Gateway Cities und ihr Hinterland

Wirtschaftliche Entwicklung peripherer, ressourcenreicher Standorte in Abhängigkeit von urbanen Knoten in globalen Netzwerken

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Einleitung

Auf den folgenden Seiten werden zunächst die Forschungsdebatten, die diese Habilitation fortführt, zusammengefasst und daraus zwei Leitfragen abgeleitet: zu Weltstädten als Gateway Cities und zur wirtschaftlichen Entwicklung in ihrem Hinterland. Anschließend werden die Datengrundlage und das methodische Vorgehen vorgestellt.

Weltstädte als Gateway Cities

Weltstädte sind „basing points" des globalen Kapital. Sie dienen als „banking and financial centres, administrative headquarters [and] centres of ideological control […]. Without them, the worldspanning system of economic relations would be unthinkable" (Friedmann & Wolff, 1982, S. 311-312). Forschung in dieser Tradition untersucht die Beziehungen zwischen Konzernzentralen und untergeordneten Niederlassungen (z.B. Alderson & Beckfield, 2012; Wall & Van der Knaap, 2012).

Andere, vor allem das Netzwerk „Globalization and World Cities" (GaWC), konzentrieren sich auf unternehmensbezogene Dienstleistungen (z.B. Beaverstock et al., 1999; Taylor et al., 2002a). Ihr Argument in Anlehnung an Sassen (1991) ist, dass diese „advanced producer services" im Bank- und Finanzwesen, der Buchhaltung, Rechtsberatung und Werbung entscheidend dafür seien, dass transnationale Unternehmen trotz der Komplexität weltumspannend verflochtener Produktionsprozesse effizient arbeiten können. Weltstädte seien die Orte, an denen Firmen wie Deloitte, E&Y und KPMG solche Dienstleistungen schaffen. Methodisch führt dieser Ansatz zu Netzwerkanalysen, bei denen Weltstädte die Knoten und deren Verflechtungen die Kanten bilden (z.B. Taylor & Derudder, 2016).

Neben Untersuchungen zu den globalen Verflechtungen von Weltstädten liegen interessante Arbeiten vor, in denen die regionale, subkontinentale Ebene im Vordergrund steht. Brown et al. (2002) arbeiten per Netzwerkanalyse heraus, dass Miami Zentralamerika und Teile der Karibik in das Weltstädtenetzwerk einbindet. Taylor et al. (2002b) identifizieren „regional command centres". Rossi et al. (2007) teilen brasilianische Städte als „decision cities" und „service cities" ein, sprich Orte, über die Brasilien in die Weltwirtschaft eingebunden wird. Martinus et al. (2016) zeigen, dass „globalizing centres" regionale Wirtschaftssysteme weltweit vernetzen.

In jüngeren Veröffentlichungen differenzieren Martinus et al. (2021) und Sigler et al. (2021) die global-regionale Verknüpfung durch Städte weiter aus. Als sogenannte Broker können Städte die Beziehungen zwischen anderen in derselben Region koordinieren. Panama-Stadt beispielsweise übernimmt diese Rolle für Lateinamerika. Finanzhubs wie Hongkong und Luxemburg verknüpfen Städte, die sich in einer anderen Region – vor allem in anderen Rechts- und Steuersphären – befinden. Gleichzeitig tritt Hongkong als Gatekeeper auf, wenn Unternehmen aus Europa und Nordamerika nach China expandieren. Luxemburg hingegen repräsentiert oft die Eurozone, verbindet also europäische Städte mit dem Rest der Welt. Andere dienen als Bindeglieder zwischen verschiedenen Weltregionen, wie zum Beispiel Singapur zwischen Europa und Fernost.

Eine Schwäche der mittlerweile sehr umfangreichen GaWC-Forschung ist, dass die unternehmensinternen Hierarchien und Verbindungen zumeist nur angenommen, also nicht empirisch erfasst werden. Am vor mehr als 25 Jahren von Short et al. (1996) angeprangerten „dirty

little secret of world cities research“ hat sich daher trotz der beeindruckenden GaWC-Datensätze nichts Wesentliches geändert. Selbst einige GaWC-Forscher sprechen von methodischen Sackgassen angesichts der Probleme, auf Grundlage quantitativer Daten die Praktiken zu erklären, die Weltstädte zu den Schaltzentralen der Weltwirtschaft machen (Watson & Beaverstock, 2014). Im Bemühen, diese Wissenslücke mittels qualitativer Forschung zu schließen, entstanden vor gut zehn Jahren empirische und konzeptionelle Studien zu Weltstädten in globalen Wertschöpfungsketten. Bei diesen handelt es sich um „the world economy's backbone and central nervous system“ (Cattaneo et al., 2010, S. 7) – weltumspannende Verflechtungen primär- und sekundärwirtschaftlicher Aktivitäten, die verbunden durch/mit Dienstleistungen die Weltwirtschaft prägen.

