THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

45 years
1979-2024

shtm
SCHOOL OF HOTEL &
TOURISM MANAGEMENT

TOUROMETER:
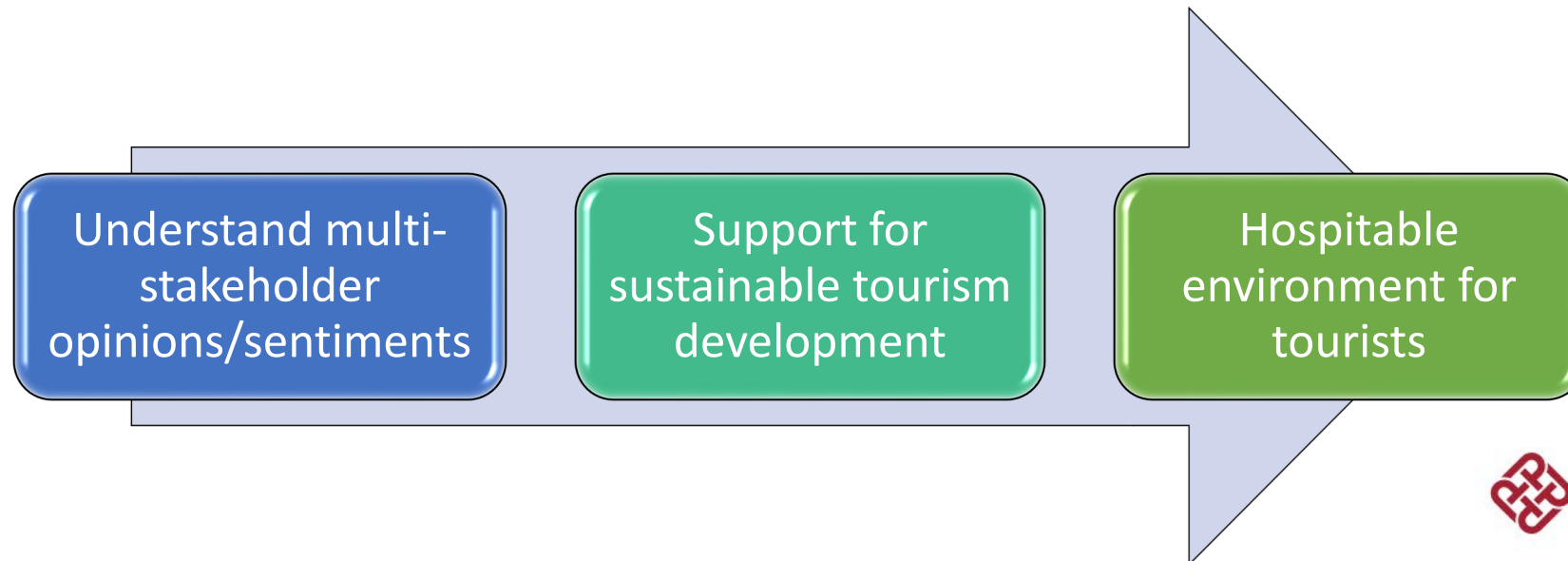# A tool to support social sustainability of tourism

Prof. Cathy Hsu

UNWTO/PATA Forum on Tourism Trends and Outlook

Guilin, China

Leading Hospitality and Tourism

Undesirable Social Effects of Tourism

- Cultural conflicts between tourists and locals

- Excessive use of public resources

- Disturbing the ways of life for local residents

- Social sustainability requires significant efforts to balance +/- and benefit local communities

| Understand multi-stakeholder opinions/sentiments | Support for sustainable tourism development | Hospitable environment for tourists |

Input

Social media
Mass media
Interviews
Survey

Database
(tourists/hosts/organizations)

System Processing

Sentiment analysis
Topic modeling
Coding
Statistics

Data transformation
(big data/interviews/survey)

Balance state
Ambivalence
Statistical modeling

Knowledge base
(stakeholders & experts)

Output

Module 1: Ambivalence
Module 2: Triadic Balance State
Module 3: Statistical Modeling
Module 4: Strategy Advice

