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SHADOW ECONOMY – BIBLIOMETRIC MAPPING

Cristina TIMOFTE (COCA), PhD Student
Ștefan cel Mare University of Suceava, Romania
E-mail: cristinat.coca@gmail.com

Dan-Andrei COCA, PhD Student
Ștefan cel Mare University of Suceava, Romania
E-mail: coca.danandrei@gmail.com

OBJECTIVES

- Main objectives:
 - ❖ reviewing the scientific terminology used in connection and with regard to the shadow economy;
 - ❖ establishing the most explored and researched subject areas in connection with shadow economy, as per the Web of Science database.
- The VOSviewer software, a freely available computer program that was developed for constructing and viewing bibliometric maps (van Eck & Waltman, 2010) is used.

1. Retrieving bibliometric data from the Web of Science database.

The screenshot displays the Web of Science search results page. The search query is "TOPIC: (shadow economy)". The results are sorted by "Date" and show 1,561 results. The first three results are highlighted with yellow boxes around the word "shadow".

| Rank | Title | Author(s) | Journal | Volume | Article Number | Published | Times Cited | |
|------|--|---|----------------------------------|--------|----------------|----------------|------------------------|---|
| 1. | The cost of reducing unplanned water supply interruptions: A parametric shadow price approach | Maziotis, Alexandros; Villegas, Andres; Molinos-Senante, Maria | SCIENCE OF THE TOTAL ENVIRONMENT | 719 | 137487 | JUN 1 2020 | 0 | |
| 2. | Modelling environmental technical efficiency and phosphorus pollution abatement cost in dairy farms | Adenuga, Adewale Henry; Davis, John; Hutchinson, George; et al. | SCIENCE OF THE TOTAL ENVIRONMENT | 714 | 136690 | APR 20 2020 | 0 | |
| 3. | Not Just Another Shadow Bank: Chinese Authoritarian Capitalism and the 'Developmental' Promise of Digital Financial Innovation | Gruin, Julian; Knaack, Peter | NEW POLITICAL ECONOMY | 25 | Issue: 3 | Pages: 370-387 | Published: APR 15 2020 | 1 |
| 4. | Rule of Law, Economic Growth and Shadow Economy in Transition Countries | By Thi Thuy Huong Luong; Tho Minh Nguyen; Thi Anh Nhu Nguyen | | | | | 0 | |

2. Extracting bibliographic information (on the authors, titles, sources and abstracts).

The screenshot shows a web browser window with a search results page on Web of Science. The search results are for the topic 'TOPIC economy) ...More'. The results are filtered by 'Highly Cited in Field' and 'Open Access (386)'. The search results are sorted by 'Publication Years' and show 45 results for the year 2020.

The Notepad window displays the following extracted bibliographic information:

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FI Clarivate Analytics Web of Science
VR 1.0
PT J
AU Tsur, Y
AF Tsur, Yacov
TI Optimal water pricing: Accounting for environmental externalities
SO ECOLOGICAL ECONOMICS
AB A pricing-based mechanism that implements the optimal water policy while accounting for environmental externalities is developed. The analysis is presented in the context of a comprehensive water economy, stressing the tradeoffs between water use in the provision of ecosystem services vs. other uses. A distinction is made between conveyed and instream environmental water, which turns out to have important policy implications. It is shown that the allocation of instream water can be implemented by properly incorporating the (marginal) instream value of water within the shadow (in situ) price of natural water. The regulation of conveyed environmental water requires a quota-price combination. An example based on Israel's water economy is presented.
SN 0921-8009
EI 1873-6106
PD APR
PY 2020
VL 170
AR 106429
DI 10.1016/j.ecolecon.2019.106429
UT WOS:000514748400005
ER

PT J
AU Berdiev, AN
   Goel, RK
   Saunoris, JW
AF Berdiev, Aziz N.
   Goel, Rajeev K.
   Saunoris, James W.
TI Dimensions of Ethnic Diversity and Underground Economic Activity: Cross-country Evidence
SO PUBLIC FINANCE REVIEW
AB Cultural and ethnic factors crucially affect economic agents' propensities toward law-abiding behavior and operating in the underground economy is an important, widely prevalent, aspect. However, there are many dimensions of ethnic diversity, and the relative influences of each on underground behavior are not well articulated. This article uniquely considers the effects of five dimensions of ethnic/cultural diversity, including ethnic income inequality, ethnic-linguistic fragmentation, cultural fragmentation, ethnolinguistic polarization, and ethnic-linguistic segregation, on the international shadow economy. Placing the empirical analysis in the context of the empirical determinants of the shadow economy, results show income inequality across ethnic groups increases underground activity across different modeling variations, while the effects of the other dimensions are statistically insignificant. This unique finding underscores the notion that not all dimensions of ethnic diversity are alike when it comes to their influences on the informal sector.
OI Saunoris, James/0000-0002-6304-3070
    
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3. Creating a term co-occurrence map based on text data in the VOSviewer software.

