

# DER ÖFFENTLICHE SEKTOR THE PUBLIC SECTOR

Video: Ein gutes Leben für alle:  
Perspektiven der Daseinsvorsorge &  
Alltagsökonomie

Veni vidi VC - the backend of digital  
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Ein gutes Leben für alle: Kommunale  
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Gebakken lucht – Identifying Illicit  
Financial Flows of Oil and Gas  
Corporations from Africa through the  
Netherlands

Forschungsbereich  
Finanzwissenschaft &  
Infrastrukturpolitik

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“Der öffentliche Sektor - The Public Sector”, als Printzeitschrift im Jahr 1975 gegründet, erscheint seit 2015 als elektronisches Open-Access-Journal des Forschungsbereichs Finanzwissenschaft und Infrastrukturpolitik im Institut für Raumplanung der Technischen Universität Wien. Seit 2017 ist “Der öffentliche Sektor” Mitglied des Directory of Open Access Journals (DOAJ), gemeinsam mit 10.000 anderen Open-access-Zeitschriften aus der ganzen Welt.

Das zweisprachige Journal lädt zum Diskurs über die Bedeutung und Herausforderungen staatlicher Aufgabenerfüllung, mit besonderem Augenmerk auf die Wechselwirkung zwischen gesellschaftlichem und wirtschaftlichem Wandel, politischer Steuerung und räumlicher Entwicklung auf unterschiedlichen Ebenen. Gleichzeitig sollen verschiedene Rollenmodelle in der Aufgabenverteilung zwischen öffentlichem, privatem und zivilgesellschaftlichem Sektor hinterfragt und diskutiert werden.

In einem multidisziplinären Ansatz werden Fachleute verschiedener Disziplinen angesprochen: Finanzwissenschaft und Fiskalpolitik, Raumplanung, Infrastrukturplanung und -politik, Bodenmanagement und -politik, Ressourcenökonomie, Planungsrecht, Immobilienwirtschaft und Wohnungswesen, Politikwissenschaft, Volkswirtschaftslehre, Stadtsoziologie sowie andere verwandte Gebiete.

“Der öffentliche Sektor - The Public Sector” versteht sich als Wissensspeicher und Kommunikationsplattform zwischen Wissenschaft und Praxis einerseits und zwischen Jungakademiker\*innen und erfahrenen Expert\*innen andererseits.

Jede Ausgabe ist einem Schwerpunktthema gewidmet, zu dem ein spezifischer “Call for Papers” eingerichtet wird. Darüber hinaus werden auch andere geeignete Beiträge aus den oben genannten Themenkreisen veröffentlicht. Die Herausgeber ermutigen insbesondere junge Wissenschaftler\*innen, Artikel zur Veröffentlichung einzureichen. Nach Prüfung und Akzeptanz des Abstracts werden alle eingereichten Artikel einer Review durch ein oder mehrere Mitglieder des Editorial Board unterzogen, fallweise werden auch externe Reviewer\*innen beigezogen. Es werden keine Autorengebühren eingehoben. Publikationssprachen sind Deutsch oder Englisch.

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The aim of the bilingual journal is to advance the discussion on public intervention in a socio-economic and spatial context, studying the interrelations between economic and social change, policy design and policy impacts on different spatial levels. At the same time, it encourages the discussion on roles of and co-operation between the public, private and the different non-profit sectors.

It follows a multi-disciplinary approach, addressing experts from various disciplines and fields such as public economics, urban and regional planning, infrastructure policy, fiscal policy, environmental economics, land use policy and planning, planning law, real estate management and housing economics, political science, urban sociology and other related fields.

“Der öffentliche Sektor - The Public Sector” considers itself as a platform for exchange between science and practice, as well as between young academics and senior experts.

The journal adopts a focused thematic format with specific calls for papers. Each issue is devoted to a particular theme selected by the editorial board. However, papers that fall into the broad research fields mentioned above will also be published. The journal especially encourages young researchers to submit papers. After acceptance of the abstract, all papers will be reviewed by one or more members of the advisory board and eventually also by external reviewers. No open-access or paper submission fees will be charged. Publication languages are English and German.

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# Editorial

*Justin Kadi*

Liebe Leser\*innen,

Ich freue mich, Ihnen die Ausgabe 2/2022 unserer Zeitschrift „Der öffentliche Sektor – The Public Sector“ zu präsentieren.

Die Ausgabe steht ganz im Zeichen der 50-Jahrfeier, die unser Forschungsbereich Finanzwissenschaft und Infrastrukturpolitik im September 2022 an der TU Wien begangen hat. Titel der Veranstaltung war „Gutes Leben für Alle: Perspektiven der Daseinsvorsorge und Alltagsökonomie“.

Zu Beginn der Ausgabe finden sie einen Videomitschnitt der Tagung. Er gibt all jenen, die nicht dabei sein konnten, die Möglichkeit, Versäumtes nachzusehen. All jene, die dabei waren, können ihre Highlights noch einmal ansehen.

Im Rahmen der 50-Jahrfeier wurden auch zwei wissenschaftliche Artikel mit dem Egon-Matzner Preis für Sozioökonomie 2022 ausgezeichnet. F. Cooman, für Ihren Artikel *Veni vidi VC—the backend of the digital economy*

and its political making, sowie J. Schulz, D. Mayerhoffer und A. Gebhard für ihren Artikel *A network-based explanation of inequality perceptions*. Kurzfassungen beider Artikel finden sie in dieser Ausgabe, ergänzt durch eine Abschrift der Laudatio für die Preisträger\*innen von A. T. Renner und W. Blaas.

Die 50-Jahrfeier war auch Rahmen für eine institutionelle Neuerung. Das „[Kompetenzzentrum Alltagsökonomie](#)“ wurde offiziell vorgestellt. Es stärkt transdisziplinäre, transformative Grundlagen und fördert angewandte Forschung unterschiedlicher Ausrichtung sowie den wissenschaftlichen Austausch zu den Themen der Alltagsökonomie. M. Getzner, L. Plank und A. Strickner stellen den Hintergrund und die Ziele des Zentrums in einem kurzen Beitrag vor.

Die Ausgabe wird abgerundet durch einen Beitrag von D. Brom, D. de Gruijter, J. Ferwerda, und B. Unger über rechtswidrige Finanzflüsse und Geldwäsche im Öl- und Gassektor in den Niederlanden.

Ich wünsche Ihnen eine spannende Lektüre.



# Ein gutes Leben für alle: Perspektiven der Daseinsvorsorge & Alltagsökonomie

*Forschungsbereich Finanzwissenschaft & Infrastrukturpolitik*

Anlässlich seines 50-jährigen Bestehens lud der Forschungsbereich Finanzwissenschaft & Infrastrukturpolitik zu einer Tagung am 21.09.2022 in den Kuppelsaal der Technischen Universität ein. Im Rahmen der Tagung wurde auch das neu gegründete Kompetenzzentrum Alltagsökonomie, ein Netzwerk aus Forscher\*innen verschiedener Universitäten und außeruniversitärer Forschungsinstitutionen sowie vielfältigen Organisationen der Praxis der Alltagsökonomie, vorgestellt.

Zuletzt wurde wie jedes Jahr der Egon-Matzner-Preis verliehen.

Das Video zur [Konferenz des 50-jährigen Jubiläums des Forschungsbereichs Finanzwissenschaft & Infrastrukturpolitik](#) kann hier nachgeschaut werden.





# Veni vidi VC – the backend of the digital economy and its political making

*Franziska Cooman*

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Over the last three decades, the European Union (EU) has actively created a venture capital market in Europe. A crucial player in that mission is the European Investment Fund (EIF), a unique state agency specialized in intermediated financial investments to reach policy goals. The EIF manages mandates for other agencies, such as the European Commission (EC), national ministries and development banks. In the case of venture capital (VC) investments, the reasoning behind that strategy of ‘governing through financial markets’ was to spur innovation and job growth by strengthening the digital economy. By carrying out that strategy the Commission and the EIF become part of investment chains (Arjaliès et al. 2017), including both private and public actors. In this study, I analyze parts of the chain that spans between the EU government bodies, venture capital, the digital economy and its subjects. The scope is confined to the linkage between European government bodies, one starting point of European VC chains, and the venture capital market over thirty years, beginning with the 1990s. A central node within that chain, and consequently the focus of the analysis, is the EIF. I trace how the EIF has become a major actor in European VC markets over three decades of crisis-led institutional innovation and the implications of this governance strategy.

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## 1 Venture capital is the backend of the digital economy

Venture capital is a major source of funding in the digital economy: in Europe 87% of all startup companies founded between 2010 and 2020 that reached a valuation of over \$1bn – so-called unicorns- received VC financing (Atomico 2021). Globally, as of December 2020, venture capital had backed seven out of the eight largest firms by market capitalization prior to their listing: Microsoft, Apple, Amazon, Alphabet, Facebook, Alibaba and Tencent, which, at the same time, are the lead firms of the digital economy. Most existing debates on the digital economy focus on these corporations and their United States home base Silicon Valley. In contrast, this article shifts the analytical attention: regionally towards Europe, and structurally towards the backend of the digital economy – that is venture capital. Just as the user interface we see on the displays of our computers is structured by a layered code on the backend, I argue that the digital economy is fundamentally shaped by its financing structures and that these financing struc-

tures are not one-dimensional but take the form of investment chains.

## 2 Empirical strategy

Empirically, I triangulate document analysis, interviewing methods and descriptive statistics to trace the emergence of the EIF and European VC markets and their implications. The main data source is publicly available documents from official European sources. These are complemented by VC market data provided by Invest Europe and semi-structured expert interviews. I conducted two interviews with senior EIF management to flesh out their agendas and derive operational insights. In addition, I conducted six interviews with VC investors, which mainly serve as background to understand VC investing and the European VC market and do not figure centrally in my analysis.

### 3 Governing along the investment chain and infrastructural power

Beyond the empirical effort, the intention of the article is to contribute to a theory of linkages, where the links between spheres rendered as separate, in this case politics, finance and the digital economy, figure centrally. To this end, I propose the theoretical framework of governing along the investment chain, which synthesizes a political economy account of ‘governing through financial markets’ with the notion of the ‘investment chain’, which was born in a Latourian tradition within the social studies of finance. The theoretical framework comes with a drawback: the analysis does not include all actors presumably involved in the configuration of European venture capital policy. I do not analyze the role of nation states, national development banks and lobbying groups. The proposition of this article is to analyze the length of the chain, rather than the breadth of any given interaction point. This not only serves the mission of theoretical innovation but is also founded on the claim that the established state-finance links prove valuable in understanding the structure of the digital economy.

The interplay between public and private actors produces entanglements when governing along the investment chain, which have been conceptualized as ‘infrastructural power’ (Braun 2020; Braun and Gabor 2020). When political actors rely on infrastructures to govern, they create entanglements which financial actors can leverage in the political process. These entanglements become two-way streets: state actors send their capital along these streets to achieve policy goals, and financial actors may use the streets to make demands, positioning themselves as gatekeepers at essential junctions. In my article I show how VC firms are granted infrastructural power as they are used to govern.

### 4 The European Investment Fund has become a crucial actor in European VC markets

The EIF is a unique institution within the European polity. Its main shareholder, the European Investment Bank (EIB), is the largest multilateral development bank globally. What makes the EIF unique is that it manages mandates for others, such as national ministries, development banks or the European Commission. The EIF has two statutory objectives, namely to ‘foster EU objectives, notably in the field of entrepreneurship, growth, innovation, research and development, employment and regional development’ and ‘to generate an appropriate return for shareholders, through a commercial pricing policy and a balance of fee-

and risk-based income’ (EIF 2015). This dual role serves to avoid public market interference and has set the ground for the emergence of public-private infrastructural entanglements and the strategy of governing through financial markets

Over the last three decades, the EIF has come to hold a unique and central position in the European political economy: as a key policy arm of the Commission in its strategy to govern along the investment chain; as a translator between European government bodies and VC funds; and as a central node in the European VC investment chain. My analysis shows how the Commission harnesses the EIF, and how the EIF harnesses VC funds for governance purposes. It reveals how in acts of crisis-led institutional innovation over thirty years the Commission has established the EIF as a key investor, shifted investment risks away from the private markets towards EU government bodies, and granted infrastructural power to VC firms.

The EIF was founded in 1994 to overcome legal limitations in the EIB’s statutes and at the same time be able to provide financing to startups and small and medium-sized enterprises (SMEs). Against the backdrop of the Lisbon Agenda’s ambitious goals the EIB became the EIF’s majority shareholder, which enabled the EIF to focus and expand its operations. Following the great financial crisis (GFC), the European Fund for Strategic Investments (EFSI) enabled the EIF and EIB to take on riskier projects without impacting its ratings, which the EIB in particular needed to refinance on the financial markets.

Along with these institutional reconfigurations, I show how the shape of European VC investment chains has transformed. The position of the EIF became more and more central over the observed period. First, in the 2000s the EIF started to manage mandates from external state actors, such as the German Ministry for Economic Affairs. Consequently, the EIF became deeply rooted both on a European and national level and became the largest institutional investor in European VC markets. Second, as part of the Juncker plan the EIF introduced a funds-of-funds program, which extended the investment chain by one nod and increased the share of profits accrued by private VC funds.

All along the EIF was founded to take on risks. At first, the EIF took on EU policy risks by guaranteeing SME and infrastructure project loans. After three years, the EIF started equity investing from its own means and carried the capital gains risk. From 1999 onwards the EIF took on mandates by other political bodies. The EIFs value model transformed into a fee-based model, and the capital gains risk was henceforth carried by its mandators. In the 2000s, in the aftermath of the dotcom bubble bursting, the EIF began explicitly taking on the idiosyncratic risks of the VC asset class by disproportionately focusing on early-stage investments the riskiest investment stage. In response to

the GFC the EFSI enabled a fourth shift, which comprised taking on the systemic risks of a financialized economy. Consequently, VC investors value model was de-risked. In other words, the risk carried by VC investors shifted to European governance agencies.

## 5 Implications - the EIF at a crossroads

Overall, the discussed transformations are ambiguous and put the EIF at a crossroads. On the one hand, the EIF's central position in the European VC market may equip the EIF to achieve progressive policy goals. Indeed, under the European Green Deal 30% of the EIF's volumes are to be invested sustainably. The EIF's profitability orientation may, however, counter a truly progressive agenda. As the EIF depends on the relatively predictable high profits to sustain its market-based nature, VCs can lever their political power to counter strict regulations and controlling. In addition, the current set-up, which balances risky investments in new markets with less risky investments in winner VC funds, could translate into a setup where climate-friendly VC funds are balanced with aggressive hyper-growth-oriented ones, while potentially only taking into account the climate effects of the former. The very proposition that has granted the EIF its central position takes the edges off that position and inhibits a truly proactive and progressive role of the EIF. In other words, in its current market-based setup the EIF depends on the goodwill and returns of powerful VC investors.

This paper has several implications beyond the empirical understanding of the dynamics surrounding the EIF. Regarding debates on governing through financial markets, the analysis points to the urgent need to consider the shape of investment chains instead of merely focusing on

interaction points. Two results are noteworthy in particular. First, my analysis of the EIF shows how financial actors' business models, particularly regarding risk-return, impact potential outcomes of governance. The EIF's de-risking strategy has enabled problematic tendencies in VC, such as the narrow range of innovation or the built-in need for aggressive business models in winner-takes-all markets. Second, the analysis reveals how governing through financial markets creates new interaction points and infrastructures, which financial market actors can leverage to adapt policies in their favor. Regarding debates on the digital economy, the analysis points to the crucial need for a shift in focus towards understanding the structure of the digital economy (monopolistic, platform business models, focus on software) as fundamentally shaped by the underlying financing structure.