Tourists
Public dialogue
Host community
DMOs & enterprises

TOUROMETER
Social Listening Platform for Tourism Public Policy

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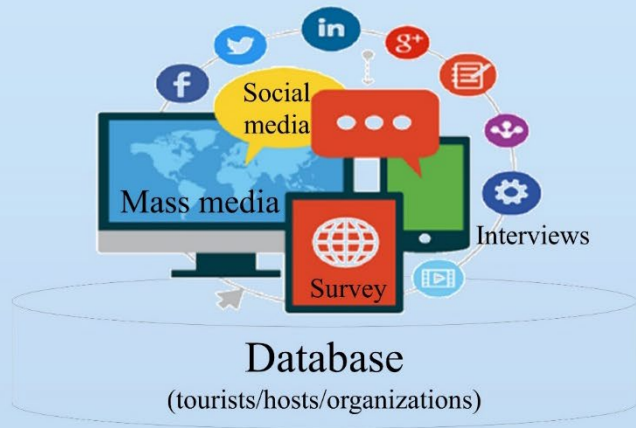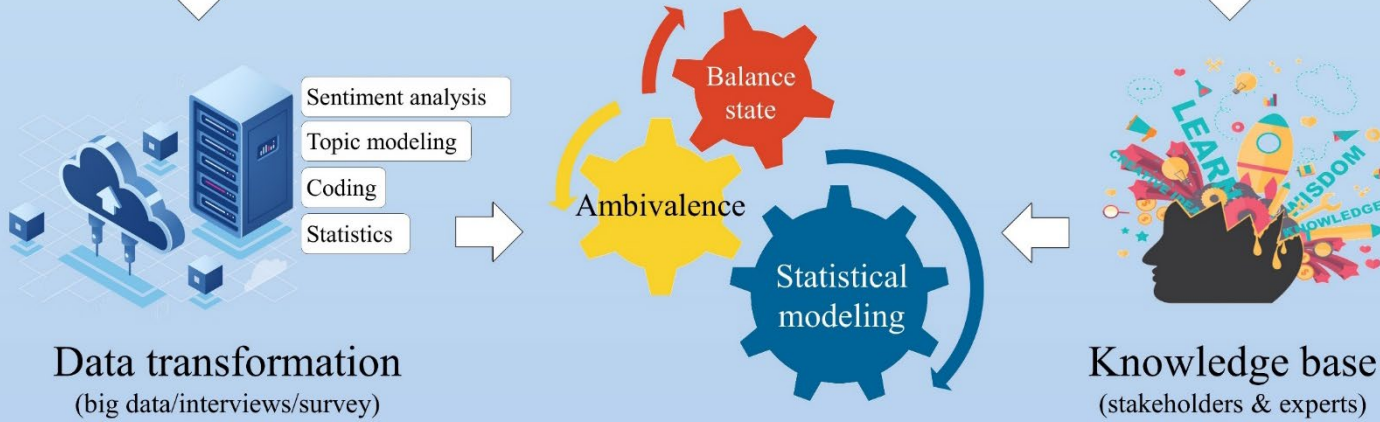
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TOUROMETER

- Module I: Dispositions and ambivalence

- Module II: Triadic balance state of sentiment

- Module III: Statistical modelling (among dispositions, economy, environment, tourism, and quality of life)