The screenshot displays the VOSviewer software interface. The main window shows a network visualization of terms. A dialog box titled 'Verify selected terms' is open, listing various terms with their occurrence counts and relevance scores. The dialog box has a table with the following data:

| Selected | Term | Occurrences | Relevance |
|-------------------------------------|-----------------------|-------------|-----------|
| <input checked="" type="checkbox"/> | mimic | 12 | 3.52 |
| <input checked="" type="checkbox"/> | formal economy | 10 | 3.33 |
| <input checked="" type="checkbox"/> | scientific knowledge | 10 | 3.33 |
| <input checked="" type="checkbox"/> | economic security | 12 | 3.14 |
| <input checked="" type="checkbox"/> | counteraction | 16 | 3.06 |
| <input checked="" type="checkbox"/> | informality | 13 | 2.90 |
| <input checked="" type="checkbox"/> | policy implication | 16 | 2.80 |
| <input checked="" type="checkbox"/> | synthesis | 11 | 2.65 |
| <input checked="" type="checkbox"/> | informal sector | 21 | 2.63 |
| <input checked="" type="checkbox"/> | definition | 14 | 2.54 |
| <input checked="" type="checkbox"/> | empirical evidence | 15 | 2.50 |
| <input checked="" type="checkbox"/> | ukrainian economy | 11 | 2.45 |
| <input checked="" type="checkbox"/> | income inequality | 13 | 2.37 |
| <input checked="" type="checkbox"/> | financial crisis | 17 | 2.32 |
| <input checked="" type="checkbox"/> | shadow banking system | 14 | 2.31 |
| <input checked="" type="checkbox"/> | variable | 34 | 2.29 |
| <input checked="" type="checkbox"/> | shadow banking | 26 | 2.17 |
| <input checked="" type="checkbox"/> | originality value | 18 | 2.15 |
| <input checked="" type="checkbox"/> | inflation | 12 | 2.14 |

The background shows a network visualization with nodes representing terms and lines representing co-occurrences. The status bar at the bottom indicates 'Items: 55 | Clusters: 5' and 'VOSviewer version 1.6.13 | Update to version 1.6.15'. The system tray shows the date '23.04.2020' and time '14:00'.

SHADOW ECONOMY MAP

- The first term map created with regard to the topic “shadow economy” is based on a corpus of scientific documents extracted from the Web of Science database that consists of the titles and abstracts of 11.952 publications that appeared in the period 2000–2020.
- Out of the 289 noun phrases that occur in at least 10 publications in the corpus, the term map contains the 170 noun phrases that are considered most relevant.