Together these implications ask for a new perspective on political answers to the digital economy. A political angle should revolve not merely around regulating emerging economic entities but also, in the spirit of this paper, problematize the EU's role in stabilizing a highly financialized system and develop alternative financing structures. The EU, via its EIF-engagement, takes the edges off financialization by stepping in in times of crisis. However, this does not reach the economy broadly but rather primarily secures a few privileged actors, namely those financial actors that the EU has grown so entangled with. Startups are not necessarily reached by these measures and have to defer to the rule of VC. Instead of this EU-enabled VC regime, democratic and truly long-term forms of financing new businesses are needed.

*This is a short version of the article by last year's (2022) Egon Matzner Award winner. The article was published in Review of International Political Economy as Cooman, F. (2021). Veni vidi VC—the backend of the digital economy and its political making. Review of International Political Economy, 1-23.*

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# Laudatio für die Egon-Matzner-Preisträgerin 2022 Franziska Cooiman

*Anna-Theresa Renner*

Ich habe die prämierte Arbeit *“Veni Vidi VC - the backend of the digital economy and its political making”* von Frau Cooiman mit großem Interesse gelesen und möchte der Autorin herzlich zum Egon-Matzner-Preis gratulieren! Ihr Paper besticht vor allem durch die fundierte theoretische Aufbereitung des sogenannten *“governing along the investment chain”* - also des Steuerns oder Regierens entlang der Investitionskette. Dies wird anhand des Eingreifens der Europäischen Kommission in die Finanzierung des digitalen Sektors in Europa dargelegt.

Der Egon-Matzner-Preis wird an wissenschaftliche Arbeiten vergeben, die das Forschungsverständnis seines Namensträgers widerspiegeln. Aus diesem Grund zunächst ein paar Worte zum wissenschaftlichen Vermächtnis Matzners im Kontext der prämierten Arbeit:

In dem 1992 erschienen Buch *„The Market Shock“* zeigen Matzner und seine Ko-Autor\*innen auf, dass der „Markt“ nicht als neutrale Basis für Wirtschaftsvorgänge, sondern als Institution mit inhärenten Logiken und Zielen betrachtet werden muss. Zu dieser Erkenntnis gelangt auch Cooiman in ihrer Arbeit, in der sie den **European Investment Fund** als Schnittstelle des öffentlichen und privaten Sektors beleuchtet – nämlich der Europäischen Kommission auf der einen, und privater **Venture Capital Funds** auf der anderen Seite. Die Autorin geht dabei auch der Frage nach, wie risikoreiche Investitionen mit öffentlichen Mitteln in private, profit-orientierte Unternehmen politisch gerechtfertigt werden. Und kommt zu der Erkenntnis, dass hier meist mit der Aufwertung oder Stabilisierung bestimmter Wirtschaftssektoren und -standorten, oft nach Krisen, argumentiert wird; im konkreten Fall also mit der wirtschaftlichen Entwicklung und Integration des europäischen Wirtschaftsraums. Die Arbeit Cooimans zeigt allerdings auch auf, wie das politische Ansinnen regionale Ungleichheiten durch gezielte Investitionen zu verringern, dazu führen kann, dass die Ungleichheit auf individueller Ebene verstärkt wird. Der von Matzner kritisierten Konzentration von Vermögen nach dem Zerfall der kommunistischen Wirtschaftssysteme, wird durch solche Investitionen jedenfalls nicht oder nur unzureichend entgegengewirkt.

Ganz im Sinne Matzners ist wohl auch der interdisziplinäre Zugang der Arbeit von Frau Cooiman. Die eingenommene wirtschaftspolitische Perspektive auf ein vermeintlich unreguliertes Instrument des Finanzmarktes erlaubt eine analytische Aufarbeitung der politischen und finanziellen Interessen einzelner Akteure. Die Annahme, dass ein Markt keine andere Funktion als die effiziente Verteilung von Ressourcen hat, wird dadurch implizit in Frage gestellt. Ebenso wird von Frau Cooiman hervorragend argumentiert, dass das Verwenden öffentlicher Gelder für risikoreiche Investitionen das Risiko für private Venture Capital Funds reduziert, und somit attraktiver macht. Die Ausführungen, wie dadurch, vor allem auch unter dem Deckmantel der Krisenintervention, Vermögen vom Steuerzahler hin zu privaten Investoren verteilt wird, sind wohl besonders im Geiste Matzners. Und sollten uns auch in der aktuellen krisengebeutelten Zeit zu denken geben.

Der heute prämierte Artikel ist darüber hinaus fast exemplarisch für den von Matzner und Bhaduri im Jahr 1998 vorgeschlagenen *„socioeconomic context approach“*. Als Leser\*in der Arbeit Cooimans bekommt man sowohl ein Bild von der Weltanschauung und den individuellen Anreizen der involvierten Akteur\*innen als auch von deren institutioneller Einbettung. Das letztere nicht als gegeben und unverrückbar angenommen werden kann, wird durch die Beschreibung der historischen Entwicklung des European Investment Funds mehr als deutlich. Auch der Forderung von Matzner und Bhaduri den Blick auf die „makro“ Fundamente der „mikro“ Theorie zu wenden, wird von Frau Cooiman Folge geleistet. So hebt sie nicht nur die Verflechtungen zwischen privaten und öffentlichen Akteuren hervor, sondern auch das Machtgefüge, das durch die *„infrastructural power“* der privaten Investmentfonds getrieben wird.

Die prämierte Arbeit ist meines Erachtens auch deshalb so auszeichnungswürdig, weil sie nicht auf ausgetretenen Pfaden wandelt, und nicht mit immer neuen Methoden althergebrachte, oft neoliberal-mechanistische Theorien überprüft. Sie erfüllt hingegen den Anspruch, komplexe Zusammenhänge umfassend aufzuzeigen, kritisch zu diskutieren und damit auch neue Thesen zu generieren. Frau Cooiman ist dies mit gebührendem analytischem Abstand und ohne unangebrachte Polemik gelungen.



# Soziale Vergleiche und wahrgenommene Ungleichheit

Jan Schulz, Daniel Mayerhoffer, Anna Gebhard

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Die öffentliche Wahrnehmung von ökonomischer Ungleichheit ist oft stark verzerrt. Solche Fehlwahrnehmungen haben weitreichende Folgen für verschiedenste ökonomische Fragen und beeinflussen das subjektive Wohlbefinden, Umverteilungspräferenzen sowie Wahl- und Konsumverhalten. Wir schlagen ein Netzwerkmodell vor, das die wesentlichen stilisierten Fakten in Bezug auf solche Fehlwahrnehmungen replizieren kann. Analytisch und mittels Computersimulationen können wir zeigen, dass sie sich ergeben, wenn die einzelnen Akteur\*innen von ihrem wahrgenommenen sozialen Netzwerk auf die Gesamtgesellschaft extrapolieren. Ein solcher Effekt ergibt sich immer dann, wenn das soziale Netzwerk Homophilie im Einkommen aufweist, das Netzwerk also nach Einkommen segregiert ist. Es müssen insbesondere keine kognitiven Verzerrungen angenommen werden, sondern verzerrte individuelle Stichproben bei korrekter Wahrnehmung sind hinreichend. In dieser Zusammenfassung unseres Ansatzes stellen wir weiterhin auch die Implikationen dieses Mechanismus für andere Zusammenhänge wie Konsumkaskaden, genderbezogene Ungleichheit und das Wahlverhalten dar.

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## 1 Segregation und Organisation

Menschliches Handeln ist von Überzeugungen geprägt, die nicht notwendigerweise mit der objektiven Realität übereinstimmen. Beispielsweise ist empirisch gut belegt, dass verzerrte Wahrnehmungen von ökonomischer Ungleichheit Umverteilung beschränken (Choi, 2019). Allerdings ist der soziale Ursprung dieser Wahrnehmungsverzerrungen sehr viel weniger erforscht. In unserem Aufsatz „A Network-Based Explanation of Inequality Perceptions“ beschreiben wir einen Mechanismus, wie unsere alltägliche soziale Interaktion diese Verzerrungen erzeugen könnte. Viel kürzer bringt aber bereits Marx in seinem achtzehnten Brumaire den grundlegenden Mechanismus auf den Punkt:

*„Insofern Millionen von Familien unter ökonomischen Existenzbedingungen leben, die ihre Lebensweise, ihre Interessen und ihre Bildung von denen der andern Klassen trennen [...], bilden sie eine Klasse. Insofern ein nur lokaler Zusammenhang unter [ihnen] besteht, die Dieseligkeit ihrer Interessen [...] keine politische Organisation unter ihnen erzeugt, bilden sie keine Klasse. Sie sind daher unfähig, ihr Klasseninteresse im eigenen Namen, sei es durch*

*ein Parlament, sei es durch einen Konvent geltend zu machen.“ (MEW 8, S. 198)*

Nur zweckgerichtete, dezidiert politische Abgrenzung ermöglicht also nach Marx Klassenbewusstsein als Voraussetzung für kollektives Handeln und damit sozio-ökonomischen Wandel. Unser Netzwerkmodell in Schulz et al. (2022) beschäftigt sich mit der gegensätzlichen, apolitischen Form von Segregation und expliziert einen Mechanismus, wie diese politische Organisation behindern statt fördern kann: Sie erzeugt Fehlwahrnehmungen von ökonomischer Ungleichheit und der eigenen Position in der Einkommenshierarchie und untergräbt so möglicherweise klassenbezogene Solidarität.

## 2 Meine, ihre, unsere Realität?

Empirisch lassen sich drei stilisierte Fakten zu Wahrnehmungsverzerrungen aus der Literatur herausarbeiten (Schulz et al., 2022): Erstens glaubt ein überproportionaler Teil der Bevölkerung unabhängig von der eigenen tatsächlichen hierarchischen Position, sich nahe der Mitte der Einkommenshierarchie zu befinden („middle-class

bias“). Ärmere überschätzen also ihre eigene Position in der Einkommenshierarchie und Reichere unterschätzen sie. Abbildung 1 zeigt dieses Phänomen exemplarisch für Deutschland, es scheint aber global zu sein und lässt sich für alle im International Social Survey Programme (ISSP) teilnehmenden Staaten herausarbeiten. Nachdem sich per Definition zehn Prozent der Bevölkerung in jedem Einkommensdezil befinden und es sich beim ISSP um repräsentative Umfragen handelt, liegen die relativen Häufigkeiten bei korrekten Wahrnehmungen für alle Dezile ebenfalls bei etwa zehn Prozent. Tatsächlich konzentrieren sich die Wahrnehmungen aber um die mittleren Dezile und ein überproportionaler Anteil der Bevölkerung wähnt sich in der Mittelschicht. Zweitens unterschätzt die Gesamtbevölkerung tendenziell Einkommensungleichheit, wobei diese Wahrnehmungsverzerrung für die Reichsten am größten ist. Schließlich schlagen sich Veränderungen in der tatsächlichen Ungleichheit kaum in der wahrgenommenen Ungleichheit nieder, was es dem\*der Einzelnen auch erschweren dürfte, auf einen Anstieg der Ungleichheit in Form von Protest oder Wahlverhalten zu reagieren.

Wir können nun analytisch und mithilfe von Computersimulationen (Mayerhoffer/Schulz 2023a) zeigen, dass sich diese stilisierten Fakten durch eine empirisch gut belegte Eigenschaft sozialer Netzwerke erklären lassen- der Homophilie im Einkommen, also dem Phänomen, dass tendenziell Menschen mit ähnlichem Einkommen miteinander interagieren. Exemplarisch zeigt sich dies im rechten Panel von Abbildung 1 für den ersten stilisierten Fakt, bei dem sich qualitativ derselbe middle class bias wie in den empirischen Daten im linken Panel ergibt. Bemerkenswerterweise sind die Individuen in unserem Simulationsmodell kognitiv dazu fähig, sowohl ihre eigene Position als auch Einkommensungleichheit allgemein korrekt einzuordnen. Allerdings tun sie das nicht bezogen auf die Gesamtbevölkerung, sondern auf ihr persönliches Umfeld, dessen Einkommen sie kennen. Alle drei stilisierten Fakten ergeben sich dann direkt aus dem Modell, wenn jedes Gesellschaftsmitglied von seiner individuellen sozialen Stichprobe auf die Gesamtgesellschaft extrapoliert, solange diese subjektiven Wahrnehmungsnetzwerke durch Homophilie im Einkommen gekennzeichnet und verzerrt sind. Dazu kann ein sozial exkludierendes Bildungssystem und segregierte Wohnviertel ebenso beitragen wie die kulturelle Norm, nicht „über Geld“, also das eigene Einkommen, zu sprechen. Bei starker Einkommenshomophilie weiß kaum jemand, was die Menschen im benachbarten Wohngebiet oder Kolleg\*innen außerhalb der eigenen Abteilung wirklich verdienen – und wie groß die ökonomische Ungleichheit in der Gesamtgesellschaft wirklich ist.

Es zeigt sich also, dass sich die weitverbreiteten Verzerrungen und Fehlwahrnehmungen mit sehr sparsamen Annahmen erklären lassen. Insbesondere müssen keine Verzerrungen in der kognitiven Informationsverarbeitung unterstellt werden; zu homogene soziale Stichproben bei korrekter kognitiver Verarbeitung sind völlig hinreichend.

Diversität ist demnach nicht nur ein Wert an sich, sondern hilft auch dabei, bessere Entscheidungen zu treffen und so auch auf politischem Weg ökonomische Ungleichheit abzubauen. In Marx' Terminologie handelt es sich bei den Fehlwahrnehmungen in unserem Modell folglich um Ideologie als notwendig falsches Bewusstsein, die nicht durch einzelne, subjektive Irrtümer, sondern aus der objektiven Struktur des gesellschaftlichen Zusammenlebens im sozialen Netzwerk entsteht (MEW 3, S. 26).

Das verweist auf das Potenzial, Fehlwahrnehmungen der sozialen Realität politisch bekämpfen zu können: Wenn die Qualität der Wahrnehmung von der Qualität der Information und nicht der Informationsverarbeitung abhängt, lassen sich Verzerrungen auch über korrekte Informationen korrigieren. Bildung und Informationskampagnen haben also durchaus Chancen auf Erfolg. Politisch lässt sich aber auch direkt an der Segregation ansetzen. Hier ist der spezifische Typ von Einkommenshomophilie entscheidend. Strukturell bedingte Homophilie z.B. durch Segregation im Bildungssektor ist mutmaßlich sehr viel einfacher politisch beeinflussbar als selbstgewählte Homophilie, die aus den Präferenzen des\*der Einzelnen erwächst (McPherson/Smith-Lovin, 1987). Welcher Kanal unter welchen Umständen dominiert, lässt sich letztlich nur empirisch klären. Speziell diese Fragestellung ist aber möglicherweise nicht nur für die Policy-Implicationen interessant, sie dürfte auch zur Erklärung beitragen, warum die verschiedenen Wahrnehmungsverzerrungen so stark zwischen Staaten und Beobachtungsperioden variieren (Choi, 2019). So scheinen die qualitativen Phänomene der drei stilisierten Fakten global zu sein, ihre quantitative Ausprägung wie beispielsweise die Stärke des middle class bias aber durchaus von lokalen Gegebenheiten abhängig. Wir hoffen, mit unserem Modell Anhaltspunkte für deren empirische Untersuchung zu liefern.

### 3 Weitere Anwendungen von Wahrnehmungsnetzwerken

Neben der oben erläuterten konkreten Anwendung stellt unser Modell eine Methode dar, Netzwerke zu generieren, die sowohl Wahrnehmungsverzerrungen als auch empirische Netzwerktopologien gut replizieren können und damit eine hohe externe Validität aufweisen. Das ermöglicht es, die Netzwerkstruktur auch auf andere Bereiche außerhalb des ursprünglichen Forschungszusammenhangs anzuwenden. Im Rahmen unseres laufenden Forschungsprojekts bauen wir in drei Aspekten auf der generierten Netzwerkstruktur auf und beziehen diese auf i) andere Formen von Ungleichheit, ii) individuelles Wahlverhalten und iii) Nachahmungskonsum.