Die Verknüpfung von Weltstädten und Wertschöpfungsketten beginnt damit, dass beide auf die Weltsystemanalyse zurückgehen, also gemeinsame Wurzeln haben und deswegen – so zumindest Brown et al. (2010) – konzeptionelle Gemeinsamkeiten vorweisen. Sie sind Modelle von Strömen, die die Globalisierung prägen. Die Forschung zu Weltstädten untersucht ein Städtenetzwerk, in dem Informationen zwischen den Knotenpunkten fließen. Bei Wertschöpfungsketten geht es um Produktionsknoten, die durch Warenströme aneinander gereiht sind. Brown et al. (2010) vertreten die Ansicht, dass die Verbindung der beiden Ansätze es der Forschung zu Weltstädten ermögliche, über die globale Ebene hinauszugehen, um das Zusammenspiel von Weltstädten und ihrem Hinterland zu betrachten. Für die Forschung zu Wertschöpfungsketten ließen sich die unterbelichtete räumliche Dimension und Dienstleistungen besser berücksichtigen.

Auf diese Ideen aufbauend hat Parnreiter (2010, 2015) durch Experteninterviews nachgezeichnet, wie Anbieter unternehmensbezogener Dienstleistungen in Hamburg und Mexiko-Stadt als Bindeglieder zwischen dem Umland dieser Städte und der Weltwirtschaft wirken. Weitere Beiträge zu einem Themenheft von „Global Networks“ (Band 10, Nr. 1) beschäftigen sich mit unternehmensbezogenen Dienstleistungen und maritimem Transport sowie High-Tech-Firmen (Jacobs et al., 2010; Lüthi et al., 2010). Zwar liefert das Themenheft wichtige Erkenntnisse. Es verfolgt einen innovativen Ansatz. Doch bleibt die Rolle von Städten in Wertschöpfungsketten auf unternehmensbezogene Dienstleistungen beschränkt. Wenig positiv fällt dementsprechend die Würdigung des Anliegens durch Coe et al. (2010) aus.

Die eben erwähnten Artikel stehen im Kontext der stadt- und wirtschaftsgeografischen Forschung zu Gateway Cities. Der Begriff wird oft auf einen Beitrag von Burghardt (1971) zurückgeführt, auch wenn es ältere Vorläufer gibt (z.B. Brigham, 1899; Hance & Van Dongen, 1957). Burghardt definierte Gateway Cities als „an entrance into (and necessarily an exit out of) some area“ (1971, S. 269). Er verstand sie als Orte, durch die ein weites Hinterland mit dem Rest der Welt verbunden wird. Der Begriff wurde seitdem vielfach verwendet, meist allerdings ohne ihn konzeptionell voranzubringen. Eine Literatur zu Gateway Cities, die sich auf eine gemeinsame Definition oder zumindest weitgehend anerkannte Schlüsselbeiträge bezieht, gibt es nicht.

Auch gehen die Erkenntnisinteressen von Beiträgen zu Gateway Cities weit auseinander. Grant und Nijman (2002) untersuchen Accra und Mumbai als Gateway Cities. Ihr Interesse besteht darin, wie sich einzelne Stadtteile als Standorte lokaler, nationaler und internationaler Unternehmen entwickelt haben. Short et al. (2000) und Sigler (2013) hingegen betrachten die Art und Weise, in der Städte

ihr Hinterland in globale Prozesse einbinden. Allerdings werden die unterschiedlichen Verknüpfungsfunktionen nicht systematisch herausgearbeitet. Sie illustrieren lediglich Vielfalt.

Angesichts der in den letzten Absätzen zusammengefassten Schwachstellen der Forschung zu Weltstädten und insbesondere zu Weltstädten in Wertschöpfungsketten lautet die erste Leitfrage der vorliegenden Habilitation, mit denen der entsprechende Erkenntnisstand erweitert wird: Wie binden Gateway Cities ihr Hinterland in die Weltwirtschaft ein?

Das Hinterland verstehe ich als weiträumige Einflusssphäre, die potenziell über Staatsgrenzen hinausreicht. Es wurde in keinem der vorgelegten Artikel vorab abgegrenzt, sondern ergab sich aus den Beobachtungen zur jeweiligen Gateway City. Ich ging davon aus, dass Standorte im Hinterland durch die ersten, oft extraktiven Schritte von Wertschöpfungsketten gekennzeichnet sind, wohingegen anschließende, komplexere Schritte der Verarbeitung in Gateway Cities oder deren näherem Umfeld zu finden sind.

