A Behavioral Perspective on Money Laundering

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Seminar Antikorupsi & Call for Proposals Jurnal Integritas
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Short CV

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- **Education**
  - Bachelor of Economics (Accounting) – Islamic University of Indonesia (2002)
  - Master of Forensic Accounting – University of Wollongong Australia (2006)
  - Doctor of Philosophy (Forensic Accounting) – Centre for Transnational Crime Prevention University of Wollongong Australia (2010)
Forensic Accounting Perspective

- Forensic and investigative accounting is the application of financial skills and an investigative mentality to unresolved issues, conducted within the context of the rules of evidence. As a discipline, it encompasses financial expertise, fraud knowledge, and a strong knowledge and understanding of business reality and the workings of the legal system (Bologna & Lindquist, 1987).
Multidisciplinary

- Accounting
- Finance
- Business
- Law
- Technology
- Behavior
- Etc.
Behavioral Forensics

• Behavioral forensics focuses on human behavior, because the central fact behind all fraud is the existence of one or more individuals and their questionable, egregious, unethical, or even illegal behavior.
Jurnal INTEGRITAS Volume 01

Di usia lembaga yang ke-12 tahun, Komisi Pemberantasan Korupsi (KPK) terus berupaya menggandeng siapa pun untuk menyebarluaskan budaya dan semangat antikorupsi. Partisipasi publik yang bertumbuh niscaya dapat menjadi energi pendorong bagi percepatan langkah memberantas korupsi. Karenanya, serangkaian program penyebaran informasi dan edukasi digulirkan dengan pencegahan dan pemberantasan korupsi sebagai pesan utamanya.

Dari segi kuantitas, publikasi pengetahuan antikorupsi di Indonesia tumbuh dengan pesat seiring dengan berdirinya KPK. Sedangkan dari segi kualitas, masih banyak yang perlu diperbaiki dan dikembangkan di masa depan, melalui penelitian-penelitian ilmiah bidang antikorupsi. Namun tak jarang seorang peneliti tak memiliki media yang dapat menumbuhkan gagasan-gagasan baru untuk melakukan penelitian lanjutan. Kondisi inilah yang melatarbelakangi KPK untuk menerbitkan jurnal ilmiah antikorupsi INTEGRITAS, sebuah wadah yang dapat menampung sekaligus mengkomunikasikan penelitian, kajian dan buah pemikiran teoretis maupun konseptual di bidang antikorupsi.

Sehubungan dengan itu Biro Humas KPK bekerja sama dengan LPPM Universitas Paramadina menyelenggarakan kompetisi proposal penelitian dan selanjutnya hasil penelitiannya dapat dipublikasi di Jurnal Antikorupsi INTEGRITAS.

Kami mengundang anda untuk berpartisipasi dalam kompetisi proposal riset ini.
Kami mengundang anda untuk berpartisipasi dalam kompetisi proposal riset ini.

**TOPIK PENELITIAN**

1. Teknologi Melawan Korupsi
2. Pemulihan Aset
3. Tindak Pidana Pencucian Uang
4. Korupsi Sektor Hukum
5. Penguatan Integritas
6. Integritas Kepemimpinan
7. Model Pendidikan Antikorupsi

**KRITERIA & PENGUSULAN**

a. Jumlah peneliti: 1 ketua dan 1-2 anggota  
b. Kriteria peneliti: akademisi, dosen/guru, mahasiswa, umum  
c. Lama penelitian: maksimal 3 bulan  
d. Dana Penelitian: Rp.10.000.000

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www.paramadina.ac.id/ankor
Sight beyond sight: Foreseeing corruption in the Indonesian government through behavioral analysis

Author(s): Hendi Yogi Prabowo (Centre for Forensic Accounting Studies, Islamic University of Indonesia, Yogyakarta, Indonesia)

Citation: Hendi Yogi Prabowo, "Sight beyond sight: Foreseeing corruption in the Indonesian government through behavioral analysis", Journal of Financial Crime, Vol. 23 Iss: 2, pp.289 - 316

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Re-understanding corruption in the Indonesian public sector through three behavioral lenses

Author(s): Hendi Yogi Prabowo (Faculty of Economics Islamic University of Indonesia Sleman Indonesia), Kathie Cooper (University of Wollongong Wollongong Australia)

Citation: Hendi Yogi Prabowo, Kathie Cooper, "Re-understanding corruption in the Indonesian public sector through three behavioral lenses", Journal of Financial Crime, Vol. 23 Iss: 4, pp.
To be corrupt or not to be corrupt: Understanding the behavioral side of corruption in Indonesia

Author(s): Hendi Yogi Prabowo (Centre for Forensic Accounting Studies, Faculty of Economics, Islamic University of Indonesia, Sleman, Indonesia)


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Emerging Topics

• Legal framework for AML
• Money laundering in cyberspace
• Technological approach for AML
• The economics of money laundering
• Behavioral analysis on the launderers
• New payment instruments
• Building skills and competencies for AML
• Etc.
Economic Crime

• More than a third of organizations have experienced economic crime in the past 24 months (Global Economic Crime Survey 2016).