In einer ersten Anwendung auf andere Formen von Ungleichheit, namentlich gender- und ethnizitätsbezogener Ungleichheit, zeigt sich, dass hier lokale Wahrnehmungen im Gegensatz zur allgemeinen Ungleichheit nicht ausreichen, um die weitverbreitete Unterschätzung des Gender und Racial Wage Gaps zu erklären (Mayerhoffer/Schulz, 2021; 2022). Eine Kalibrierung des Modells ergibt vielmehr, dass der korrekte, medial kommunizierte Lohnunterschied durchaus eine Rolle spielt und in die Überzeugungsbildung einbezogen wird. Das könnte daran liegen, dass Ungleichheit als abstraktes und formales Konzept wesentlich schlechter kommunizierbar ist als das greifbarere Konzept einer Lohnlücke - und dass feministische Kampagnenarbeit beispielsweise über den „Equal Pay Day“ erfolgreich war. Politisch scheint sich Kommunikation mit klar verständlichen Kennzahlen also auszuzahlen. Und in der Tat werden individuelle Umverteilungspräferenzen viel stärker von gruppenbezogener, als unfair empfundener Ungleichheit beeinflusst als von allgemeiner Ungleichheit (Ahrens, 2019; 2022). Wie Wählende zwischen dieser gruppenbezogenen Ungleichheit und einer sozial weiter akzeptierten leistungsbezogenen Ungleichverteilung differenzieren und wie sich die intersektionale Verschränkung der verschiedenen Gruppenidentitäten auswirkt, ist Gegenstand eines laufenden Forschungsprojektes.

Unser statisches, auf Einkommensungleichheit bezogenes Modell kann per Konstruktion weder Wahrnehmungen ökonomischer Mobilität noch von Vermögensungleichheit erfassen, die aber ähnlichen Verzerrungen unterliegen (vgl. auch OECD, 2021 und die Laudatio von Wolfgang Blaas in dieser Ausgabe). Beim Vermögen ist die Ungleichheit insbesondere am oberen Rand empirisch derart ausgeprägt, dass sie selbst statistisch mit den üblichen Stichprobengrößen kaum zu erfassen ist (Schulz/Milaković, 2021). Extrapolation auf Basis der um Größenordnungen kleineren individuellen sozialen Stichproben erscheint daher für das Vermögen als noch hoffnungsloseres Unterfangen als in Bezug auf das Einkommen. Prinzipiell lassen sich aber sowohl Mobilität als auch Vermögensungleichheit in einem sehr ähnlichen Modellrahmen untersuchen, in welchem Einkommens- und Vermögensbildung beispielsweise dynamisch als stochastischer Prozess modelliert wird und sich die Wahrnehmungsnetzwerke endogen anpassen.

In einer zweiten Anwendung modellieren wir direkt Wahlentscheidungen zu (umverteilenden) Steuern. Wir zeigen, dass Segregation in der Tat im Simulationsmodell zu weniger Umverteilung führt, weil insbesondere die Ärmere gegen ihre objektiven Interessen wählen (Mayerhoffer/Schulz, 2023b). Wir legen aber auch dar, dass unter bestimmten Umständen dynamisch lernende Wählende ihre Verzerrung überwinden und zum Grad von Umverteilung mit unverzerrten Wahrnehmungen konvergieren können - insbesondere dann, wenn die ursprünglichen Überzeugungen nicht zu stark verzerrt sind. Informationskampagnen sind also nicht nur im statischen Sinne rele-

vant, sie können auch dynamisch Lernprozesse ermöglichen und beschleunigen. Auch hier ergibt sich eine Vielzahl von Anschlussfragen, insbesondere zum Einfluss bestimmter Wahlsysteme, einer möglicherweise strategisch agierenden Angebotsseite von Politik und von möglichem Feedback zwischen Wahrnehmungen, Umverteilungsmaßnahmen und makroökonomischer Performance. Insbesondere stellt sich hier die Frage, welche Implikationen ausbleibendes Wachstum auf das Wahlverhalten und die Mobilisierung sowie die thematische Schwerpunktsetzung von politischem Protest hat, das mutmaßlich bislang soziale Konflikte befriedet hat (Asgharpourmasouleh et al., 2019, Diley/Brenner, 2022).

Die letzte Anwendung von Wahrnehmungsnetzwerken erscheint vermutlich als diejenige, die am weitesten vom ursprünglichen Forschungskontext abweicht: Nachahmungskonsum in sozialen Netzwerken. Individuelle Konsumententscheidungen werden empirisch vom Konsum von Referenzgruppen beeinflusst, zu denen der\*die einzelne Konsument\*in aufschließen möchte, was sogenannte „Konsumkaskaden“ auslösen kann (Frank et al., 2014). Typischerweise konkretisieren diese Konsummodelle aber nicht, auf welche Referenzgruppen sich das Nachahmungsverhalten genau bezieht. Als plausiblen Kandidaten, um die alltäglichen Interaktionen mit hoher externer Validität zu modellieren, verwenden wir daher unser Wahrnehmungsnetzwerk. In einem partialanalytischen Konsummodell können wir zeigen, dass die Kombination aus Einkommenshomophilie und nachahmendem Konsumverhalten die stilisierten empirischen Fakten von individuellen Konsumausgaben replizieren kann. Damit stellt sie eine tragfähige Alternative zur konventionellen Konsumtheorie auf Basis der Eulergleichung mit intertemporaler Optimierung dar (Schulz/Mayerhoffer, 2021). Auf der Makroebene weisen die unterschiedlichen Netzwerktopologien starken Einfluss auf den aggregierten Konsum auf und wir liefern damit Segregation als Folge von einkommensbasierter Homophilie als mögliche Erklärung für internationale Unterschiede in aggregierten Konsumquoten. In den USA ist Nachahmungskonsum beispielsweise wesentlich verbreiteter als in Deutschland und Österreich. In einem Folgeprojekt integrieren wir diese partialanalytische Konsumfunktion in ein makroökonomisches Modell, um die Interaktion insbesondere mit Finanzmärkten zu verstehen und zu untersuchen, wie Ungleichheit über den dargestellten Konsumkanal zu finanzieller Fragilität und privater Überschuldung beitragen kann (Priori et al., 2023).

In allen drei weiteren Anwendungsfeldern erweist sich die alltägliche soziale Interaktion als entscheidend für die theoretischen Ergebnisse, Mechanismen und empirisch zu überprüfenden Hypothesen. Über das konkrete Netzwerkmodell hinaus sind wir deshalb überzeugt, dass die Ökonomik sich viel expliziter als Sozialwissenschaft verstehen und den sozioökonomischen Kontext ökonomischen Handelns mitbedenken muss. Das bedeutet auch, Erkennt-

nisse aus angrenzenden Wissenschaftsfeldern von Anfang an miteinzubeziehen. Während es innerhalb der disziplinären Grenzen der Ökonomik einer Reihe von starken Hilfsannahmen wie beispielsweise „rationaler Irrationalität“ der Akteur\*innen (Caplan, 2011) bedarf, um persistente Fehlwahrnehmungen zu erklären, erscheinen diese im Licht des in der Soziologie schon lange dokumentierten empirischen Faktums segregierter sozialer Netzwerke viel weniger erstaunlich. Wir hoffen, mit unserem Projekt

das Potenzial eines explizit sozioökonomischen Ansatzes exemplarisch zu veranschaulichen.

*Der Text ist eine Kurzfassung des mit dem Egon-Matzen-Preises 2022 ausgezeichneten Papers Schulz, J., Mayerhoffer, D. M., & Gebhard, A. (2022). A network-based explanation of inequality perceptions. Social Networks, 70, 306-324.*

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# Laudatio für die Egon-Matzner-Preisträger 2022

## Jan Schulz, Daniel M. Mayerhoffer und Anna Gebhard

*Wolfgang Blaas*

Der von der Jury ausgewählte Aufsatz der Preisträger befasst sich mit dem weitverbreiteten Phänomen der Fehleinschätzung der eigenen Position in der ökonomischen Verteilungshierarchie.

Bei dieser Fehleinschätzung gibt es verschiedene Facetten. Die in der Allgemeinheit bekannteste dürfte sein, dass Personen auf den unteren Stufen ihre Position überschätzen – also glauben, weiter oben in der Verteilungsskala zu sein – und Personen auf den oberen Stufen ihre Position unterschätzen – also glauben, in der Verteilungshierarchie weiter unten zu stehen („middle class bias“). Eine andere durchaus häufig anzutreffende Fehleinschätzung wäre etwa, dass das Ausmaß der Ungleichheit grob unterschätzt wird.

Zur Methodik und den Ergebnissen der Arbeit werden die Autoren selbst kurz Stellung nehmen. Ich möchte mir erlauben, einige Anmerkungen zum Verteilungsthema aus gesamtwirtschaftlicher und gesamtgesellschaftlicher Sicht einzubringen.

Solche Fehleinschätzungen sind aus wirtschaftlicher und politischer Perspektive kein zu vernachlässigendes Problem. Ganz im Gegenteil. Sie können dazu beitragen oder überhaupt ursächlich dafür sein, dass Maßnahmen der Umverteilung (von oben nach unten) nicht oder in die falsche Richtung (von unten nach oben) umgesetzt werden. Die umfangreichen Studien, die heute dazu vorliegen, zeigen die wachstumspolitischen, demokratiepolitischen und systemdestabilisierenden Probleme solcher Politikfehler auf.

Gibt es keinen gesellschaftlichen Konsens oder keine parlamentarische Mehrheit dafür, dass die Ungleichheit redu-

ziert werden soll, werden Maßnahmen unterbleiben, die die volkswirtschaftlichen Kapazitäten besser auslasten. Dass das keine linken Hirngespinnste sind, zeigen Publikationen von so konservativen Institutionen wie der OECD.

Die OECD hat wissenschaftliche Untersuchungen veröffentlicht, die zeigen, um wieviel die Wachstumsrate der einzelnen OECD-Länder höher gewesen wäre, wenn über einen längeren Zeitraum sich die Ungleichheit der Einkommen verringert hätte oder zumindest gleich geblieben wäre (OECD 2014; OECD 2015).

Wenn es um die Vermögensverteilung geht, liegt Österreich bekanntlich innerhalb der EU auf den vordersten Rängen der Ungleichheit. Neuere Arbeiten, die Probleme wie die Untererfassung der Spitzenvermögen methodisch umgehen, kommen zum Schluss, dass die Vermögenskonzentration in Österreich beständig hoch bleibt (Heck et al. 2020). Die ärmere Hälfte der Österreicher besitzt 2,8% des (Gesamt-) Nettovermögens, während das reichste (eine) Prozent 39% des Nettovermögens besitzt. Das ist auch im internationalen Vergleich extrem, für die USA lautet dieser Prozentsatz 36%, für Deutschland 35%.

Dass eine zunehmende Vermögenskonzentration die Gefahr eines schleichenden Übergangs von der Demokratie zur Plutokratie in sich birgt, zeigen eine Reihe von einschlägigen Studien z.B. für die USA, aber auch für europäische Länder (siehe z.B. Trabold (2017); Ey/Wagner (2017)). Demgegenüber steht aber die Tatsache, dass in Ländern wie z.B. Österreich die Einführung (oder Wieder-Einführung) von vermögenbezogenen Steuern extrem schwierig bis unmöglich erscheint. Das verwundert auch nicht, wenn man die Antworten bei Befragungen zu Vermögenssteuern in Betracht zieht. Nach Angaben von Forschern,

die sich schon viele Jahre mit diesem Thema befassen (wie z.B. Martin Schürz 2019), lautet die verblüffende Reaktion auf die Frage, warum der Befragte gegen eine (entsprechend konzipierte) Vermögenssteuer ist, wenn diese ihn sowie 90% der Bevölkerung gar nicht treffen würde: „Ja, jetzt nicht. Aber vielleicht bin ich einmal reich, und dann trifft sie mich“.

Diese hoffnungsvolle Erwartung, die für mehr als 90% der Bevölkerung nie in Erfüllung geht, gehört meines Erachtens ebenso zu jenen Fehleinschätzungen wie jene der Verteilungsposition, die eine Umsetzung wirtschafts- und demokratiepolitisch sinnvoller Maßnahmen behindern.

Dass solche Fehleinschätzungen und romantische Erwartungen eine gezielte Verteilungspolitik erschweren oder unmöglich machen, ist mit ein Grund für die zunehmende Dominanz der Finanz- über die Realmärkte und damit eine der Ursachen für die vermehrte Instabilität unseres Wirtschaftssystems. Umso mehr sind alle wissenschaftlichen Arbeiten zu begrüßen, die dazu beitragen können, den verteilungspolitische Diskurs zu versachlichen und damit politische Maßnahmen im Interesse der Mehrheit der Bevölkerung zu unterstützen.

In diesem Lichte sehe ich auch die vorliegende Arbeit der Egon-Matzner-Preisträger, zu der ich ihnen herzlich gratuliere.

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# Ein gutes Leben für alle: Kommunale Aufgaben im Bereich der Alltagsökonomie

*Michael Getzner, Leonhard Plank, Alexandra Strickner*

Die aktuellen und vergangenen Krisen – Pandemie, Teuerung, globale Erhitzung – haben gezeigt, dass ein „gutes Leben für alle“ auch in Österreich nicht ohne teilweise fundamentale Anpassungsprozesse gesichert werden kann. Eine wichtige Voraussetzung für die Lebensqualität stellen die Basisleistungen der Infrastruktur und Daseinsvorsorge dar. In den letzten Jahren werden diese Güter und Dienstleistungen, die die Notwendigkeiten des täglichen Lebens abdecken, unter dem Konzept der „Alltagsökonomie“ zusammengefasst.

Die Alltagsökonomie ist wesentlicher Teil unseres gelebten Alltags, und wird meist als funktionierend und „einfach vorhanden“ vorausgesetzt. Die Bedeutung dieser Grundversorgung wird oft erst dann deutlich, wenn Infrastrukturleistungen wegfallen, eingeschränkt zur Verfügung stehen oder nicht mehr funktionieren. Beispielsweise wurden während der pandemiebedingten Lockdown-Phasen viele wirtschaftliche Aktivitäten zurückgefahren – jene der Basisversorgung im Rahmen der Alltagsökonomie jedoch blieben weiterhin geöffnet. Der zunehmende Mangel an Arbeitskräften in der öffentlichen Daseinsvorsorge, der sich aus sehr unterschiedlichen Ursachen speist (von schlechten Arbeitsbedingungen, zu geringer Bezahlung bis hin zur Pensionierungswelle der sogenannten Babyboomer-Generation) führt zu bislang ungekannten Einschränkungen des Angebots. Längere Öffi-Intervalle, gesperrte Betten in Krankenhäusern bzw. in Einrichtungen für die Betreuung von älteren Menschen oder auch reduzierte Betreuungszeiten in der Elementarbildung bzw. größere Gruppen haben vielfältige negativen Wirkungen für die Betroffenen.

Die Alltagsökonomie ist aber nicht nur für die Versorgung mit lebensnotwendigen Gütern und Dienstleistungen essentiell, sondern auch strukturell das Leben der Bürger\*innen prägt. Somit tragen Maßnahmen zum Umbau der Infrastrukturen für die Dekarbonisierung dazu bei, dass die Bürger\*innen auch klimaschonende öffentliche Güter vorfinden und sich somit auch umweltfreundlich verhalten können.

Die Alltagsökonomie und der Umbau im Sinne des Klimaschutzes und der Dekarbonisierung sind wesentliche

Voraussetzungen für klimaschonende individuelle Entscheidungen: Infrastrukturen bestimmen die Möglichkeiten, sich individuell klimaschonend zu verhalten. Dies zeigt auch der kürzlich erschienene Bericht des Austrian Panel on Climate Change (APCC), „Strukturen für ein klimafreundliches Leben“. Neben der Dekarbonisierung des täglichen Lebens, gibt es auch die Herausforderung, den Ressourcenverbrauch massiv zu verringern, um innerhalb der planetaren Grenzen ein gutes Leben für alle zu ermöglichen. Die Möglichkeiten bzw. die Rolle der öffentlichen Infrastrukturen und Daseinsvorsorge, hier einen wichtigen Beitrag zu leisten und auch die Herausforderungen, die sich daraus ergeben, müssen noch stärker in den Blick genommen werden. Auch das Potential zur Stärkung lokaler, resilienter Wirtschaftskreisläufe ist noch ausbaufähig. Denn die öffentliche Hand ist über die öffentlichen Unternehmen und die Bereitstellung all dieser Dienstleistungen ein wichtiger Auftraggeber.

