

Computational Socioeconomics

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Abstract

Uncovering the structure of socioeconomic systems and timely estimation of socioeconomic status are significant for economic development. The understanding of socioeconomic processes provides foundations to quantify global economic development, to map regional industrial structure, and to infer individual socioeconomic status. In this review, we will make a brief manifesto about a new interdisciplinary research field named *Computational Socioeconomics*, followed by detailed introduction about data resources, computational tools, data-driven methods, theoretical models and novel applications at multiple resolutions, including the quantification of global economic inequality and complexity, the map of regional industrial structure and urban perception, the estimation of individual socioeconomic status and demographic, and the real-time monitoring of emergent events. This review, together with pioneering works we have highlighted, will draw increasing interdisciplinary attentions and induce a methodological shift in future socioeconomic studies.

Keywords: Socioeconomics; network science; data mining; machine learning

Contents

1	Introduction	3
2	Global development, inequality and complexity	6
2.1	World development and poverty mapping	6
2.1.1	Remote sensing observes poverty	6
2.1.2	Mobile phones reveal socioeconomic status	9
2.1.3	Combined data for better inference	10
2.2	Economic complexity and fitness of nations	12
2.2.1	Product space and economic complexity	12
2.2.2	Fitness index and economic dynamics	14
2.2.3	Variant indices and development analysis	16
2.3	Spatial demography and culture evolution	19
2.3.1	World population distribution	19
2.3.2	International migration	21
2.3.3	Culture evolution	23

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3 Regional socioeconomic status and urban perception	27
3.1 Economic activity and socioeconomic status	27
3.1.1 Nighttime lights reflect economic activity	27
3.1.2 Very high resolution imagery maps poverty	28
3.1.3 Mobile phones track socioeconomic levels	30
3.1.4 Social media reveals socioeconomic status	32
3.2 Industrial structure and development path	34
3.2.1 Economic structure and relatedness	34
3.2.2 Collective learning in economic development	36
3.2.3 Development paths and strategies	39
3.3 Urban scalings and perception	41
3.3.1 Scaling laws for cities	41
3.3.2 Unfolding urban functional areas	45
3.3.3 Perceiving urban environment	48
3.3.4 Urban computing for better lives	51
4 Individual socioeconomic status and attributes	54
4.1 Individual socioeconomic level	54
4.1.1 Mobile phone and credit card usage	54
4.1.2 Social profile and network structure	56
4.1.3 Human mobility pattern	59
4.2 Employment and performance	62
4.2.1 Search queries indicate unemployment	62
4.2.2 Novel data sources track unemployment	64
4.2.3 Individual and group performance	66
4.3 Demographics and personal variables	69
4.3.1 Demographic inference	69
4.3.2 Personality analysis	71
4.3.3 Online reputation evaluation	73
4.3.4 Emotion and health analysis	76
5 Situational awareness and disaster management	79
5.1 Public health and epidemic surveillance	79
5.1.1 Search queries for epidemic surveillance	79
5.1.2 Online posts for disease surveillance	81
5.1.3 Phone records for epidemic prediction	83
5.2 Emergency and disaster monitoring	85
5.2.1 Remote sensing for disaster assessment	86
5.2.2 Mobile phones for emergency management	88
5.2.3 Social media for situational awareness	91
6 Discussions	94
Acknowledgements	96
References	96