Top 3 most commonly reported types of economic crime in 2016

- Asset misappropriation: 64%
- Cybercrime: 32%
- Bribery & corruption: 24%
Common Types of Economic Crimes

Source: Global Economic Crime Survey 2016
Industries at Risk

Source: Global Economic Crime Survey 2016
A Typical Money Laundering Scheme

1. Collection of Dirty Money
2. Placement: Dirty Money Integrates into the Financial System
3. Integration:
   - Payment by "Y" of False Invoice to Company "X"
   - Loan to Company "Y"
4. Layering:
   - Transfer on the Bank Account of Company "X"
   - Wire Transfer

Purchase of Luxury Assets
Financial Investments
Commercial/Industrial Investments
Money is laundered through...

- Banks
- Brokerage firms
- Financial services

Other Examples: Insurance companies, Money remitters, Cash intensive businesses, Brokerage firms, Realtors, Crooked LAWYERS and ACCOUNTANTS
Types of Fraud

Source: ACFE’s Report to the Nations 2016
Types of Fraud

Source: ACFE’s Report to the Nations 2016
Corruption Cases investigated by the Corruption Eradication Commission (KPK)

- Bribery: 52%
- Budget misallocation: 8%
- Unauthorized collection: 4%
- Money laundering: 3%
- Obstruction of investigation: 1%
- Goods and services procurement: 28%
- Unlawful licensing: 4%

Source: Komisi Pemberantasan Korupsi
Corruption Offenders Investigated by the Corruption Eradication Commission (KPK)

- Echelons I/II/III: 22%
- Members of Central and Regional Parliaments: 20%
- Heads of Agencies and Ministries: 4%
- Governors: 3%
- Mayors/Regents and Vice Regents: 9%
- Commissioners: 1%
- Ambassadors: 1%
- Heads of Agencies and Ministries: 4%
- Private Sector: 25%
- Judges: 2%
- Others: 13%

Source: Komisi Pemberantasan Korupsi
## Corruption Perception Index 2016

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<tr>
<th>Country/Territory</th>
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Source: Transparency International
Fraud Triangle

Why?

Pressure/Motivation  Opportunity  Rationalization
Pressure
Opportunity
Rationalization

I SWEAR
I'M INNOCENT!
Example: Credit Union Embezzlement Case
Overriding Motivation for Fraudster

- 66%: For personal financial gain and greed
- 27%: Eager/"Because I can"
- 13%: Organizational culture driven
- 12%: Desire to meet targets/hide losses to receive bonus
- 12%: Desire to meet budgets/hide losses to retain job
- 11%: Desire to meet targets/hide losses to protect the company
- 10%: Other not listed above
- 5%: Other motives (less than 5%) include: Loss of confidence, avoidance of regulatory compliance, ratings driven, publicity driven, disruption of operations

Source: Global Profiles of the Fraudster, KPMG International, 2016
Criminal Background of Perpetrator

Source: ACFE, Report to The Nations 2016
Employment Background of Perpetrator

Source: ACFE, Report to The Nations 2016
Offenders’ Personal traits and Capability

Fraud Elements Triangle

- Act
- Concealment
- Conversion

How?
Normalization of Corruption

Source: Adapted from Ashforth and Anand (2003)
Act
Concealment

| 323,21 | 14,72 | 60,89 |
| 796,56 | 316,45 | 1,36 |
| 985,28 | 644,84 | 464,64 |
| 166,48 | 551,68 | 394,51 |
| 958,70 | 658,32 | 901,12 |
| 956,12 | 997,86 | 444,54 |
| 770,00 | 525,54 | 732,92 |
| 133,66 | 784,12 | 147,86 |
| 981,05 | 209,62 | 972,14 |
Figure 94: Behavioral Red Flags Displayed by Perpetrators

- Living Beyond Means: 45.8%
- Financial Difficulties: 30.0%
- Unusually Close Association with Vendor/Customer: 20.1%
- Wheeler-Dealer Attitude: 15.3%
- Control Issues, Unwillingness to Share Duties: 15.3%
- Divorce/Family Problems: 13.4%
- Irritability, Suspiciousness, or Defensiveness: 12.3%
- Addiction Problems: 10.0%
- Complained About Inadequate Pay: 9.0%
- No Behavioral Red Flags: 8.8%
- Refusal to Take Vacations: 7.8%
- Excessive Pressure from Within Organization: 7.0%
- Past Employment-Related Problems: 6.8%
- Social Isolation: 5.9%
- Past Legal Problems: 5.6%
- Other: 5.5%
- Excessive Family/Peer Pressure for Success: 5.1%
- Complained About Lack of Authority: 4.4%
- Instability in Life Circumstances: 4.3%

Source: Report to the Nations 2016
<table>
<thead>
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<th>Behavioral Red Flags Displayed by Perpetrators</th>
<th>Percentage</th>
</tr>
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<td>Refusal to Take Vacations</td>
<td>7.8%</td>
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</tbody>
</table>
Fraud Elements Triangle

How?