Im September 2022 wurde an der TU Wien im Rahmen einer Tagung das neu gegründete „Kompetenzzentrum Alltagsökonomie“ ([www.alltagsoekonomie.at](http://www.alltagsoekonomie.at)) vorgestellt. Das Kompetenzzentrum Alltagsökonomie fördert und stärkt transdisziplinäre, transformative Grundlagen, angewandte Forschung unterschiedlicher Ausrichtung sowie den wissenschaftlichen Austausch zu den Themen der Alltagsökonomie. Mehr als 40 Forscher\*innen an österreichischen Universitäten und Forschungseinrichtungen und auch einigen Forschungseinrichtungen in Deutschland sind bereits Teil des wissenschaftlichen Beirats. Darüber hinaus fördert das Kompetenzzentrum den Austausch und die Zusammenarbeit zwischen Forscher\*innen und Vertreter\*innen von Stadt- und Gemeindeverwaltungen, Sozialpartnern, Unternehmensverbänden, sowie Akteur\*innen der Zivilgesellschaft, die rund um die Alltagsökonomie tätig sind.

Vom 14. Bis 16. September 2023 richtet das Institut für Infrastrukturpolitik und Finanzwissenschaft der TU Wien, mit Unterstützung des Kompetenzzentrums für Alltagsökonomie und dem Foundational Economy Collective die 6. Foundational Economy Conference unter dem Motto „Exploring the Foundational Economy for a Just Transition“ aus.



# Gebakken lucht – Identifying Illicit Financial Flows of Oil and Gas Corporations from Africa through the Netherlands\*

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*\* The authors note that this is a working paper*

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‘Gebakken lucht’ is a Dutch expression that literally means “baked air”, proverbially referring to something that appears like quite something, while it is in fact nothing. Oil and gas corporations that delve valuable resources in Africa often have offices in the Netherlands or similar countries with large amounts of money flowing through and little to no real activity. These money flows without underlying substance can be seen as ‘gebakken lucht’ and are classified as illicit financial flows by UNCTAD. This article shows how one could monitor these immense but hidden illicit financial flows which, when retrieved, would make Africa almost debt-free. We show how red flag indicators can reveal the risk of money laundering, tax evasion, or tax avoidance. We identify 61 different red flags and apply them to five oil and gas corporations (of which one is a ‘clean case’) active in Angola, Mozambique, Nigeria, and Egypt. These five corporations have their headquarters in Europe with 173 subsidiaries in the Netherlands. Their annual total revenue in Africa is 36.4 billion USD. We demonstrate how such an analysis works and draw preliminary conclusions about the validity of the red flags for monitoring illicit financial flows to reach sustainable development goals.

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## 1 Introduction

The role of Multinational Companies (MNCs) in the oil and gas sector in Africa is ambiguous. On the one hand, they are seen as an important driver for development through capital inflows, investment, employment, and the creation of infrastructure. On the other hand, they are perceived as producers of negative externalities such as heavy pollution of air and water, and as responsible for the destruction of the local community and health problems (see eg. Konte and Vincent, 2021). Investments can land in the pockets of corrupt politicians so that the benefits do not reach those who are negatively affected by these companies and who should be compensated for it.<sup>1</sup>

This article wants to enlarge the list of negative impacts of MNCs in the oil and gas sector by showing that they do not only take the raw materials out of African countries and leave environmental damage but also do not pay the local taxes they should pay. Developed countries like the Netherlands offer opportunities for through flows of illicit finance. Not much economic activity, not much oil and gas, but only what the Dutch call ‘gebakken lucht’ – thin air – is being transmitted to shift profits away from Africa. By offering such opportunities to corporations, developed countries are co-responsible for depriving African people of important income.

The estimates of the amounts of unpaid taxes in Africa exceed Foreign Development Aid by far. The UNCTAD's Economic Development in Africa Report of 2020 states that 89 billion USD of illicit financial flows leave Africa, almost the same amount as the 48 billion USD official

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<sup>1</sup> For a short overview of pros and cons of MNCs in developing countries, see <https://vittana.org/19-advantages-and-disadvantages-of-multinational-corporations>

development aid and 54 billion USD Foreign Direct Investment together (UNCTAD 2020). Repatriating unpaid taxes would make Africa almost debt-free and is an important task for both developing and involved developed countries. Such tax justice – a pro-poor redistributive tax system aiming to reduce income and social inequality – is a popular and important concept in development theory nowadays. (Cascant-Sempere, 2002: 526)

Adebayo (2021) analyzes the gold mining sector and concludes that the government ‘take’ – defined as total payments to the government from a mining project (including taxes, fees, and royalties) relative to the mining company’s pre-tax net revenue from the same project should be reduced to compensate companies for their investment in local development and their political risks. We think that this is not necessary. On the contrary: we analyze oil and gas companies’ tax payment behavior in African countries and conclude that companies reduce the government ‘take’ themselves – by avoiding paying taxes in African countries. This tax avoidance behavior is enabled by the tax policies of developed countries. Companies can also avoid or minimize the political risks through investment treaties in developed countries, which guarantee their investments in African countries (at least financially) even if there is expropriation by political leaders.

Money laundering, tax evasion, and some forms of tax avoidance are grouped as illicit financial flows by UNCTAD. Tax avoidance schemes like setting up empty shell companies in tax havens where no business is allowed for foreign companies, with the sole purpose of escaping taxation, are in a grey zone of legality. These tax avoidance schemes use legal loopholes in the international tax system but do not correspond to the spirit of the law. This is why UNCTAD groups them with illegal tax evasion and criminal money laundering as illicit financial flows. There are diverse approaches at the macro-level trying to measure illicit financial flows (see Cobham et al 2021 and Ferwerda and Unger 2021 for an overview and recent results). These methods allow to estimate illicit financial flows between countries and give an estimate of the total size of the problem. Estimates still vary a lot (between 125 billion and 15 trillion USD for the world and between 89 and 200 billion USD for African countries, see Ferwerda and Unger 2021). Cobham et al (2021) see the monitoring of these flows as important for reaching sustainable development goals as defined by UNCTAD.

To monitor illicit financial flows, it is important to assess the risks related to different types of transactions. Illicit financial flows happen in the dark. Therefore, one cannot ‘see’ and ‘monitor’ them directly but needs ways to identify them indirectly.

The contribution of this article is to develop a methodology to identify the risks of unpaid taxes and money laundering by MNCs. With the growing resistance to tax avoidance

worldwide, it would be valuable to have a risk assessment methodology to indicate which companies engage in illicit tax and money laundering activities. This can help consumers to identify bad social corporate behavior, but also help governments – from developing countries but also the developed countries involved – to focus their efforts on limiting illicit financial flows on the riskiest companies.

To illustrate how such a risk assessment methodology can be set up and applied, this article identifies concrete cases of MNCs tax avoidance, where concrete developed countries are involved and should be urged to close tax loopholes and discuss reparation with the specific companies to reach sustainable development goals.

We apply the methodology to oil and gas companies in four African countries: Angola, Mozambique, Nigeria, and Egypt. We select the Netherlands as the developed country offering opportunities to avoid taxes in Africa. The Corporate Tax Haven list of Tax Justice Network in 2021 lists the Netherlands as number four after the British Virgin Islands, Cayman Islands, and Bermuda (see [cthi.taxjustice.net](http://cthi.taxjustice.net)) – hence the first ‘non-little island’ country on this list. A multitude of double tax treaties and investment treaties create a favorable climate for MNCs to direct their tax avoidance schemes through the Netherlands.

This article focuses on four important corporate groups in the oil and gas industry: Total, BP, Eni, and Saipem. In total these corporations have 137 subsidiaries in the Netherlands. We find in total 35 subsidiaries in the Netherlands related to their activities in Angola, Mozambique, Nigeria, and Egypt. In addition, to test the quality of our risk assessment indicators, we add the Norwegian oil and gas company Equinor as a ‘clean case’. By holding the red flags against the selected company cases, this study attempts to determine to what extent the companies are involved in tax avoidance, tax evasion, and money laundering. The red flags function as ‘codes’ in the analysis of annual company data and aid to give meaning and interpretation to the findings (Boeije, 2016). We disentangle indicators that are measurable with publicly available information and indicators that need further documentation. Our article shows that oil and gas companies can be classified as high-risk, medium-risk, and low-risk companies regarding unpaid taxes. It also shows which risk indicators are most important for identifying illicit financial flows of oil companies. High-interest payments, intragroup loans, complex company structures, and subsidiaries in tax havens are the most telling indicators of oil and gas corporations not paying their fair share of taxes in Africa. While proposed in the literature as indicators for illicit financial flows, characteristics like setting up holdings or negative media attention appear typical for all oil and gas companies and can therefore not function as effective indicators for illicit financial flows in our study. They might qualify as valid indicators though, when applied to the overall economy and compared to other sectors.



This article is organized as follows. After Section 2 describes the risk assessment methodology conceptually, Section 3 gives an overview of relevant indicators for suspect behavior, the so-called red flags, mentioned in the literature, and derives a composite red flag list. Section 4 describes the gathering of data and Section 5 describes the selection of companies and countries. Section 6 reports the results and Section 7 concludes and discusses the contributions of this article.

## 2 Conceptual Framework For A Risk Assessment Methodology For Illicit Financial Flows

Risk assessment is a tool that has been used for decision-making in a wide variety of fields, from health and environment to financial regulation. There is considerable variation in the specific form that the tool takes, reflecting differences in the available data and the specific decisions that it informs. (Rausand, 2011)

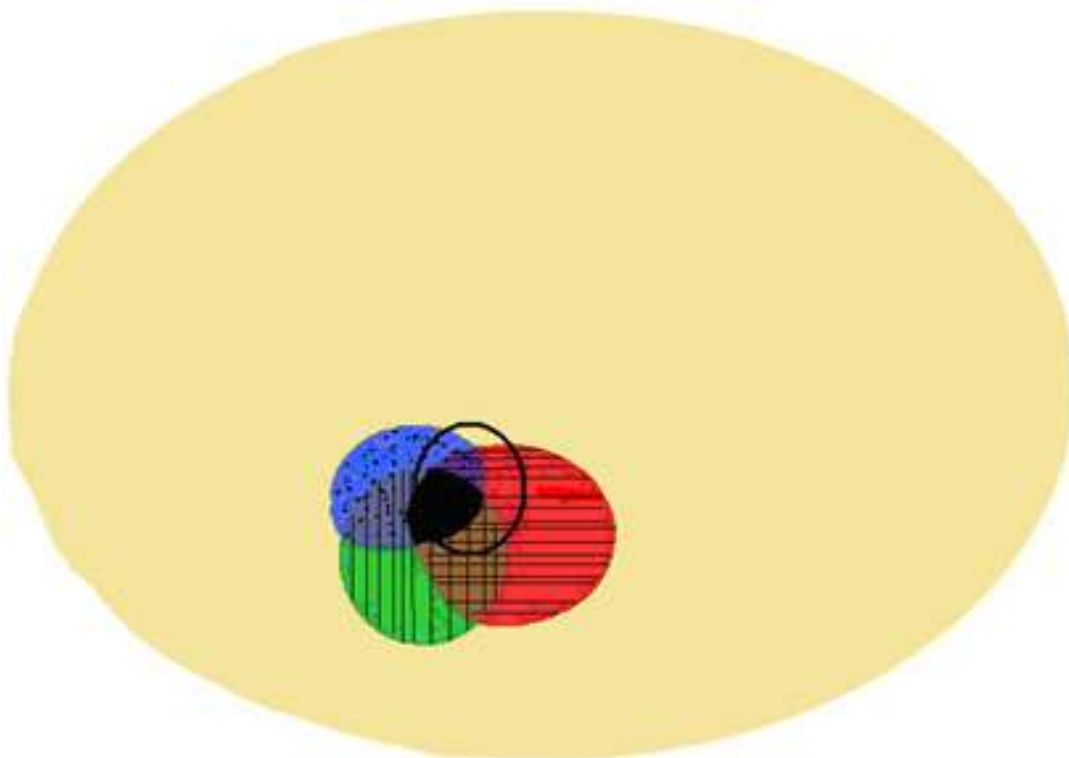
The international standard for risk assessment (ISO 31000 and 31010) lists 31 tools and techniques for risk identification, risk analysis, and risk evaluation (ISO 31010: 22), from basic techniques like check-lists and brainstorming to more advanced quantitative tools like Markov and Bayesian analysis. The use of a red flag analysis or composite

indicator analysis to estimate the risks – as previously used for illicit financial flows (see eg. Unger and Ferwerda, 2011, Ferwerda, Deleanu, Unger, 2017, Ferwerda and Kleemans, 2019, Savona and Riccardi, 2017, Riccardi, Milani, Camerini, 2019) – is not recognized yet in the broader risk assessment literature.

This article aims to establish a comprehensive list of indicators that allows identifying companies related to tax avoidance, tax evasion, and money laundering. To establish such a list, we went over the literature from economics, accounting, criminology, and law to find such indicators. We call these indicators red flags. Such a red flag methodology to identify possible company risks is well-known in accountancy to check the quality of financial reports (Robinson and Munter, 2004).

### 2.1 Red flag analysis tool

This article aims to develop a tool that enables its user to determine where the main risks for illicit financial flows are. We are looking for transactions and corporate ownership structures that facilitate illicit financial flows related to tax avoidance and tax evasion. We develop a list of characteristics that are associated with such behavior, the so-called ‘red flags’. Although a single characteristic by itself is generally not enough to arouse suspicions, we claim that a combination of these characteristics can.



**Figure 1:** Visual representation of the use of multiple red flags

**Source:** Unger and Ferwerda, 2011. This is a visual representation without assumptions on the relative sizes of the relevant groups.

Figure 1 gives a visual representation of this research method. The outer circle represents all the investigated subjects (in this article: oil and gas companies), the circles with stripes and stars are the subgroups found with indicators. The black surface is the congruent of subjects that have the characteristics of all three indicators (for instance an excessively complicated company structure, dividend stripping, and nominee shareholders). The black open circle represents the unknown subgroup we are looking for: MNCs with illicit financial flows. We assume that by using more and more indicators this circle will be filled more and more with darker surfaces.

A priori we do not know the individual effectiveness of the red flags and the (relative) importance of each red flag. Further iterations of the model will have to test the effectiveness of individual red flags (see eg. Unger and Ferwerda 2011 and Ferwerda et al. 2017) and possible interaction effects between different red flags. We assume for now that red flags mentioned in the literature are relevant and have equal importance (Unger and Ferwerda 2011).

Suppose there are two companies (company A and company B, respectively: A, B), and that we have 4 red flags for illicit financial flows (indicated with, in subscript, 1x when the red flag is not present and 1v for when it is). Suppose that after checking for the first three red flags, we determine that both companies have all three of these red flags:

$$A_{1v2v3v}, B_{1v2v3v}$$

Now suppose that for red flag 4, we find out that it applies to company A, but not to company B:

$$A_{1v2v3v4v}, B_{1v2v3v4x}$$

Then we assume that:

$$R(A_{1v2v3v4v}) > R(B_{1v2v3v4x})$$

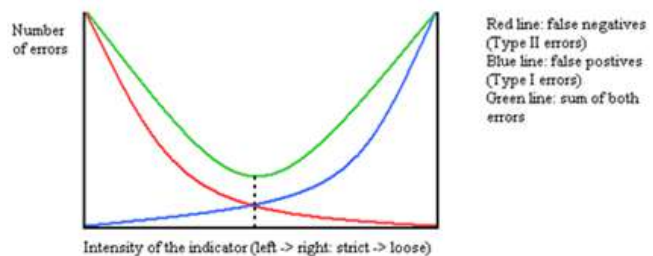
With R(A) being the risk or probability that company A is related to illicit financial flows and R(B) being the risk that company B is related to illicit financial flows.