SHADOW ECONOMY MAP

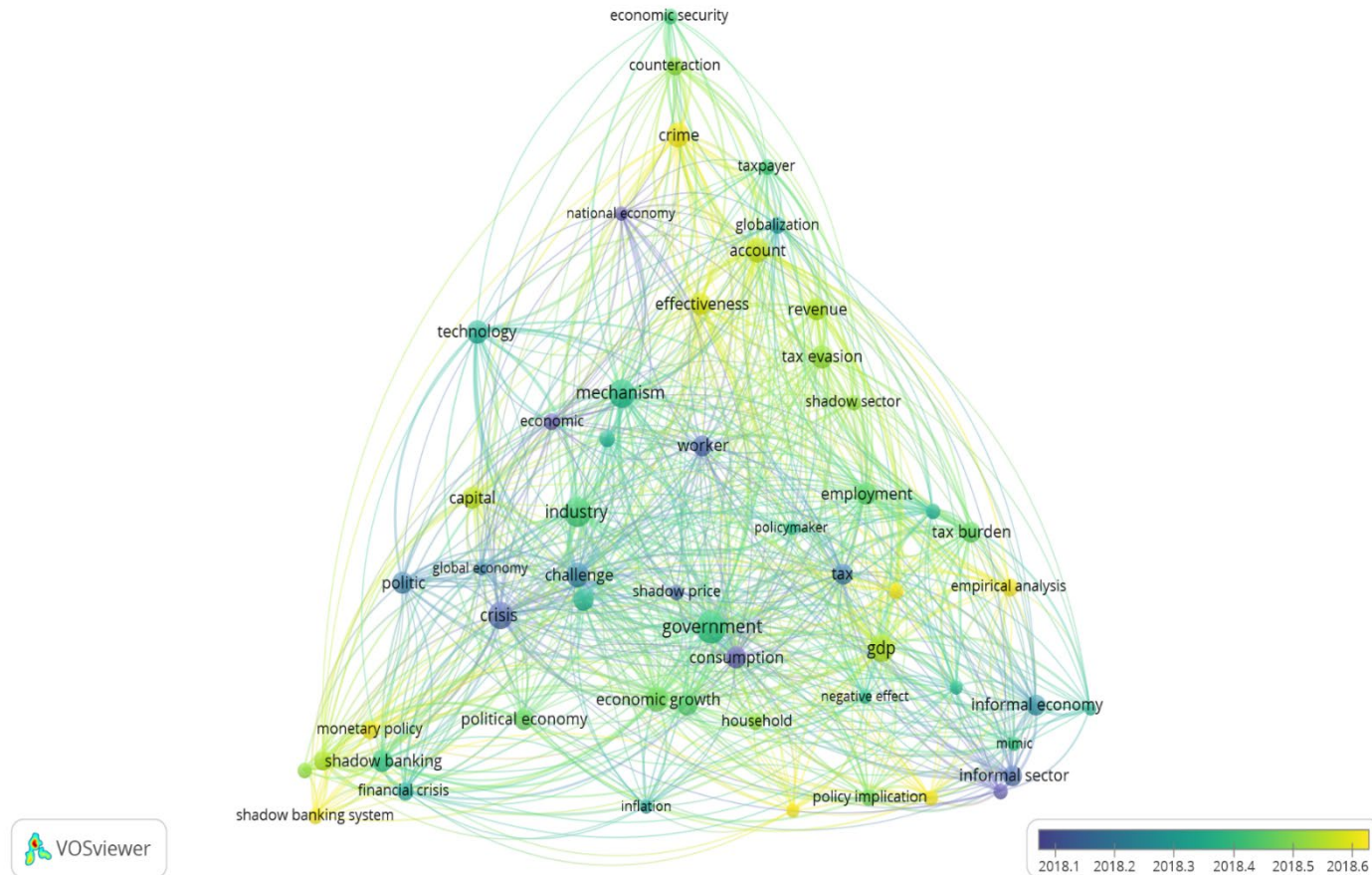


Figure no. 1: VOSviewer visualization map – co-occurrence network of terms when searching for shadow economy. Source: own generation.

UNDERGROUND ECONOMY MAP

- The second term map created with regard to the topic “underground economy” is based on a corpus of scientific documents extracted from the Web of Science database that consists of the titles and abstracts of 13.960 publications that appeared in the period 2000–2020.
- Out of the 265 noun phrases that occur in at least 10 publications in the corpus, the term map contains the 160 noun phrases that are considered most relevant.