Act

Concealment

Conversion

Money Laundering
What is Money Laundering?

- **Definition:** The process of disguising the proceeds of crime in an effort to conceal their illicit origins and legitimate their future use.

- **Objective:** To conceal true ownership and origin of the proceeds, a desire to maintain control, a need to change the form of the proceeds.

- **Techniques:** They can be simple, diverse, complex, subtle, but secret.

  *Proceeds = any economic advantage derived directly or indirectly from criminal offenses*
Money Laundering Cycle

1. Predicate Crimes
   - Corruption and Bribery
   - Fraud
   - Organized crime
   - Drug and human trafficking
   - Environmental crime
   - Terrorism
   - Other serious crimes...

2. Placement
   - Initial introduction of criminal proceeds into the stream of commerce
   - Most vulnerable stage of money laundering process

3. Layering
   - Involves distancing the money from its criminal source:
     - movements of $ into different accounts
     - movements of money to different countries
     - Increasingly difficult to detect

4. Integration
   - The last stage in the laundering process.
   - Occurs when the laundered proceeds are distributed back to the criminal.
   - Creates appearance of legitimate wealth.

Predicate Crimes
- Corruption and Bribery
- Fraud
- Organized crime
- Drug and human trafficking
- Environmental crime
- Terrorism
- Other serious crimes...
Illustration
Example: Crazy Eddie Case
Initial Detection of Occupational Frauds
Example: Crazy Eddie Case
Global money laundering transactions are estimated at 2 to 5% of global GDP, or roughly U.S.$1-2 trillion annually (Global Economic Crime Survey 2016).

A key justification for AML is its alleged ability to identify criminals through their financial activity that would otherwise go undetected, and in doing so disrupt organized crime networks.
Incentives to Launder

• Large amount of proceeds from corruption that need to be hidden
• Low confidence in the security of assets in country
• Asset disclosure requirements
• Political instability or possible regime change
• Greater risk for corruptors and corruptees of investigation and prosecution
Example: Trade-Based Money Laundering

• Defined by the Financial Action Task Force (FATF) as, “the process of disguising the proceeds of crime and moving value through the use of trade transactions in an attempt to legitimize their illicit origins.”
Invoice Manipulation Made Simple

- Money moved out:
  - By importing goods at overvalued prices or exporting goods at undervalued prices

- Money moved in:
  - By importing goods at undervalued prices or exporting the goods at overvalued prices
Example: Virtual Currency
The Launderers

Professional

Opportunistic

Self-laundering
The Launderers

• Professionals
  – The classic picture of a money-launderer involves financial experts, such lawyers, accountants, stockbrokers, and real estate agents, who because of their expertise are hired by criminals to clean money. Professionals are sought out because of their skills, and do not have a prior relationship with the client.
The Launderers

• **Opportunistic**
  
  – A second category of money-laundering involves individuals exclusively helping or working for someone they know. The relationship could be kinship or friendship.

  – Social snowball effect occurs among organized criminals; initially people get involved in organized crime activities through their existing social circle and subsequently come to depend upon these associations for knowledge and skill. There is very little
• Self-laundering
  – Individuals who launder their own illicit funds. Case study research shows that this is often accomplished through a legitimate business that is not likely to arouse suspicion.
What is a Social Network?

• A social network is most easily understood as a structure of social actors joined together by connections.

• By visualizing and analyzing these social networks, we can observe behaviors, understand network flow, identify influence, and make predictions about how individuals or groups may behave.
The Corrupt Social Network

• Corruption network requires that members keep the activity secret while simultaneously the members must also share necessary information.

• Secret information often leads members to decrease communication frequency to the lowest amount possible to minimize the threat of discovery.
Example

Organized Corruption Network

- FSB, Judicial MVD, or state officials
- Regional bureaucracy, individuals, and business
- Illegal business, Organized crime
Secrecy

• When information is meant to be kept secret, the process by which people share or discuss the information leads to different communication choices and strategies than if the information is public.
• Corrupt network members will become increasingly secretive and clandestine in their communication behavior over time.
• However, increased time in corrupt networks might shift members away from clandestine communication behavior toward the less secretive patterns of those of non-corrupt members.
  – With the passage of time, individuals become more tolerant of the moral transgressions of others and themselves (ethical decay)
  – Members of corrupt network may come to find that their communication behavior undermines the group’s ability to organize and accomplish its objectives.
Corrupt network members must strike a balance between coordinating members to complete the project’s goal and shielding members from detection.
Analogy