The more red flags are applied, the safer it is to assume that  $R(A_{1v2v3v\dots Nv}) > R(B_{1v2v3v\dots Nx})$  with N as the number of red flags applied.

## 2.2 Type I and type II errors

When using indicators, one is always confronted with the trade-off between false positives and false negatives, or the so-called type I and type II errors, respectively. A false positive (or type I error) in this specific research is when a red flag marks a company with a (potential) increased probability of illicit financial flows while it actually is not

engaging in any of such behavior. A false negative (or type II error) occurs when a company related to illicit financial flows does not receive a red flag. Figure 2 visualizes the trade-off between these two errors.



**Figure 2:** Trade-off between Type I and Type II errors  
**Source:** Unger and Ferwerda, 2011.

Figure 2 is best explained by discussing the two extremes: a very strict indicator and a very broad indicator. A very broad indicator (right end of the graph) marks almost all companies as having this red flag. Therefore, there will be very few false negatives (type II errors; the red, downward sloping line), at the expense of a lot of false positives (type I errors; the blue, upward-sloping line). A very strict indicator (left end of the graph) will mark hardly any object with this red flag. Therefore, there will be almost no false positives (type I errors; the blue line), at the expense of a large number of false negatives (type II errors; the red line). Assuming equal importance, the optimum is the minimum of the sum of these two errors (the green line). Initially, when applying red flags mentioned in the literature, we do not know the amount and types of errors we are making. We assume that companies that are related to illicit financial flows have an increased chance of receiving more red flags than companies that do not (in line with Holland Quaestor, 2020). We can then conclude that the number of false positives (type I errors) will diminish once we focus on the combination of several indicators. Therefore, this approach is better equipped to deal with the false negatives (type II errors) of a single indicator than the false positives (type I errors). We therefore prefer to use relatively broad indicators and accept an increased degree of false positives. (see Unger and Ferwerda 2011)

### 3 Meta-Analysis Of Red Flags For Illicit Financial Flows

The literature on corporate tax avoidance, evasion, and money laundering lists diverse indicators for identifying illicit financial flows of corporations. A test on the reliability of these indicators is often missing. We collect all indicators mentioned in the literature to find out which indicators can be operationalized with existing public data, which ones need non-public data, and which ones cannot be operationalized at all or are redundant.

Our meta-analysis of red flag analyses aims to include as many studies on corporations' illicit financial flows as possible. Some international organizations have already done comparable research. The Financial Action Task Force (FATF) published multiple studies on identifying risky company behavior and the Dutch Center for Research on Multinational Corporations (SOMO) investigates company-specific tax structures (Hietland, 2021). We include the red flag indicators for tax avoidance, tax evasion, or money laundering and categorize them accordingly. In total, our analysis covers approximately 35 different studies and publications. We focus the meta-analysis on the seven most relevant encompassing studies we found on the illicit behavior of companies.

First, this research is inspired by a Profundo study in 2016 that tackles tax avoidance by international companies in the mining industry (Gelder Van et al., 2016). Van Gelder et al. (2016) identify red flags with a literature survey. The study focuses on the role of Dutch holding and finance companies in the mining industry and includes multiple categories of indicators. Some indicators are specifically related to the extractive industry, others to the ownership structure in general. Van Gelder et al. (2016) conclude that the eleven international mining groups match many of their indicators and that the Dutch tax treaty network is relevant for tax avoidance in developing countries.

Second, we include the Tax Integrity Guide of Holland Quaestor, the association for trust offices in the Netherlands. This association can set regulations and guidelines for its members. These guidelines aim to prevent unintended risks for tax evasion and aggressive tax planning. The strong feature of this article is that it categorizes indicators for how seriously they form a risk for tax evasion or avoidance. Some indicators are unconditionally unacceptable, others are only allowed under extra strict supervision and there is a third category of indicators for which contra indicators can apply. The ranking of these different risk levels and potential contra indicators corresponds to the complexity of multinational company structures.

Third, we include indicators for offshore structures by van Koningsveld (2015). Koningsveld (2015) focuses on the legal side of offshore entities and how these can be

abused for tax avoidance, financial crimes, and to conceal the Ultimate Beneficial Owner (UBO) of a company. Next to comparing legal forms, the methodology consists of interviews, a literature study, mystery shopping, and case studies. All these methodologies together create a very thorough understanding of the use of offshore companies.

Fourth, the article by the Financial Action Task Force (FAFT) and the Egmont Group (2021) on trade-based money laundering indicators addresses a broad audience of public and private sector professionals for example, in financial institutions, banks, and compliance departments. The indicator categories are structural, trade activities, trade documents, commodities, and transactions. The latter two are almost impossible to identify with the limited information available.

Fifth, we include the Dutch Central Bank's guide "DNB Good Practices for the trust sector" (2019) because of its focus on the process of fiscal research, what an acceptable risks strategy should include, and how to access certain general risks, such as a complex company structure.

The sixth included publication is by Savona & Riccardi (2017) who present in the IARM (Identifying and Assessing the Risk of Money Laundering in Europe) report a country analysis for money laundering risks across business sectors based on quantitative and qualitative research methods. The most vulnerable sectors in the Netherlands are gambling, accommodations, and creative industries. The factors that cause this vulnerability are especially the opaqueness of business ownership and the average profitability of the business.

Finally, FATF & Egmont Group (2018) aim to improve the understanding of government institutions about the risk involved with beneficial ownership structures. Based on over one hundred case studies, the main findings are that shell companies and nominee directors (or informal strawmen) are often used in these structures. A Dutch report lists 6 characteristics of shell companies: 1) a Dutch entity as part of a foreign corporate structure, 2) most transactions are with affiliated entities, 3) few or zero employees in the Netherlands, 4) the Dutch entity is used for financial, legal, or fiscal benefits, 5) financial flows through the entity consist of royalty payments, dividends, or lease payments, and 6) the Dutch entity has relatively high valued assets (ter Haar et al., 2021). Moreover, Ultimate Beneficial Owners are likely to choose a combination of indirect and direct control over their assets. Finally, in money laundering schemes, often a trust office is involved combined with either legal services or an accountant.

The findings of the meta-analysis of these seven publications in combination with expert interviews<sup>2</sup> on how to operationalize and interpret some of the red flags are the foundation of our methodology. These red flags are applied to concrete corporate cases in four African countries. The red flag indicators complement each other and should not be treated separately. As outlined in Section 2, one indicator on its own does not necessarily imply illegitimate behavior, but a combination of indicators increases the risk of illegitimate behavior (Holland Quaestor, 2020). Our list includes 61 indicators in total. The red flags are ordered in six categories along the business process, from how the business is set up, to how the profits are spent and accounted for, and finally how the media reports about the activities carried out. These categories are: 1) corporate structure 2) lack of transparency 3) conspicuous business activities, 4) finance 5) accounting, and finally 6) negative media attention. The list shows that the red flags for tax avoidance and tax evasion sometimes overlap and sometimes stay distinct features.

### 3.1 Corporate structure

The indicators in this category are the following:

1. A subsidiary located in a tax haven (van Gelder et al, 2016; Holland Quaestor, 2020; Koningsveld, 2015; IMF, 2007; DNB, 2019; Tavares, 2013; Tax Justice Network, 2015a).
2. A Dutch holding or financing company (van Gelder et al., 2016; Actionaid, 2015).
3. A Dutch cooperative company (Ministerie van Financiën, 2016; van Gelder, 2016).
4. Tax efficiency reasons are indicated for corporate structure (van Gelder, 2016; Holland Quaestor, 2020).
5. There is a flow-through company (Holland Quaestor, 2020; FATF & Egmont Group, 2021; DNB, 2019; FATF & Egmont Group, 2018).
6. There is a flash entity, set up for one single transaction (Holland Quaestor, 2020; FATF & Egmont Group, 2021).
7. A closed limited partnership (besloten commanditaire vennootschap, C.V.) (DNB, 2019).

<sup>2</sup> Their knowledge, comments and suggestions to the red flag list and indicators helped to improve, correctly interpret, and operationalize the red flags. Furthermore, sometimes specific questions regarding the application for some of the companies could be clarified. The interviewees were with Martin Bergwerff (international tax consultant), Thom de Jong (Citco group and former DNB supervisor), Joeri de Wilde (Profundo and Investment Strategist at Triodos), Francis Weyzig (Centraal Plan Bureau), and Javier Garcia Bernardo (University of Amsterdam).

8. The company structure is excessively complicated (Holland Quaestor, 2019; FAFT & Egmont group, 2021; Savona et al., 2017; FAFT & Egmont group, 2018; Holland Quaestor, 2020; FATF & Egmont Group, 2021; DNB, 2019).
9. Trade entity is registered in a jurisdiction with weak AML/CFT compliance (FATF & Egmont Group, 2021).
10. An entity is registered at a mass registration address (FATF & Egmont Group, 2021).
11. There is a lack of effective control mechanisms (Koningsveld, 2015)
12. A Special Purpose Entity (SPE) (DNB, 2007; Koningsveld, 2015; Unger, 2007; DNB, 2019).
13. Via intermediate holding companies the corporate group could benefit from bilateral tax agreements (Tweede Kamer, 2013; Van Gelder et al., 2016).

An entity can be set up to avoid or evade taxes or launder money. Most red flags that relate to the company structure are relevant for tax avoidance. Entities that are set up for optimizing tax positions and benefiting from tax exemptions using the Netherlands share some characteristics. These are, for example, an excessively complicated structure or mass registration at relatively small office addresses. Flow-through companies hardly need local employees or an actual office because the company only needs the legal existence and domicile in the country of incorporation. Its activities can be conducted abroad by representatives/ employees of the group to which the shell company (legally or economically) belongs. Formal adaptation of contracts only finally have to be conducted by directors that always follow the (verbal) instructions of the group representatives. Another important related indicator is a Special Purpose Entity (SPE), a corporate entity owned by foreign multinationals registered in the Netherlands as a holding or finance company. SPEs are characterized by the fact they can only engage in financial activities and do not have any employees. In 2018, The Netherlands has 12,000 SPEs with a total capital of 3,371 billion euro. 70% of the SPEs use a trust office or other forms of shareholding (DNB, 2020). A study from Garcia-Bernardo et al. (2017) finds that the Netherlands is a conduit offshore financial center (OFC). Conduit OFCs are intermediate countries for financial flows coming from (high tax) origin countries and predominantly sink OFCs as destination. Sink OFCs are typically tax havens, with zero or low corporate tax rates and/or applying favorable tax regimes for specific sources of (foreign) income. Holding companies are a feature of a conduit OFC present in the Netherlands.

### 3.2 Lack of transparency

Ownership concealment indicators are a specific part of the company structure. All these indicators share the common feature that they can be used to hide or conceal the beneficial owner. If there are attempts to hide the ultimate beneficial owner (UBO), this does not necessarily have to do with tax avoidance or other malicious company behavior. Privacy considerations can be a valid argument to hide the beneficial owner.

14. The Ultimate Beneficial Owner (UBO) is unknown (Eurodad, 2015; Holland Quaestor, 2020; FATF, 2006; Worldbank, 2011; OESO, 2009; Koningsveld, 2015).
15. There is a weak separation of ownership and control (based on interviews for this study).
16. There are bearer shares (DNB, 2019)
17. A UBO (wrongly) claims tax residency and thereby frustrates the exchange of information. (Holland Quaestor, 2020).
18. There are nominee shareholders (Holland Quaestor, 2020; FATF & Egmont Group, 2021; Koningsveld, 2015; Unger, 2006; FATF, 2006; OECD, 2001; DNB, 2019; FATF & Egmont Group, 2018).
19. The UBO is a tax resident of a jurisdiction that does not participate in FACTA/CRS regulations. (Holland Quaestor, 2020)
20. Recently adjusted ownership structures due to changes in fiscal laws or other causes (DNB, 2019).
21. Unrestricted use of legal persons as directors (FATF & Egmont Group, 2018).
22. There is a Trust or Company Service Provider (TCSP) acting as director (van Gelder, 2016; Koningsveld, 2016; FATF & Egmont Group, 2018)
23. The name of the trade entity is a copy/very similar to a well-known corporation (FATF & Egmont Group, 2021).
24. There is a STAK (Stichting Administratie Kantoor) in the company structure, this increases the complexity of the corporate structure (DNB, 2019).

If the UBO is not registered or publicly known, there is a lack of transparency. The weak separation between ownership and control is related to unlisted companies. If there are no external shareholders, there is less external control, accountability, and transparency. Company misbehavior is therefore more likely to go unnoticed.

Bearer shares and nominee shareholding are related to the ownership structure. Bearer shares, where the owner of a share is identified via certificates, are not allowed anymore in the Netherlands. Nominee shareholding separates the legal and economic ownership. A service provider can hold shares on behalf of a client and become the legal owner. It is not easy for authorities to recognize this and find the UBO. Moreover, the company structure can be further complicated by using many persons as legal directors and by adjusting the company structure as a result of changes in fiscal laws. Finally, the jurisdiction where the UBO is registered influences the information process.

### 3.3 Conspicuous business activities

The following red flags are related to business activities:

25. Business activity of an entity is not appropriate for the type of address (FATF & Egmont Group, 2021).
26. A business entity lacks an online presence, or online presence suggests other activities than stated in reports (FATF & Egmont Group, 2021).
27. The business entity shows a noticeable lack of business activity (FATF & Egmont Group, 2021).
28. The entity has unexplained periods of inactivity (FATF & Egmont Group, 2021).
29. The trade activity of an entity is not in line with the stated line of business (FATF & Egmont Group, 2021).
30. The trade entity engages in transactions or shipping routes that are inconsistent with standard business practices (FATF & Egmont Group, 2021).
31. There are unreasonable low-profit margins in the transactions (FATF & Egmont Group, 2021).
32. A new trade entity engages in high-volume or value activities (FATF & Egmont Group, 2021).
33. The entity purchases commodities that exceed the economic capacities of the entity (FATF & Egmont Group, 2021).
34. The price of oil and gas is undervalued (van Gelder et al., 2016; Holland Quaestor, 2020; FATF & Egmont Group, 2021).
35. A limited number of employees (van Gelder et al., 2016; Holland Quaestor, 2020; FATF & Egmont Group, 2021).

36. Payment for commodities is made by another entity without economic reason (FATF & Egmont Group, 2021).
37. A company is not in compliance with regular business obligations (FATF & Egmont Group, 2021; Tax Justice Network, 2015).

These indicators aim to find business entities or business behavior that are unusual and therefore can be suspicious. Some indicators are related to a deviation from the stated line of business. For example, an address registration not appropriate for the activities, unusual shipping routes or transactions for the sector, or when a business entity suddenly engages in the trade of very different products. Other indicators are related to a lack of business activities. For example, lacking online presence, lack of payroll transactions compared to the number of employees, an unexplained period without any activities, or a very low-profit margin. Finally, it can be suspicious if a business suddenly enters a market with high entry barriers or invests/purchases commodities exceeding the economic capacity.

### 3.4 Finance

The category 'financial flows and payments' contains a mix of indicators related to tax avoidance, tax evasion, and money laundering:

38. There are payments for patents to a jurisdiction with a lower profit tax (Eurodad, 2015; Holland Quaestor, 2020).
39. There are royalty payments to a jurisdiction with a lower profit tax (Weyzig, 2013; Holland Quaestor, 2020).
40. There are intra group loans and payments between entities of the same corporate group. (Weyzig, 2013; Actionaid, 2015; Holland Quaestor, 2020; Koningsveld, 2015).
41. Dividend payments do not follow hierarchical lines but are redirected (European Commission, 2016).
42. Dividend stripping (Holland Quaestor, 2020).
43. Management fee payments to jurisdictions with a low-profit tax (Van Gelder et al., 2016).
44. Cash deposits are consistently just below reporting thresholds (FATF & Egmont Group, 2021).
45. Large round payments in a sector where this is unusual (FATF & Egmont Group, 2021).