UNDERGROUND ECONOMY MAP

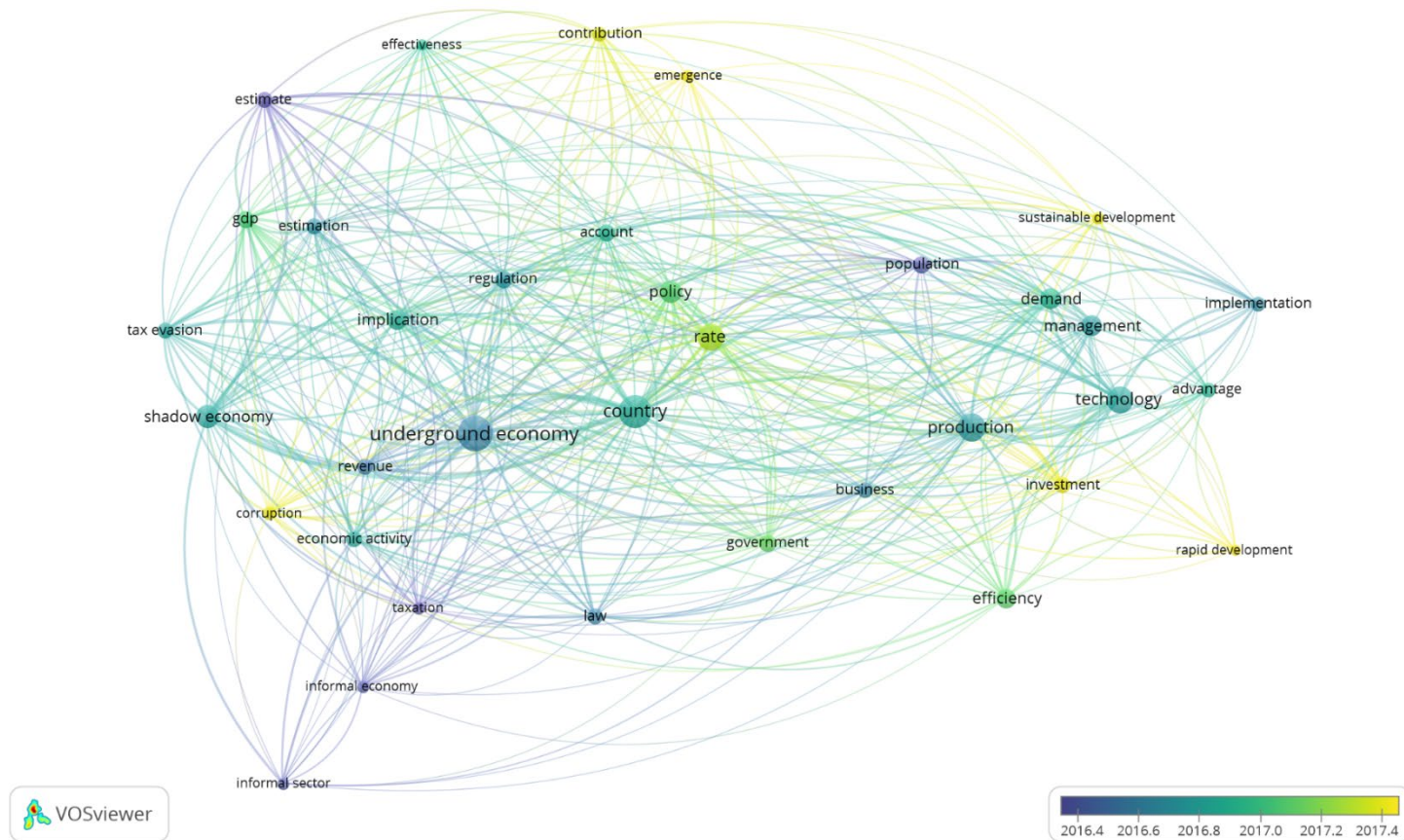


Figure no. 2: VOSviewer visualization map – co-occurrence network of terms when searching for underground economy. Source: own generation.

INFORMAL ECONOMY MAP

- The third term map created with regard to the topic “informal economy” is based on a corpus of scientific documents extracted from the Web of Science database that consists of the titles and abstracts of 12.542 publications that appeared in the period 2000–2020.
- Out of the 292 noun phrases that occur in at least 10 publications in the corpus, the term map contains the 175 noun phrases that are considered most relevant.

RESEARCH RESULTS

- Topic “shadow economy”
 - five clusters;
 - most occurrences in the first one are for the terms: GDP, informal economy and employment;
 - most occurrences in the second one are for the terms: crisis, economic growth and challenge;
 - most occurrences in the third one are for the terms: mechanism, tax evasion and crime;
 - most occurrences in the fourth one are for the terms: industry, technology and worker;
 - most occurrences in the fifth one are for the terms: government, consumption and household.

RESEARCH RESULTS

- Topic “underground economy”
 - three clusters;
 - most occurrences in the first one are for the terms: production, technology and management;
 - most occurrences in the second one are for the terms: rate, implication and tax evasion;
 - most occurrences in the third one are for the terms: country, shadow economy and policy.

RESEARCH RESULTS

- Topic “informal economy”
 - five clusters;
 - most occurrences in the first one are for the terms: production, organization and cost;
 - most occurrences in the second one are for the terms: worker, employment and security;
 - most occurrences in the third one are for the terms: enterprise, entrepreneur and entrepreneurship;
 - most occurrences in the fourth one are for the terms: dynamic, political economy and politic;
 - most occurrences in the fifth one are for the terms: implication, governance and reform.

CONCLUSIONS

- The research revealed the scientific terminology used in connection with the shadow economy, underground economy and informal economy, as per the Web of Science database.
- The main finding was that, the terminology used with regard to the shadow economy revolves around terms and phrases such as: consumption, governance, financial crisis, crime, informal economy, unemployment, inflation, tax evasion and others.
- The research established the most explored and researched subject areas in connection with shadow economy, underground economy and informal economy as follows:

CONCLUSIONS

1. The size and development of the shadow economy (terms and phrases such as: size, global economy, financial crisis, rapid development, etc.);
2. The determinants of shadow economy (terms and phrases such as: GDP, income inequality, corruption, tax burden, culture, complexity, unemployment, etc.);
3. Cause and effect analysis (terms and phrases such as: negative effect, negative impact, etc.);
4. Counteracting measures (terms and phrases such as: policymaker, governance, regulation, law, reform, etc.);
5. Measurement methods (MIMIC, estimation, etc.).

THANK YOU
FOR YOUR ATTENTION!

Questions?