	Rural	8	None	Before	Min-Max	Linear	PCA – weighted by factor scores	No	No
53	Liu et al.	2018	China	Household	Rural	12	None	Before	None (All indicators in the same unit)	Linear	Equal weighting	No	No

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Nº	Author(s)	Year	Study area country	Spacial scale	Region classification	Number of indicators	Reduction of indicators		Normalization method	Aggregation method	Weighting method	Uncertainy and sensitivity analysis	Validation
54	Lotfata and Ambinakudige	2019	United States	Neighborhood	Both	15	None	Before	Ranking	Linear	Unspecified	No	No
55	Mavhura et al.	2017	Zimbabwe	Neighborhood	Rural	17	PCA	Before	Unspecified	Linear	Equal weighting	No	No
56	Miguez and Veról	2017	Brazil	Neighborhood	Urban	5	None	After	None (All indicators in the same unit)	Linear	Analytical Hierarchy Process (AHP)	No	No
57	Müller	2013	Chile	Neighborhood	Urban	12	None	Before	Distance from the group leader	Linear	Public opinion	No	No
58	Müller et al.	2011	Chile	Neighborhood	Urban	10	None	Before	Division by total	Linear	Public opinion	Yes (sensitivity)	No
59	Munyai, Musyoki and Nethengwe	2019	South Africa	Household	Rural	14	None	Before	Distance from the group leader	Geometric	Equal weighting	No	No
60	Mwale et al.	2015	Malawi	Neighborhood	Rural	37	None	Before	Unspecified	Linear	Public opinion	No	No
61	Nahiduzzaman et al.	2015	Saudi Arabia	Neighborhood	Urban	8	None	Before	Unspecified	Linear	Unspecified	No	No
62	Nasiri et al.	2019	Malaysia	District	Urban	25	None	Before	Unspecified	Linear	Analytical Hierarchy Process (AHP)	No	No
63	Nazeer and Bork	2019	Pakistan	District	Both	18	None	Before	Min-Max	Linear and geometric	Division by variance and PCA – weighted by factor scores	Yes	No
64	Nelson et al.	2015	United States	Neighborhood	Urban	38	PCA	Before	Z-score	Linear	PCA – weighted by factor scores	No	No
65	Nguyen and Nguyen	2019	Vietnamita	Neighborhood	Both	24	None	Before	Min-Max	Linear	Equal weighting	No	No

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N°	Author(s)	Year	Study area country	Spacial scale	Region classification	Number of indicators	Reduction of indicators		Normalization method	Aggregation method	Weighting method	Uncertainy and sensitivity analysis	Validation
66	Ni et al.	2010	China	Neighborhood	Urban and rural	9	None	Before	Min-Max	Linear	Unspecified	No	Yes
67	Okazawa et al.	2011	Global	State	Urban and rural	11	None	Both	Distance from the group leader	Linear	Division by Max	No	No
68	Papathoma- Köhle, Schlögl and Fuchs	2019	Austria	Household	Urban	27	Yes	Before	Z-score	Linear	Division by total	No	No
69	Peng	2018	Taiwan	Neighborhood	Urban and rural	19	None	Before	None (All indicators in the same unit)	Linear	Analytical Hierarchy Process (AHP) and Delphi technique	No	No
70	Quezada- Hofflinger et al.	2017	Peru	Neighborhood	Urban	20	PCA	Before	None (All indicators in the same unit)	Linear	PCA – weighted by factor scores	No	No
71	Rahman et al.	2016	Saudi Arabia	Neighborhood	Urban	8	None	Before	Distance from the group leader	Linear	Equal weighting	No	No
72	Rana and Routray	2018	Pakistan	Neighborhood	Urban	34	None	Before	None (All indicators in the same unit)	Linear	None (selected by authors)	No	No
73	Remo et al.	2015	United States	Various	Urban and rural	17	PCA	Before	Min-Max	Linear	PCA – weighted by factor scores	No	No
74	Reyes-Olvera and Gutiérrez- González	2016	Mexico	City	Urban and rural	10	None	Before	None (All indicators in the same unit)	Linear	PCA – weighted by factor scores	No	No
75	Rezende et al.	2019	Brazil	Neighborhood	Urban	9	None	Before	Categorical scale	Linear	None (selected by authors)	No	Yes

Uncertainy Number Reduction Region Normalization Study area Temporal Aggregation Weighting and Spacial scale Nº Validation Author(s) Year of of country classification dynamics method method method sensitivity indicators indicators analysis Urban and PCA - equal Roder and 76 2017 PCA Italy Neighborhood 16 Before Z-score Linear No No Sofia rural weighting Urban and PCA - equal Yes Neighborhood 29 77 Rogelis et al. 2016 Colombia PCA Both Min-Max Linear No weighting (sensitivity) rural Roncancio and PCA - equal 2016 78 Neighborhood 24 PCA No No Brazil Urban Before Z-score Linear Nardocci weighting Urban and Neighborhood 2015 14 Public opinion 79 Ronco et al. Switzerland None Before Unspecified Linear No No rural Equal 80 Sam et al. 2017 India Household Rural 30 None Before Min-Max Linear No No weighting Distance from Schuster-81 2018 Canada Neighborhood Urban 8 None Before the group Public opinion No No Linear Wallace et al. leader None (All Urban and 82 Shah et al. 2018 Pakistan City 35 None Before indicators in Geometric Expert opinion No No rural the same unit) None (All Urban and Division by Neighborhood 5 83 Shiau et al. 2012 Taiwan None Before indicators in Geometric No No rural total the same unit) United Urban and Equal 84 2002 Neighborhood 7 Tapsell et al. None Before Z-score Linear No No States rural weighting United Division by 85 Neighborhood 12 Tate et al. 2016 Urban None After Min-Max Geometric No No States total PCA -Urban and 86 2018 28 PCA Török Romania Neighborhood Before Z-score weighted by No No Linear rural factor scores

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Uncertainy Number Reduction **Temporal** Normalization Study area Region Aggregation Weighting and Nº Spacial scale Validation Author(s) Year of of country classification dynamics method method method sensitivity indicators indicators analysis Analytical Hierarchy Group of Urban and 87 2015 China 9 Process (AHP) Yes Wu et al. None Before Min-Max Linear No cities rural and expert scoring method Analytical 88 Xiong et al. 2019 China City Both 25 None Before Min-max Linear Hierarchy No No Process (AHP) Fuzzy Comprehensive Distance from Delphi Urban and Neighborhood 15 Evaluation 89 Yang et al. 2018 China None Before the group No No rural technique leader Method (FCEM) Distance from Shannon Urban and Delphi 90 Yang et al. 2018 China Neighborhood 16 None Before the group entropy No No rural technique leader methods Group of South Urban and 2014 15 No 91 Yoon et al. None Before Unspecified Linear Unspecified No Korea cities rural United Urban and Division by 92 Zachos et al. 2016 Neighborhood 15 None Before Linear No No Ranking States rural total Analytical Hierarchy 93 2016 China Neighborhood Rural 15 None Min-Max Process (AHP) No No Zeng et al. Before Linear and entropy weight method Urban and Equal Yes 94 Zhang and You 2014 City 36 PCA China Before Min-Max Linear No (sensitivity) rural weighting PCA -Non-95 Zhang et al. 2018 China Neighborhood Urban 9 None Before Unspecified parametric weighted by No No DEA method factor scores

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