46. Payments go in circles (FATF & Egmont Group, 2021).
47. There is a high value of money remittance (FATF, 2016).
48. Payments to local governments (Curtis, 2015; TRACE International, 2016; Savona et al., 2017).
49. There are advanced tax rulings in developing countries (van Gelder et al., 2016).

Payments for patents or royalty payments to a jurisdiction with a low-profit tax are a well-known way to lower tax payments in a high tax jurisdiction. Similar to this is the use of intra-group loans and payments resulting in interest payments between different entities belonging to the same corporate structure. Intra-group loans may be used to shift costs to a high tax country and therefore lower the taxable amount of profit. Management fee payments can be used similarly.

Dividend payments are redirected when dividend payments in the corporate structure do not follow hierarchical lines but are redirected via intermediate financial holding entities, in countries as the Netherlands, which combines a participation exemption with a beneficial network of tax treaties. This can indicate tax avoidance.

Dividend stripping is not legal anymore in the Netherlands. The most recent important legal adjustment is from January 2020. However, it could still be useful to investigate if this happened in previous years. This is characterized by selling or lending shares as soon as a dividend payment is announced and buying them back after the dividend has been paid. The dividend to be received is included in the selling price and, after the dividend has been paid, the shares are repurchased at a lower price. The result is that the dividend has effectively not been paid and no dividend tax is owed, or dividend tax is paid at an excessively low rate.

### 3.5 Accounting

The fifth category contains the indicators for fiscal or bookkeeping 'tricks'.

50. Underreporting of exports (Le Billion, 2011; Kar & Spanjers, 2015; Weyzig, 2013; Curtis, 2015; Curtis, 2013; OSISA, Third World Network Africa, Tax Justice Network Africa, Action Aid International, and Christian Aid, 2009; FATF & Egmont Group, 2021).
51. Overreporting of imports (OSISA, Third World Network Africa, Tax Justice Network Africa, Action Aid International, and Christian Aid, 2009; Kar & Spanjers, 2015; Curtis, 2015; Weyzig, 2013).

52. No country-by-country reporting where this is mandatory (OSISA, Third World Network Africa, Tax Justice Network Africa, Action Aid International, and Christian Aid, 2009; Curtis, 2015; Anglo American, 2016; Holland Quaestor, 2020).
53. Accelerated depreciation of assets (OSISA, Third World Network Africa, Tax Justice Network Africa, Action Aid International, and Christian Aid, 2009).
54. An entity has relatively many immaterial assets (van Gelder et al., 2016).
55. There is a difference between the reported and taxed income (Frank, et al., 2009).
56. Tax returns in developing counties are nicely rounded amounts (Jaskiewicz, 2015; Holland Quaestor, 2020).
57. Contracts regarding complex trade transactions seem unusually simple. (FATF & Egmont Group, 2021).
58. Contracts or invoices have vague descriptions of commodities or documents are missing. (FATF & Egmont Group, 2021).
59. Last-minute changes in the payment details of a transaction (FATF & Egmont Group, 2021).
60. The owner or manager evades or avoids taxes (Chyz, 2013).

Underreporting exports and overreporting imports are ways to shift profits to countries with a lower tax rate and thus reduce the total amount of paid taxes. Indicators related to (immaterial) assets are also used to reduce the tax burden. On the other hand, indicators in contract irregularities are suspicious of money laundering. Such as when contracts are too simple for the transaction, for example, internet copies, or when rejected contracts or tax fills are resubmitted. Finally, it is suspicious if a company is not in line with regular business obligations such as filing VAT or country-by-country- reporting.

### 3.6 Negative media attention

61. The company received negative media attention (van Gelder et al., 2016; Holland Quaestor, 2020; FATF & Egmont Group, 2021).

If the company receives negative media attention, this can be a signal something is wrong with the company. This of course depends on the content of the news articles.

Table 1 gives a visual overview of the red flags in their respective categories. Appendix I provides additional details for some red flags.

## 4 Data

We use the annual reports of the selected corporate groups retrieved from Company.Info<sup>3</sup> and the Dutch Chamber of Commerce<sup>4</sup> and their ownership structures from the Orbis database to operationalize the red flags, determine whether there are links between the four African countries and the Netherlands, and visualize the group structures. This study mainly uses annual reports of the selected corporate groups from 2018, in combination with earlier reports, because for most companies these are the latest available documents at the time of our research. We analyze the balance sheet, profit, and loss accounts, and cash flow statements in the annual reports of the Dutch subsidiaries to find annual revenues, profits, tax paid, intra-group loans, and other relevant financial information. We distinguish capital structures and money flows between entities within the corporate group. Furthermore, qualitative content analysis (Bryman, 2016) of the annual reports of the Dutch subsidiaries provides information on the activities of the companies to check for red flags.<sup>5</sup>

## 5 Selection And Description Of Corporations And Countries

### 5.1 Selection of corporations

Our selection procedure for relevant cases consists of several steps. In the first step, we select international oil and gas companies operating in African developing countries with a link to the Netherlands. For this, we use the Orbis dataset.<sup>6</sup> The selection process is based on the following criteria:

<sup>3</sup> Company.Info is part of the FD Mediagroup and gives access to the annual reports and financial data of all Dutch companies. More information on: <https://companyinfo.nl>

<sup>4</sup> Dutch Company Register. More information on: <https://www.kvk.nl/zoeken/handelsregister/>

<sup>5</sup> As this is a partly interpretative qualitative study developed in an unexplored field, the study is automatically susceptible to researcher bias. Often there are multiple explanations for the existence of red flags, and one red flag on its own is not sufficient to prove tax planning. But analyzing each corporate group by means of red flags gives a consistent focus and quantifiable way of defining the risk on tax avoidance. The validity is verified by combining different sources, backed up by interviews with experts in the field. Moreover, to reduce selection bias, countries and companies are selected based on objective criteria.

<sup>6</sup> Orbis provides information on almost 400 companies and entities worldwide and provides comparable financial data and extensive corporate ownership structures. The database is owned by Bureau van Dijk, which became Moody's Analytics company in 2017. Although Orbis data on developing countries is limited, data on companies operating in the Netherlands is more extensive. More info on Orbis dataset can be found on: <https://www.bvdinfo.com/en-gb/our-products/data/international/orbis>

Company structure		Lack of transparency		Accounting	
Subsidiary located in a tax haven		Unknown UBO		<u>Underreporting export</u>	
Dutch holding		Weak separation		<u>Overreporting imports</u>	
Dutch cooperative		<u>Bearer shares</u>		No country-by-country report	
Tax efficiency		<u>Tax residency</u>		<u>Accelerated depreciation</u>	
Flow-through companies		<u>Nominee shareholders</u>		<u>Many immaterial assets</u>	
<u>Flash entity</u>		<u>UBO tax resident - non FACTA/CRS</u>		<u>Difference reported/taxed income</u>	
Bilateral tax agreements		Adjusted ownership		<u>Rounded tax return developing country</u>	
A closed limited partnership (C.V.)		Unrestricted directors		<u>Unusual simple contracts</u>	
Complicated structures		Trust company		<u>Issues with contacts and invoices</u>	
Weak AML/CFT jurisdiction		Similar name		<u>Late changes in payments</u>	
Mass registration address		A STAK		<u>Owner/manager avoids taxes</u>	
<u>Lack supervision/ control</u>		<b>Conspicuous business activity</b>		<b>Finance</b>	
A SPE		Unappropriate type of address		<u>Payments for patents</u>	
<b>Negative media</b>		Lack online presence		<u>Royalty payments</u>	
Negative media attention		Lack business activity		Intragroup loans	
		<u>Unexplained inactivity</u>		Redirected dividend payments	
		Not in line with stated business		<u>Dividend stripping</u>	
		<u>Non-standard transactions/routes</u>		Management fee	
		<u>Very low profitmargins</u>		Cash deposit below threshold	
		High volumes for new entity		Unusual, large round payments	
		Exceeding economic capacity.		Payments in circles	
		Few employees		Money remittance	
		<u>Undervaluing oil and gas prices</u>		Advance tax rulings developed country	
		<u>Not in compliance business obligations</u>		<u>Payments to local government</u>	
		Payment by other entity			

**Table 1:** Categorized indicators for illicit financial flows

**Source:** Made by the authors. Underlining the name of the indicator = the indicator cannot be found in public data. Yellow flag = indicator for tax avoidance, orange flag = indicator for tax evasion, red flag = indicator for money laundering

- The company is operating in African developing countries where the gas and oil industry sector accounts for a significant percentage of Gross Domestic Product (GDP)
- The company has connections with the Netherlands, but does not have significant operating or exploration activities in the Netherlands (e.g. no headquarter)
- The company has publicly available lists of involved subsidiaries
- There is sufficient financial information available
- The companies provide yearly annual reports and data are available in the Orbis dataset.

We select the following international oil and gas companies based on these criteria: Total SE, BP P.I.C., Eni S.p.A., and Saipem S.p.A (Table 2).<sup>7</sup> In total 21 companies that have subsidiaries in both the Netherlands and Africa are found in Orbis. Out of this list Saipem, BP and Total are selected, because these companies are active in Angola,

<sup>7</sup> The selected companies only include European multinationals. Chinese, Russian and American multinational companies are also active in Africa, but generally provide less financial information and are therefore not included in this study.



Nigeria, Egypt, or Mozambique. Other companies like Shell or Exxon Mobile are not included, as these companies have large operating activities in the Netherlands as well and as a result do not classify as conduit companies. Total is the fourth largest international oil and gas major with a presence in more than 130 countries, and the largest integrated major<sup>8</sup> in Africa, with as main producing countries Angola and Nigeria. Total is headquartered in Paris, France. BP is on the list of largest international oil and gas companies as well with operations in 33 countries worldwide. Operating revenues in Africa amounted to \$7.2 billion in 2018. BP is headquartered in London, United Kingdom. ENI S.p.A. is relevant because it came up in several corruption scandals and is active in Africa since 1954. ENI is headquartered in Rome, Italy. ENI is active in 68 countries worldwide and has been a key player in Northern Africa for over sixty years (Villa, 2016). The group plays a large role in the new gas project in Mozambique. Saipem S.p.A is a service provider in the oil- and gas industry and present in 60 countries worldwide. The headquarter is located in Milan, Italy. Saipem is a leading company in engineering, drilling and construction in the energy and infrastructure sector. These four companies are compared to a clean company case: Equinor ASA. This is a Norwegian oil company headquartered in Stavanger. According to our survey sent to NGOs involved in taxes and developing countries and interviews with some colleagues, Equinor was seen as the oil company with the highest corporate social responsibility.<sup>9</sup> Equinor is present in Angola and Nigeria.

The 5 corporate groups have 173 subsidiaries in the Netherlands. Their total revenue in Africa amounts to \$36.4

<sup>8</sup> An integrated oil and gas company is a business entity that engages in the exploration, production, refinement, and distribution of oil and gas, as opposed to companies that specialize in just one segment.

<sup>9</sup> Appendix III provides an extensive overview of all Dutch subsidiaries of the selected companies.

billion annually. For a more comprehensive description of the corporate groups see appendix III.

## 5.2 Selection of countries

The second step consists of the selection of African countries where the four multinational companies are operating. The selection process is based on the following criteria:

- The developing country has a large amount of proven oil or gas reserves
- It appears in the top 20 of the world's ranking of proven reserves

This resulted in the selection of the following countries: Angola, Mozambique, Egypt, and Nigeria (see Table 3)<sup>10</sup>. We find 35 Dutch subsidiaries involved in either subsidiaries or permanent establishments in the selected countries. As Table 3 shows, Angola and Mozambique do not have double tax arrangements with the Netherlands, while Egypt and Nigeria have had them for more than twenty years. They together with Mozambique have bilateral investment treaties (BITs) with the Netherlands. These treaties usually reduce the political risk of investment and insure investment in a developing country. DTAs usually allow favorable tax arrangements (van Gelder et al., 2016). Investigating countries that do not have a DTA with the Netherlands can control for the effects of DTAs and help to find out if there are other reasons to settle in the Netherlands as well.

<sup>10</sup> Other African countries that are not included in the scope of this study could be relevant as well. However, the selected companies are mainly active in the Angola, Mozambique, Egypt and Nigeria.

Corporate group	Headquarter	Dutch subsidiaries	Revenue in Africa
Total SE	France	60	12.6 billion
BP P.I.C.	United Kingdom	29	7.2 billion
ENI S.p.A.	Italy	44	15.3 billion
Saipem S.p.A.	Italy	9	3.04 billion
Equinor AsA	Norway	32	5.23 billion
<b>Total Sample</b>		<b>173</b>	<b>36.37 billion</b>

**Table 2:** Selection of international oil and gas companies.

**Source:** Retrieved from annual reports. Revenue in 2018. Amounts in USD.

	Angola	Mozambique	Egypt	Nigeria
<i>Double Tax Agreement</i>	No	No	20-05-2000	09-12-1999
<i>Bilateral investment treaty</i>	No	01-09-2004	01-03-1998	01-02-1994
<i>Crude annual oil production (2018) bln barrels<sup>1</sup></i>	0.52	-	0.23	0.70
<i>Oil reserves in bln barrels (world ranking)<sup>2</sup></i>	7.8 (16)	-	3.3 (24)	36.9 (10)
<i>Gas production (2018) bln cubic feet<sup>1</sup></i>	222.9	182.4	2258.8	1682.0
<i>Gas reserves bln cubic feet (world ranking)<sup>2</sup></i>	12,113 (37)	100,000 (13)	63,000 (16)	203,444 (10)

Number of subsidiaries (more than 50% ownership; excluding permanent establishments)

	Angola	Mozambique	Egypt	Nigeria
Total SE		3		11
BP P.I.C.		3	3	6
Eni S.p.A.		1	5	4
Saipem S.p.A	3	1	1	5
Equinor ASA				5

**Table 3:** Details selected countries

1: Data from International Energy Statistics (IEA, 2018) – numbers are converted from Ktoe to billion barrels/billion cubic feet.

2: Data from US Energy Information Administration (EIA, 2021). The world rankings date from 2019.

The sample includes the two largest oil producing countries of Sub-Saharan Africa, Nigeria and Angola. Nigeria holds 36.9 billion barrels of proven crude oil reserves, compared to 7.8 billion in Angola. In both countries the government plays a large role in regulating the oil industry. In Nigeria companies can operate under a license in the form of joint ventures between the federal government and either an international oil company or a sole risk operator. Companies can also operate under product sharing agreements (PSAs) or risk service agreements (RSAs). In Angola the right to produce and explore oil or gas is granted by licenses or concession agreements. The state is the owner of all natural resources, and mineral rights are exclusively assigned to the National Concessionaire (ANPG), which can associate with other entities through corporation, consortium, PSAs or RSAs. In Nigeria oil companies are subject to income tax of 65.75 percent in the first five years and 85 percent after five years. Contractors in PSAs are subject to a tax rate of 50 percent under the Petroleum Profits Tax. In Angola all entities that carry out oil operations are subject to Petroleum Revenue Tax of 50 percent for PSAs or 65,75 percent for partnerships and RSAs (EY,2019). Exemptions and specific taxation rules are possible (Ferreira & Cunha, 2021).

Mozambique and Egypt are known for their large gas reserves. Mozambique is not producing crude oil yet, but is one of the largest natural gas reserve holders in Africa with estimations up to 100 trillion cubic feet. In compar-

ion, gas reserves in Africa are estimated to be 615 trillion cubic feet (Rocha & Mendes, 2021; EIA, 2021). Egypt holds 63 trillion cubic feet of gas reserves and 3.3 billion barrels of oil reserves. In Mozambique the gas sector is in a very early stage with two well-established fields in the South of country and a recently discovered field in the Rovuma Basin (2010). Production is expected to start in 2023/2024 (Rocha & Mendes, 2021). In Egypt the oil and gas sector accounts for 15 percent of GDP. In both Mozambique and Egypt, the natural resources are owned by the state. In Mozambique the government role is not fully developed yet. In Egypt the state can award oil and gas exploration rights by virtue of concession agreements or PSAs. Companies pay an income tax of 32 percent in Mozambique, and 40,55 percent in Egypt (EY, 2019).