- Bad apple
- Bad barrel
- Bad crop
Social Network Analysis in Crime Investigation

• Social network analysts contend that law enforcement can better mitigate threats posed by criminal networks – whether these networks are composed of individual criminals, criminal organizations, or some other criminal entities – by identifying and targeting central network actors
Social Network Analysis (SNA)

- Social network analysis (SNA) is the process of understanding social networks through the use of network (or ‘graph’) theories.
- SNA seeks to explain social behavior by analyzing the structure of these networks, rather than just looking at individuals in isolation.
Social Network Analysis (SNA)

• The practice has its roots in academic social science, but has many real-world applications. Including:
  – Finding important and influential actors in a large data set
  – Understanding and explaining network dynamics, at an individual and cluster level
  – Implying and qualifying connections that may not be explicit in the data
Social Network Analysis (SNA)

- Improving the effectiveness of network flow
- Beginning to predict future behaviors
- Predicting consequences of particular scenarios
Centrality Measures

• A node’s centrality is a measure of its prominence, or structural importance, within a network in terms of power, communication, influence, control or status.
Degree Centrality

- Degree centrality is the simplest measure of a node’s connectivity within a network.
- This measure can be useful in recognizing important nodes, as it quickly highlights the players that transmit a large amount of information.
Degree Centrality

- Questions that a degree measure can help to answer include:
  - Who is the most / least popular person in this network?
  - Who can call upon the most resource in this network?
Betweenness Centrality

• Betweenness centrality is a way of understanding how important a node is in connecting different parts of the network.
• Betweenness centrality is the number of times that an individual is located on the shortest path between a pair of other people.
• This positioning is taken to reflect the extent to which a node or person mediates connections between people.
Betweenness Centrality

- Betweenness centrality score is determined by identifying all of the shortest paths within a network, and then counting how many times a node falls on one.
- Identifying these ‘bridges’ between clusters allows us to disrupt or improve information flow through a network.
Betweenness Centrality

• The measure is useful for answering questions such as:
  – Who or what can most strongly control information or resource flow around the network?
  – Who or what would cause the most disruption to flow if they were removed?
Closeness Centrality

• This measure is similar to betweenness, but instead of calculating the number of paths through each node, it calculates a node’s proximity to other nodes.

• It does this by calculating all of the shortest paths in a network, and then assigning each node a score based on the sum of its shortest paths.
Closeness Centrality

• Closeness is most insightful when a network is sparsely connected.
• Closeness centrality helps us answer questions including:
  – Who can most efficiently obtain information on other nodes in the network?
  – Who could most quickly spread information in a network?
Eigenvector Centrality

• Eigenvector centrality is the degree to which an individual is connected to other highly connected individuals.

• Individuals with high eigenvector centrality have more opportunity to interact with key players in the network.

• This means that these individuals may have only one or two connections, but they associate with the most popular individuals (key people with the most links).
Sample Fraud Case Visualization
Example: Criminal Network
• It is fairly intuitive that ‘1’ and ‘8’ are the most central actors. Choosing between them for targeting purposes, however, would depend on the rationale behind the targeting.
• If the goal is to disrupt the network, ‘8’ makes the best target, because removing ‘8’ isolates ‘9,’ ‘10,’ ‘11,’ and ‘12’ from the rest of the network.

• Removing ‘1’ is not as effective in terms of disruption, because the network remains relatively intact despite ‘1’s’ removal; that is, all the remaining actors are still able to reach one another, albeit in a less direct fashion.
• If the goal, however, is to collect information on the network, ‘1’ makes the best target, because ‘1’ is more closely tied to other network actors than ‘8.’

• This goal of collecting information corresponds to law enforcement’s goal of intelligence: by conducting surveillance on ‘1,’ law enforcement would maximize what it can learn about other network actors.
Example: Canadian Drug Market Analysis

Source: Malm and Bichler, 2013
Example: Launderers’ Characteristics

• **Professional launderers** often do not hold a particularly important place in the drug market.

• **Launderers are often significantly higher in betweenness centrality**, suggesting that these individuals are more likely to be well positioned to control the flow of information or materials.
Example: Launderers’ Characteristics

• Eigenvector centrality for people not involved in money-laundering is significantly higher than that of money-launderers.

• Lower eigenvector scores among money-launderers, is suggestive of a distancing from others that are highly connected (linked to many people) within the drug industry.
Example: Launderers’ Characteristics

• Professional and opportunistic launderers are shown to have lower betweenness and eigenvector centrality than self-launderers.
• This can be interpreted to mean that these types of launderers hold a more peripheral role within the industry and have fewer direct ties to key players in the market.