- Module IV: Ambivalence Barometer and corresponding policy suggestions

Target users: policymakers, DMOs and industry practitioners

TOUROMETER
Social Listening Platform for Tourism Public Policy

admin

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Login
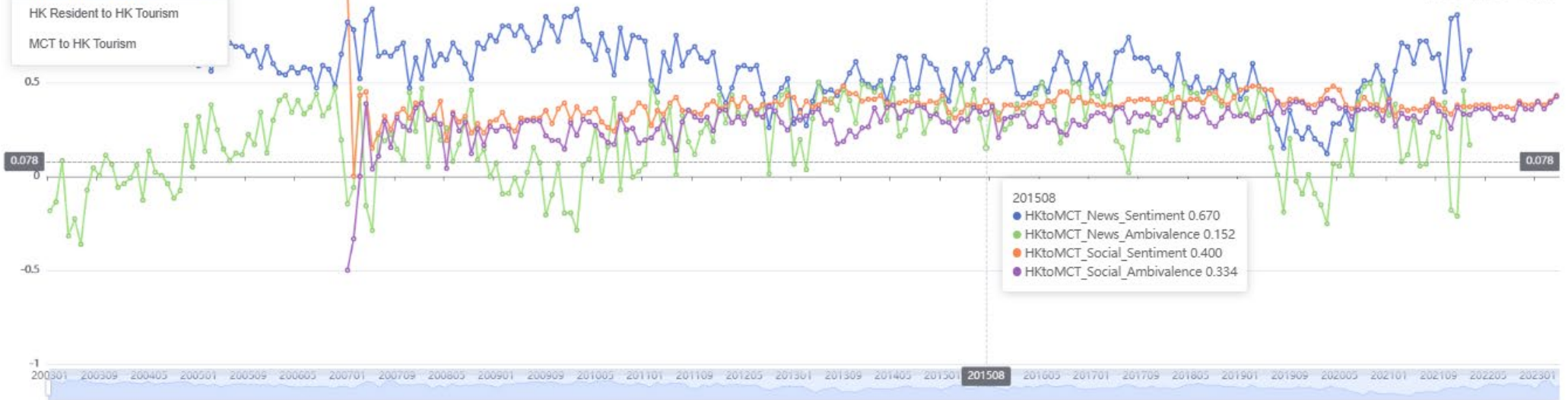
Topic: HK to MCT

- **HK to MCT**
- HK to Tourism
- MCT to HK

total   negative   positive

201907
- total   394
- negative   294
- positive   100
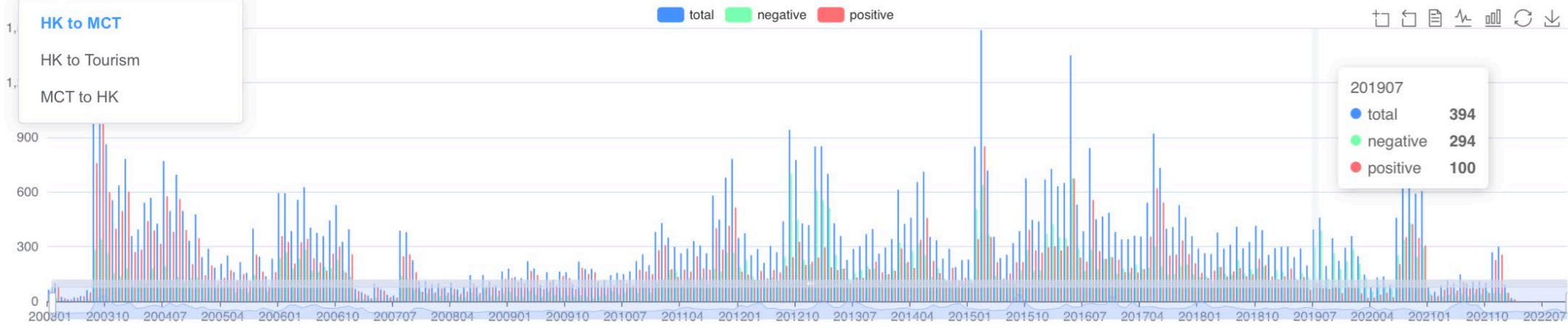
WordCloud

Topic_18

Topic_62

Topic_77

Dashboard / Statistic Anslysis / Correlation / Dispositions

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- Dashboard
- User Management
- Dispositions
- Statistic Anslysis
  - Correlation
    - Dispositions
    - Economy
    - Environment
    - Tourism
    - Quality of Life
    - Notes
  - Regression
    - Nonlinear Regressi
    - Multiple regression
- Triadic State
- Policy_Implication
- Ambivalence Barometer