For a more comprehensive overview of main activities and regulations in the four African countries, see appendix II.

## 6 Results On The Red Flags Of The Selected Corporations

### 6.1 Corporate structure

All five corporate groups have subsidiaries in the Netherlands, ranging from nine for Saipem to sixty Dutch subsidiaries for Total. However, only for Total, BP, Eni, and Saipem some of these subsidiaries are related to the four selected African countries. For Equinor no relationship is found.

These subsidiaries have stakes in subsidiaries in the African countries or organize their activities through permanent establishments. For Total, Eni, and BP the activities in Angola are managed by Dutch subsidiaries with permanent establishments in Angola. Total also has Dutch subsidiaries with permanent establishments in Egypt and Mozambique, and BP has Dutch subsidiaries with permanent establishments in Egypt as well. Before 2012, it was fiscally attractive to set up a Dutch subsidiary with a foreign permanent establishment instead of a foreign subsidiary, because foreign losses of permanent establishments could be credited with Dutch profits (until 2012 due to object exemption).

In addition, the Dutch subsidiaries are located at mass registration addresses (Appendix V) and it seems that there is a lack of effective control mechanisms as most subsidiaries are managed by the same people. On the other hand, most of the subsidiaries only report financial assets and are empty shells. Take Total, the revenues flowing through Dutch subsidiaries exceed \$7.2 billion in 2018. For ENI \$6.1 billion of revenues were flowing through Dutch subsidiaries. A large amount is related to activities in developing countries. The subsidiaries with permanent establishments in Africa do report tangible and intangible assets but do not have any activities in the Netherlands.

Moreover, Total, BP, and ENI report subsidiaries in sink-countries. Saipem and Equinor, however, do not use conduit companies in the Netherlands to channel profits to sink countries. Saipem has some subsidiaries in Luxembourg (classified as conduit OFC). The organization structures of Total, BP, and ENI are excessively complicated as well (appendix IV for organization structures). The distance between the ultimate owner and Dutch or African subsidiaries goes up to seven levels for Total, and 5 levels for BP and ENI. Equinor has a simple structure. It manages the activities in Angola directly via Norwegian subsidiaries linked to permanent establishments. The activities in Nigeria are managed by Nigerian subsidiaries.

### 6.2 Lack of transparency

All five oil and gas companies show a lack of transparency as it is hard to find the UBO.<sup>11</sup> Companies listed on the stock market have a registry of who owns these shares, but the UBO is hard to determine since these shares are owned by many other companies and trusts.

Only for Total SE the involvement of trust companies is found, out of which one is managed by a Stichting Administratiekantoor (STAK). Stogg Eagle Funding B.V. has Stichting STOGG Eagle Funding as shareholder and IQ EQ Management B.V. as director. The annual reports do not show why Stogg Eagle Funding B.V. was created, only loans from Total Holdings Nederland B.V. to this company are found but the beneficiary is unclear. The annual report of Total reports that Stogg Eagle Funding B.V. has operations in Nigeria, but provides no further information. Stogg Eagle Funding B.V. likely functions as a flow-through company. Brass Holdings B.V. is another subsidiary of Total that seems to function as a flow-through company.

### 6.3 Conspicuous business activities

This study was unable to identify most of the conspicuous business activities from public data. However, it stands out that most of the subsidiaries have a limited number of employees. For Total, we find that all subsidiaries have zero employees, except for Total E&P Nederlands B.V. (578 employees). BP does not have employees in the Dutch subsidiaries related to operations in Africa. ENI has 47 employees in Eni International B.V. and zero employees in the other subsidiaries. Saipem has 8 employees in Saipem International B.V. and 12 in Saipem Finance International B.V. and Equinor Holding Netherlands B.V. has 14 employees.

### 6.4 Finance

Total, BP, ENI, and Saipem report many intragroup loans between Dutch entities to entities worldwide. For Total, many loans are found from Total Holdings Netherlands B.V. to Nigeria and one to Angola. BP reports large values of finance receivables in the reports of BP Egypt Production B.V., BP Netherlands Upstream B.V., and BP Angola (Block 18) B.V. For Eni loans from Eni International B.V. in the Netherlands to subsidiaries in Bermuda and the United Arab Emirates via international bank corporations are found. These loans are used to control activities in Angola and Mozambique. Saipem uses Finance International B.V.

<sup>11</sup> At the time of writing this article (July 27, 2022), the deadline to register the UBO in the Dutch company register (KvK) has not passed yet. We analysed a sample of subsidiaries for all of the five oil and gas corporations (on July 27, 2022) and found that Saipem and Equinor registered the UBO of their subsidiaries, but Total, BP, and ENI registered the UBO of only some of their subsidiaries.

in the Netherlands to finance activities of other entities in the corporate group. For Equinor intragroup loans are registered as well, but none of these are related to the selected African countries.

For ENI service payments between ENI Angola Production B.V. in the Netherlands to Angola LNG Limited in Bermuda are found as well. This indicates that untaxed incomes are shifted to Bermuda and the effective tax rate of Eni Angola Production B.V. is lowered due to higher costs. Angola LNG Limited is also partly owned by Total, BP, and Chevron, which likely means that these corporate groups are all shifting the related profits of the LNG project to Bermuda.

Total, BP, ENI, and Saipem seem to benefit from tax and/or investment treaties by setting up subsidiaries in the Netherlands. As a result, dividend payments do not follow hierarchical lines but are redirected through multiple Dutch subsidiaries before they end up with the parent company. ENI also profits from a tax treaty between the Netherlands and the United Arab Emirates. ENI's activities in Mozambique are partly financed through a company in the United Arab Emirates. This is a red flag because (future) profits are shifted to the United Arab Emirates, corporate income taxes in the United Arab Emirates are zero and the DTA between the United Arab Emirates and the Netherlands can be used to avoid withholding taxes as well. Under this treaty, the withholding tax on dividends paid to United Arab Emirates entities owned by the government is zero percent and five percent for non-government entities, and the withholding tax on interest and royalties is zero percent (EY, 2021). Debt financing in Mozambique lowers the effective tax rate in the country and government revenues

as a result. The holding company in the United Arab Emirates is fifty percent owned by Exxon Mobile, so the reports of Exxon Mobile should be considered as well.

## 6.5 Accounting

Many of the indicators in this category could not be identified with the public data available. As a result, it is unclear if companies over- or under-report assets or accelerate the depreciation of assets. What the annual reports do reveal is that the Dutch subsidiaries of all five corporate groups have large amounts of immaterial assets. In addition, for Total, BP, and ENI differences between reported and taxed income are found. The Dutch subsidiaries report large amounts of deferred taxes. Eni International B.V. has been making losses for years in a row and is not paying any taxes in the Netherlands. According to the annual report of 2018, the effective tax rate in 2019 was 0.9 percent, compared to 0.6 percent in 2018. Fiscal losses of operations are carried forward for nine years via interest and operating income. Although we do not find large amounts of deferred taxes for Saipem S.p.A. the annual reports show zero effective tax rates for Saipem International B.V. It did not pay income taxes in the Netherlands in 2014, 2015, 2018, and 2019 because profits were offset against losses. Snamprogetti Netherlands B.V. (a subsidiary of Saipem S.p.A.) did not pay income taxes in 2014 and 2015 and stated in the annual reports that it did not expect profits in the years to come.

Remarkable of the activities of ENI related to Mozambique is that Eni Mozambique LNG Holding B.V attributes the

	TOTAL	BP	ENI	SAIPEM	EQUINOR
<b>CORPORATE STRUCTURE</b>					
<b>SUBSIDIARY IN TAX HAVEN</b>	Subsidiaries in Bermuda, The Cayman Islands, Mauritius Island, Panama, Hong Kong, and Cyprus	Subsidiaries in the British Virgin Islands, Bahamas, Mauritius, Barbados, and Luxembourg	Subsidiaries in Bermuda, British Virgin Islands, Cyprus, Cayman Islands, Bahamas and Luxembourg, and the United Arab Emirates	No subsidiaries in tax havens. Only 2 in Luxembourg.	No subsidiaries in tax havens.
<b>DUTCH HOLDING</b>	60 Dutch subsidiaries/ 14 (indirectly) related to selected countries	29 Dutch subsidiaries/ 8 (indirectly) related to selected countries	44 Dutch subsidiaries/ 9 (indirectly) related to selected countries	9 Dutch subsidiaries/ 4 (indirectly) related to selected countries	32 Dutch subsidiaries/ none are related to selected countries
<b>FLOW-THROUGH COMPANIES</b>	Likely for Stogg Eagle Funding B.V. and possibly for Brass Holdings B.V.				

<b>COMPLICATED STRUCTURES</b>	BO-distance of 7 levels is found.	BO-distance of 5 levels is found.	BO-distance of 5 levels is found. Especially, complex structures with regards to activities in Mozambique and Angola	Rather simple structure, BO-distance of 3 levels is found.	Rather simple structure, BO-distance of 1 or 2 levels for activities in Nigeria and Angola.
<b>MASS REGISTRATION ADDRESS</b>	Yes: Bordewijklaan 18, The Hague	Yes: d'Arcyweg 75, Europoort Rotterdam	Yes: Strawinskyiaan 1725 or Strawinskyiaan 1727, Amsterdam	Yes: Strawinskyiaan 1647 Amsterdam or Westfrankelandsedijk 7 Schiedam	Yes: Weena 760, Rotterdam
<b>A SPECIAL PURPOSE ENTITY</b>	Most Dutch subsidiaries are SPEs	Most Dutch subsidiaries are SPEs	Most Dutch subsidiaries are SPEs	Most Dutch subsidiaries are SPEs	Most Dutch subsidiaries are SPEs
<b>BILATERAL TAX AGREEMENTS</b>	For activities in Nigeria and Egypt	For activities in Egypt. for Nigeria it is unclear as not many activities have been found.	For activities in Nigeria and Egypt	For activities in Nigeria and Egypt	No use has been made of a treaty between Netherlands and Nigeria

### LACK OF TRANSPARENCY

<b>UNKNOWN ULTIMATE BENEFICIAL OWNER UBO</b>	No full registration of UBO	No full registration of UBO	No full registration of UBO	No full registration of UBO	No full registration of UBO
<b>STRONG SEPARATION</b>	Listed company with minor shares	Listed company with minor shares	Listed company, but Italian government holds 30,33 percent of shares	Listed company, but Eni S.p.A. holds 30,5 percent of the shares-	Listed company, but Norwegian government holds 67 percent of shares.
<b>NOMINEE SHAREHOLDERS</b>	Might be the case for Stogg Eagle Funding B.V. and Brass Holdings B.V.	JPMorgan Chase Bank (holds 25 percent of shares) allows for nominee shareholdings			
<b>TRUST COMPANY</b>	Stogg Eagle Funding B.V. and Brass Holdings B.V.				
<b>STICHTING ADMINISTRATIEKANTOOR (STAK)</b>	Stichting Stogg Eagle Funding				

### CONSPICUOUS BUSINESS ACTIVITIES

<b>FEW EMPLOYEES</b>	578 employees in Total E&P Nederland B.V, other subsidiaries have zero employees	Zero employees in the Netherlands	47 employees in Eni International B.V., other subsidiaries have zero employees	8 employees in the Netherlands in Saipem International B.V. and 12 in Saipem Finance International B.V.	14 employees in Equinor Holding Netherlands BV
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## FINANCE

<b>INTRAGROUP LOANS</b>	Many intra group loans from Total Holdings Netherlands B.V. (NL) to especially Nigeria and one to Angola	Large values of finance receivables in the annual reports of BP Egypt Production B.V. (2018), BP Netherlands Upstream B.V. (2015), and BP Angola (Block 18) B.V. (2018)	Loans from Eni International B.V. via international bank corporations to subsidiaries in Bermuda and the United Arab Emirates controlling activities in Angola and Mozambique	Loans from Saipem Finance International B.V. (NL) to other entities in the corporate group	Intragroup loans, but none related to Nigeria or Angola
<b>REDIRECTED DIVIDEND</b>	Dividends are transferred through multiple Dutch subsidiaries and end up in France with the parent	Dividends from subsidiaries in Egypt are transferred through Dutch subsidiaries and end up in the UK with the parent. Dividends are also transferred through multiple Dutch subsidiaries.	Dividends from subsidiaries in Mozambique, Egypt, and Nigeria are transferred through Dutch subsidiaries and end up in Italy with the parent.	Dividends from subsidiaries in Angola, Nigeria, and Egypt are transferred through Saipem International B.V. and end up in Italy with the parent.	
<b>MANAGEMENT FEE</b>			Eni Angola Production B.V. pays for services to Angola LNG Limited in Bermuda		

## ACCOUNTING

<b>MANY IMMATERIAL ASSETS</b>	Balance sheet of Dutch companies mostly consists of financial assets and receivables	Balance sheet of Dutch companies mostly consists of financial assets and receivables	Balance sheet of Dutch companies mostly consists of financial assets and receivables	Balance sheet of Dutch companies mostly consists of financial assets and receivables	Balance sheet of Dutch companies mostly consists of financial assets and receivables
<b>DIFFERENCE REPORTED/TAXED INCOME</b>	Large amounts of deferred taxes	Large amounts of deferred taxes	Large amounts of deferred taxes		
<b>OWNER/MANAGER AVOIDS TAXES</b>	The use of Total Management B.V.	The use of BP Management Netherlands B.V. and PB Management International B.V.			

## NEGATIVE MEDIA ATTENTION

<b>NEGATIVE MEDIA ATTENTION</b>	1,031 negative news stories in ORBIS	2,463 negative news stories in ORBIS	353 negative news stories in ORBIS and legal proceedings relating to Nigerian Agip Exploration Ltd.	169 negative news stories in ORBIS and legal proceedings related to Snamprogetti S.p.A with activities in Nigeria	721 negative news stories in ORBIS
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**Table 4:** Company details of relevant red flags

	<i>Total</i>	<i>BP</i>	<i>ENI</i>	<i>Saipem</i>	<i>Equinor</i>
Number of identified tax avoidance indicators	16	14	15 <sup>3</sup>	11	8
Number of identified tax evasion indicators	8 <sup>2</sup>	6 <sup>2</sup>	6	3	3
Number of unidentified indicators	15	15	16	17	13

*Source: calculation by the authors.*

**Table 5:** Overview of the number of red flags per company

<b>Indicator</b>	<b>Total</b>	<b>BP</b>	<b>Eni</b>	<b>Saipem</b>	<b>Equinor</b>	<b>Most relevant for:</b>
Subsidiary located in tax haven	+	+	+	-	-	Avoidance
Excessively complicated structures	+	+	+	-	-	Avoidance and Evasion
Nominee shareholders	+	+	-	-	-	Avoidance and Evasion
Intra-group loans and interest payments	+	+	+	+	-	Avoidance and Evasion
Redirected dividend payments	+	+	+	+	-	Avoidance
With intermediate companies benefit from tax agreements	+	+	+	+	-	Avoidance
Difference between reported and taxed income	+	+	+	?	-	Evasion
TCSP acting as director	+	-	-	-	-	Avoidance and Evasion
Flow-through companies	+	-	-	-	-	Evasion
A STAK (Stichting Administratie Kantoor)	+	-	-	-	-	Avoidance
Management fee payments to low tax jurisdiction	-	-	+	-	-	Avoidance

**Table 6:** Distinctive red flags for the 5 companies selected.

**Source:** Made by the authors.

losses to Eni International B.V., while the latter is merely a flow-through company of loans and interests. Eni Mozambique LNG Holding B.V. joined the fiscal unity of Eni International B.V. in 2017 just after activities in the Coral South in Mozambique were started. By attributing the expenses for activities in the Coral South to Eni Mozambique LNG Holding, the profitable base is lowered which leads to profit erosion in the Netherlands.