Correlation between HK resident-MCT dispositions

	Resi_Sen_MCT_News	Resi_Amb_MCT_News	Resi_Sen_MCT_Media	Resi_Amb_MCT_Media	Resi_Sen_Tourism_News	Resi_Amb_Tourism_News	Resi_Sen_Tourism_Media	Resi_Amb_Touris
Resi_Sen_MCT_News	1							
Resi_Amb_MCT_News	-.715**	1						
Resi_Sen_MCT_Media	-.830**	.658**	1					
Resi_Amb_MCT_Media	-.611*	0.332	.705**	1				
Resi_Sen_Tourism_News	.788*	-.492*"	-.830**	-.723**	1			
Resi_Amb_Tourism_News	-.755**	.612**	.859**	.633**	-.961**	1		
Resi_Sen_Tourism_Media	-0.308**	.571**	0.449**	0.196**	-0.297**	0.3521	1	
Resi_Amb_Tourism_Media	-.596*	.509*	.821**	.688**	-.759**	.756**	.499*	1
MCT_Sen_Tourism	-.580*	0.378	.618**	.690**	-.811**	.764**	0.388	.749**1
MCT_Amb_Tourism	.532*	-0.430	-0.477**	-0.382	.647**	-.646**	-.522*	-.558*

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Interpretation:

1. HK residents' disposition towards MCT

(1) News: HK residents' sentiment of MCT has strong negative correlation with their ambivalence toward MCT (r=-.715, p<.000). The more positive the value, the less ambivalent. Similarly, HK residents' sentiment of HK tourism is strongly negatively correlated with their ambivalence toward HK tourism (r=-.961, p<.000).

(2) News vs. Social Media: HK residents' sentiment of MCT on news has strong negative correlation with HK residents' sentiment of MCT on social media (r=-.830, p<.000). The more positive HK residents' sentiment of MCT on news, the more negative their sentiment of MCT on social media.

(3) News: HK residents' sentiment of MCT has strong positive correlation with HK residents' sentiment of HK tourism development (r=.788, p<.000). The more positive HK residents' sentiment of MCT, the more positive their sentiment of HK tourism development. Similarly, HK residents' ambivalence toward MCT is also positively correlated with their ambivalence toward HK tourism development (r=.612, p<.004).

(4) Social Media: HK residents' sentiment of MCT has strong positive correlation with HK residents' ambivalence toward MCT (r=.705, p<.002). The more positive HK residents' sentiment of MCT, the more their ambivalence toward MCT. This is different from the news result.

(5) Social Media: HK residents' ambivalence toward MCT on social media has strong positive correaltion with HK residents' ambivalence toward HK tourism development on social media (r=.688, p<.002). The more HK residents' ambivalence toward MCT, the more their ambivalence toward HK tourism development.

(6) Social Media vs. News: HK residents' sentiment of MCT on social media has strong negative correlation with HK residents' sentiment of tourism development on news (r=-.830, p<.000). The more positive HK residents' sentiment of tourism development on news, the more negative their sentiment of MCT on social media.

(7) News vs. Social Media: HK residents' ambivalence toward MCT on news is not significantly correlated with HK residents' ambivalence toward MCT on social media (r=.332, p>.2).

(8) News vs. Social Media: HK residents' ambivalence toward HK tourism development on news is positively correlated with their ambivalence toward HK tourism development on social media (r=.756, p<.001). The more HK residents' ambivalence toward HK tourism development on news, the more their ambivalence toward HK tourism development on social media. They show consistent ambivalence toward HK tourism development on both social media and news.

(9) Residents vs. MCT: HK residents' sentiment of HK tourism on social media has negative relationship with MCTs' ambivalence toward HK tourism (r=-.522, p<.05). The more positive residents' sentiment of HK tourism, the less MCTs' ambivalence toward HK tourism.

Ambivalence Barometer

Dashboard / BarOfAmbToMct / Ambivalence Barometer

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Dashboard

User Management

Dispositions

Statistic Anslysis

Triadic State

Policy_Implication

Ambivalence Barometer

A < 0.25 — Green

0.25 ≤ A ≤ 0.34 — Yellow

0.35 ≤ A ≤ 0.44 — Amber

A ≥ 0.45 — Red

April 2023

Social media: 0.43 — Amber

A: the ambivalence value

Green: Activities can be organized to attract MCTs and facilitate the healthy interaction between residents and visitors

Yellow: Improve the quality of tourism product offerings, better organize tourist activities, and facilitate residents' understanding of the importance of tourism to encourage more positive expressions

Amber: Address residents' concerns through tourism policies or communication campaigns to avoid potential conflicts between residents and tourists

Red: Take immediate actions to address social tensions

Thank you!

Tourometer.org

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