## 6.6 Negative media attention

The five corporate groups are mentioned in negative news stories in Orbis, ranging from 2463 negative stories for BP to 721 negative stories for Equinor. Saipem is only negatively mentioned 169 times and ENI 353 times.

For the four corporate groups, eleven to sixteen red flag indicators for tax avoidance are found and this indicates a high risk of tax avoidance for the 35 Dutch subsidiaries (Table 4). Several reasons for the incorporation of the companies in the Netherlands are DTAs, the Dutch participation exemption, and the fiscal benefits of foreign permanent establishments (until 2012). For the clean case, only 8 indicators for tax avoidance and 3 indicators for tax evasion are found. This suggests that these indicators might be too general and apply to companies regardless of tax avoidance behavior. In addition, eleven distinctive red flags indicate a high risk of tax avoidance or tax evasion (Table 5). These red flags do not show up for the clean case. Some of the indicators that are most important to indicate tax avoidance are the use of international treaties, special financial institutions, and intragroup loans. Next to these findings this study also gives some insight into which indicators can be operationalized with public data, non-public data, and indicators that are hard to operationalize to begin with (Table 6).

## 7 Conclusions, Recommendations, And Caveats

As Table 6 shows, the selected companies show different degrees of risk of illicit financial flows. We identified 14-16 red flags of tax avoidance for Total, BP, and Eni, classifying them as corporations with a high risk of tax avoidance, followed by the medium-risk corporation Saipem with 11 red flags and our low-risk clean case Equinor with 8 red flags. With regard to tax evasion, a similar picture emerges. 6-8 red flags for high risk of tax evasion of Total, BP, and Eni, compared to 3 red flags of Saipem and Equinor.

We analyzed red flags relating to 1. corporate structure 2. lack of transparency 3. conspicuous business activities 4. finance 5. accounting, and 6. negative media attention. In Table 8 we show which of the 61 red flag indicators from

the literature can be found in public data for free or can at least be bought from commercial suppliers like ORBIS and company.net. Unfortunately, only less than half of the red flags (30 out of 61) can be found in public databases (either paid or for free). There is public data on corporate structures, but very little on lack of transparency and almost none on conspicuous business activities of corporations. As Table 1 shows, many of the red flag indicators for conspicuous business activities apply to organized crime and money laundering. They require private company information or confidential data from tax authorities or other government agencies.

Also, many indicators on finance and accounting need non-public information on bank transactions, or from tax authorities and auditors. Some indicators (still) cannot be operationalized. There are efforts made between researchers, the customs, and tax authorities to operationalize and measure underreporting and overreporting of exports and imports. Similar the over- or undervaluation of the gas and oil price could be traced. Payments to local politicians would need information from the bookkeepers of the company or police information.

Nevertheless, we found that oil corporations behave conspicuously in all six categories for the 19 indicators applicable.

Regarding the first category, corporate structure, all five cases have Dutch subsidiaries, which follows evidently from our selection of cases. However, the company structures of the high-risk cases show many subsidiaries in typical tax havens like the Bermudas, British Virgin Islands, Mauritius, Cayman Islands, and Luxembourg. The medium-risk case Saipem has only two subsidiaries in Luxembourg, while the clean case Equinor has none. Moreover, the high-risk cases show very complicated corporate structures with 5-7 organization layers, compared to three layers for the medium-risk case and only two layers for low-risk case Equinor.

Regarding lack of transparency, finding the ultimate beneficial owner of the Dutch subsidiaries is a challenge. Even our clean case Equinor shows a lack of transparency about the ultimate beneficial owner. Having a transparent register of beneficial ownership to find out who owns which company is essential for monitoring illicit financial flows, and the oil industry as a whole consisting of stock market listed corporations does not comply with this criterion. Since March 28 2022 all companies in the Netherlands should have registered the ultimate beneficial owner in the company registry of the Dutch Chamber of Commerce. Till today, after this deadline, many subsidiaries of all our selected oil and gas corporations in the Netherlands have still not registered the ultimate beneficial owner.

Regarding finance, intra-group loans seem typical for the oil and gas sector, while complex dividend payment struc-



tures seem to be an important red flag. Dividends are transferred between multiple Dutch subsidiaries before they end up with the parent company in a foreign country. For both the high and medium-risk companies we find intragroup loans to subsidiaries in the selected developing countries. In some cases, these loans are also transferred through tax havens, like Bermuda or the United Arab Emirates. For the clean case, we see no loans to subsidiaries in either Nigeria or Angola.

Bilateral tax treaties seem to play an important role in illicit financial flows. While the risky companies use tax treaties for activities in Nigeria and Egypt, the clean case Equinor doesn't make use of tax treaties between the Netherlands and Nigeria. For ENI it is relevant to mention that the subsidiaries in the Netherlands and the United Arab Emirates were set up to finance activities in Mozambique, thanks to the bilateral tax treaty between the Netherlands and the United Arab Emirates.

Accounting characteristics show that a high volume of deferred taxes is typical for high-risk companies while they are not for the medium and low-risk ones.

Negative media attention seems to be the curse of oil and gas companies. They are in the media for ecological reasons, for concerns of public health, and some for tax and money laundering reasons. There were in total around 5000 negative news stories in the Orbis database.<sup>12</sup> The largest amounts for BP followed by Total. But also our clean case Equinor got 721 negative news stories in the ORBIS database, for example relating to tremendous losses due to its operations and management flops in the US in 2020. ([www.newsunenglish.no](http://www.newsunenglish.no), May 11, 2020) Equinor has more negative news stories in ORBIS than Saipem and Eni. Negative news seems to be a too general indicator to identify IFFs and can therefore be misleading without further in-depth analysis.

Our study confirms many of the usual suspects of indicators like having subsidiaries in tax havens, having no business activities in the country where 'gebakken lucht' is flowing through and the gas seems to have evaporated. Encompassing monitoring would, however, red flag the whole oil industry. All corporations follow the law of doing Country by Country Reporting, so this red flag became redundant through international law (for a more critical view on how this is being done in practice, see [www.tax-justicenetwork.com](http://www.tax-justicenetwork.com)).

### *Recommendations*

How could our study be used by governments and international organizations? First, we demonstrate that it is

possible to identify and monitor corporations' tax behavior systematically. We showed that some indicators (e.g. payments to local governments) cannot be operationalized for now, other indicators (e.g. money remittances and advanced tax rulings) need confidential data, and some indicators are redundant (e.g. indicators about SPEs, through flow companies, flash entities, and STAK are overlapping to some extent and could be merged) or misleading (e.g. negative news referring to non-tax issues). This means that one could start monitoring oil and gas corporations with only a few red flag indicators from public sources which reduces the amount of work needed. International organizations could collect red flag information for a World Matrix (see Table 7). The rest of the 61 indicators would need privacy-protected data for monitoring and should be done by public authorities. Second, we show that misbehavior is appearing in four African countries done by four corporations, of which three – Total, BP, and Eni – stick out as a particularly high risk. Third, with this type of analysis governments of developed countries could take steps to negotiate directly with the relevant corporations to reduce misbehavior and take their corporate social responsibility seriously. Fourth, developed countries could take legal steps to reduce tax loopholes, like those hidden in bilateral tax treaties. Fifth, developing countries could identify how their taxes disappear into through flow tax havens and could make this an issue.

Conspicuous behavior of high-risk corporations can be detected by creating a monitoring matrix for indicators like subsidiaries in tax havens, complicated structures, intragroup loans, redirected dividends, bilateral tax agreements, and differences between reported and taxed income. Oil corporations share features that would become red flags if one would expand the analysis to all sectors, like the lack of economic activity in a country and the lack of transparency about the beneficial owner of the company. Tax Justice Network traces these features at a macro level for countries. We think that one should also do this at the micro level for corporations, and at the industry level. In addition, an index of negative appearances in newspapers could be added. An overall index of Social Corporate Responsibility could then be composed which should include the contribution and damage of corporations to the economy, public tax revenue, the environment, labor relations, and health.

Creating awareness of the enormous amounts of money that are taken out of developing countries, being able to calculate the amounts and to identify the perpetrators of illicit financial flows both at a micro and meso level, seems an important step to bringing tax money from developed countries and tax havens back to developing countries.

There is still a way to go to establish an encompassing framework that covers all corporations and all countries. But with this handmade example of five corporations in four African countries, we hope to have shown that moni-

<sup>12</sup> Based on the Orbis "number of negative news stories since last year" search function for the 5 corporations (Total, ENI, BP, Saipem, and Equinor) in 2021.

<i>Indicator</i>	<i>Free public data / paid public data</i>	<i>Non-public data</i>	<i>Comment</i>
<b>Corporate structure</b>			
1. <i>Subsidiary located in tax haven</i>	Corporate annual report / ORBIS		
2. <i>Dutch holding</i>	Corporate annual report / ORBIS / <i>Company.Info</i>		
3. <i>Dutch cooperative</i>	Chamber of Commerce / <i>Company.Info</i>		
4. <i>Tax efficiency</i>	Corporate annual report		
5. <i>Flow-through companies</i>	<i>Company.Info</i> / Chamber of Commerce		
6. <i>Flash entity</i>		Chamber of Commerce combined with Bank account data	
7. <i>Closed limited partnership (C.V.)</i>	Chamber of Commerce		
8. <i>Complicated structures</i>	ORBIS		
9. <i>Weak AML/CFT jurisdiction</i>	Corporate annual report / ORBIS		
10. <i>Mass registration address</i>	Corporate annual report / ORBIS / <i>Company.Info</i>		Incidentally possible to find in leaks
11. <i>Lack supervision/control</i>			Multidimensional indicator without a central registry
12. <i>SPE</i>	<i>Company.Info/Chamber of Commerce</i>		
13. <i>Bilateral tax agreements</i>	Corporate annual report		
<b>Lack of transparency</b>			
14. <i>Unknown UBO</i>	<i>Chamber of Commerce</i>		Incidentally possible to find in leaks
15. <i>Weak separation</i>	Corporate annual report		
16. <i>Bearer shares</i>			No central registry of bearer shares
17. <i>Tax residency</i>		Tax authority data	Several tax authorities might need to be consulted

18. <i>Nominee shareholders</i>		The applicable trust office should know this	
19. <i>UBO tax resident non FACTA/CRS</i>		Tax authority data	Several tax authorities might need to be consulted
20. <i>Adjusted ownership</i>	<i>Chamber of Commerce</i>		
21. <i>Unrestricted directors</i>	<i>Company.Info/ Chamber of Commerce</i>		
22. <i>Trust company</i>	<i>Chamber of Commerce</i>		
23. <i>Similar name</i>	<i>Corporate annual report / Chamber of Commerce</i>		
24. <i>STAK</i>	<i>Chamber of Commerce</i>		
<b><i>Conspicuous business activities</i></b>			
25. <i>Inappropriate type of address</i>	<i>Chamber of Commerce and land registry</i>		
26. <i>Lack online presence</i>	<i>Internet</i>		
27. <i>Lack business activity</i>		<i>Company.Info/ Chamber of Commerce combined with Bank account data</i>	
28. <i>Unexplained inactivity</i>		<i>Bank account data</i>	
29. <i>Not in line with stated business</i>	<i>Chamber of Commerce</i>		
30. <i>Non-standard transactions/routes</i>		<i>Bank account data/ Customs data</i>	
31. <i>Very low profit margins</i>		<i>Private company information</i>	
32. <i>High volumes for new entity</i>		<i>Bank account data</i>	
33. <i>Exceeding economic capacity</i>		<i>Bank account data</i>	
34. <i>Undervaluing oil and gas prices</i>		<i>Customs data with additional information on regular prices</i>	
35. <i>Few employees</i>	<i>Company.Info/ Chamber of Commerce</i>		
36. <i>Payment by other entity</i>		<i>Bank account data</i>	
37. <i>Not in compliance business obligations</i>		<i>Reports of Tax authorities / auditors</i>	

<b>Finance</b>			
38. <i>Payments for patents</i>	<i>Company.Info/ Chamber of Commerce</i>		
39. <i>Royalty payments</i>	<i>Company.Info/ Chamber of Commerce</i>		
40. <i>Intragroup loans</i>	<i>Company.Info/ Chamber of Commerce</i>		
41. <i>Redirected dividend payments</i>	<i>Company.Info/ Chamber of Commerce</i>		
42. <i>Dividend stripping</i>		Stock market and tax authorities	
43. <i>Management fee</i>		Auditors	Incidentally in annual reports
44. <i>Cash deposit below threshold</i>		Bank account data	
45. <i>Unusual large round payments</i>		Bank account data	
46. <i>Payments in circles</i>		Bank account data	
47. <i>Money remittance</i>		Money transfer offices	
48. <i>Payments to local government</i>			Hard to trace, especially when done in cash
49. <i>Advance tax rulings developed country</i>		Tax authorities	
<b>Accounting</b>			
50. <i>Underreporting export</i>		Customs data with additional information on regular prices	
51. <i>Overreporting imports</i>		Customs data with additional information on regular prices	
52. <i>No country-by-country report</i>	Corporate annual report or CbCr documentation		
53. <i>Accelerated depreciation</i>		Tax authorities or auditors	
54. <i>Many immaterial assets</i>	Corporate annual report		
55. <i>Difference reported/taxed income</i>		Tax authorities combined with Chamber of Commerce	

56. <i>Rounded-off tax return developing country</i>		Tax authority of developing country	
57. <i>Unusual simple contracts</i>		Private company information	
58. <i>Issues with contracts and invoices</i>		Private company information	
59. <i>Late changes in payments</i>		Private company information	
60. <i>Owner/manager avoids taxes</i>		Tax authorities	Incidentally possible to find in leaks
<b>Negative media</b>			
61. <i>Negative media attention</i>	Internet / ORBIS		Incidentally possible to find in leaks

**Table 7:** Sources of indicators, separated by data availability

**Source:** Interpretation of the authors. This table provides an overview of our experience with the relevant sources of information to operationalize the indicators. The categories can be interpreted as follows. Public data: data that can be retrieved through annual reports of the corporate entities or public data available from the Dutch Chamber of Commerce. Source in indent if (some) payment is needed. Non-public data: data where more insight into tax administration, bank data, accounting data, or police data is needed.

toring illicit financial flows is feasible also at a micro-level. This allows to identify new ways of corporations' restructuring, and change in behavior, and to identify high-risk sectors, which macro-indicators might miss otherwise.

#### *Caveats*

A problem with the use of annual company reports is the internal reliability and validity of the research. As the contents of the annual reports differ per corporate group and per company, not the same data can be analyzed for each company and data can be missing. Many indicators cannot be identified with the public information we used. Only 30 out of 61 red flag indicators could in principle be identified with publicly available data. Access to data from the Tax Offices in the Netherlands, the police, the Dutch Central Bank on transactions, and the developing countries is necessary for a more comprehensive view of tax evasion and money laundering by oil and gas companies. This data is necessary to check the reliability of the indicators as well. As a result, the main focus of this study is the corporate structure of the selected oil and gas companies and possible financial flows between Dutch entities and extractive operations in the selected developing countries. Physical flows, export, and trade data are not included in the scope of this study. The red flags only indicate unusual company behavior and can point at suspect corporations but cannot conclude anything about the exact amount of tax avoidance. This would need further investigation by the tax

authorities. So, our red flag analysis is only a first step to identifying and pointing out unusual corporate behavior.

This research focuses on five corporate groups in the oil and gas industry and cannot generalize the findings to other corporate groups in the same industry. Micro-level analysis is needed to provide statements on the tax planning behavior of other corporate groups. However, if similar tax planning strategies are found for each of the four corporations, other corporations in the industry will likely use similar techniques. The red flag list is generalizable and can be used in further research and for other industries and sectors, as it is based on sources that are not limited to the context of the oil and gas industry.

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