Um die eben aufgeworfene Frage im Kontext aktueller Forschungsdebatten zu beantworten, fand zunächst eine umfangreiche Literaturrecherche statt. Die Ergebnisse wurden anschließend durch Fallstudien überprüft, angepasst und ergänzt. Gezeigt wurde, dass Gateway Cities ihr Hinterland durch bis zu fünf Funktionen verknüpfen:

- Gateway Cities sind Verkehrsknoten – eine Funktion, die ihre Rolle als Bindeglieder zwischen peripheren Standorten und dem Rest der Welt besonders anschaulich macht (Ducruet et al., 2014; Jacobs et al., 2010). Auch Phelps (2017) betont, dass „the value of a logistics and transport perspective within [global production networks] is that it draws attention to […] intermediate places“ (S. 30).
- Im Globalen Süden bündeln Gateway Cities die industrielle Verarbeitung von Rohstoffen aus ihrem Hinterland. Sie speisen Fertig- und Halbfertigprodukte in globale Wertschöpfungsketten ein (Ramos Schiffer, 2002; Tribe, 2002).
- Dort findet im Sinne der etablierten Forschung zu Weltstädten natürlich auch unternehmerische Kontrolle statt – durch die nationalen oder regionalen, nicht aber globalen Hauptsitze transnationaler Konzerne.
- Anbieter unternehmensbezogener Dienstleistungen haben in Gateway Cities wichtige Niederlassungen. Um periphere Standorte in globale Wertschöpfungsketten einzubinden, braucht es aber nicht nur betriebswirtschaftliche Dienstleistungen. Mittels empirischer Forscher zeige ich, dass auch technische Dienstleistungen wie das Ausbilden von Arbeitskräften oder das Warten von Maschinen notwendig sind (Scholvin, 2017).
- In Gateway Cities wird zudem global vorhandenes Wissen an lokale Besonderheiten angepasst. Lokal entwickeltes Wissen schafft von dort den Sprung auf den Weltmarkt (Scholvin et al., 2019a).

<u>Gateway Cities und wirtschaftliche Entwicklung im Hinterland</u>

Aus der großen Bedeutung von Gateway Cities für periphere Standorte ergibt sich eine zweite Leitfrage, die die Verbindung zur Forschung zu globalen Wertschöpfungsketten stärkt: Wie beeinflussen Gateway Cities die wirtschaftliche Entwicklung ihres Hinterlands?

Der erste Ansatz, mit dem ich diese Frage bearbeitet habe, sind die drei Ds aus dem Weltentwicklungsbericht „Reshaping Economic Geography“ (Weltbank, 2009). Sie sind durchaus hilfreich, um empirische Befunde zu strukturieren. Gateway Cities lassen sich als Orte der Dichte verstehen. Die Ballung wichtiger Akteure schafft Agglomerationsvorteile. Im Sinne des Weltentwicklungsberichts handelt es sich dabei um Skalenerträge. Aus der Perspektive der Weltstadtforschung müsste man sich auf den Zugang zu nicht kodifizierbarem Wissen konzentrieren. Von Orten der Dichte gehen potenziell Impulse aus, die zu wirtschaftlicher Dynamik im Hinterland führen. Diese werden durch Distance – also die Kosten und Zeit, die das Überwinden räumlicher Distanz erfordert – und Division, sprich tarifäre und nicht-tarifäre Handelsbarrieren, begrenzt.

Im Laufe der letzten Jahre bin ich von den strukturierenden drei Ds zur für Erklärungen hilfreicheren Literatur zu Produktionsnetzwerken und Wertschöpfungsketten übergegangen. Erstgenannte umfassen „all kinds of network relationships [and] all relevant sets of actors“ hinsichtlich der Produktion und Vermarktung eines bestimmten Guts (Coe et al., 2008, S. 272). Wirtschaftliche Entwicklung spiegelt wider, wie der untersuchte Ort oder die untersuchte Region in globale Netzwerke eingebunden ist, wie in diesem Zusammenspiel Werte geschaffen und in Abhängigkeit von der Machtverteilung zwischen Akteuren angeeignet werden (Henderson et al., 2002).

Coe et al. (2004) unterscheiden drei Formen strategischen Koppelns zwischen Orten und Netzwerken – „strategic coupling“ im englischen Original. Lokale Akteure internationalisieren sich und werden zu Lead Firms in neuen, von ihnen kontrollierten Produktionsnetzwerken („indigenous coupling“). Diese Form des strategischen Koppelns ist für Entwicklung am aussichtsreichsten. Etwas weniger vorteilhaft ist die Einbindung lokaler Akteure als spezialisierte Zulieferer in bestehende Netzwerke. Sie internationalisieren sich oder bleiben in ihren Herkunftsregionen („functional coupling“). Oft problematisch ist strategisches Koppeln, wenn es um billige Arbeitskräfte oder lokal vorhandene Rohstoffe geht („structural coupling“).

In allen Fällen hängt die Teilhabe an globalen Produktionsnetzwerken davon ab, dass Institutionen das Angebot der Region – von Arbeitskräften und Rohstoffen bis zu Clustern innovativer Firmen – so beeinflussen, dass es den Ansprüchen transnationaler Konzerne entgegenkommt (Coe et al., 2004). Kaum untersucht ist, wie das strategische Koppeln eines bestimmten Ortes durch seine Verflechtung mit anderen Orten beeinflusst wird. Zwar benennen Coe und Yeung (2015) Logistikzentren und Weltstädte als empirische Phänomene. Doch werden weder diese speziellen Fälle noch Städte als generelle Bindeglieder in das Analysekonzept aufgenommen. Breul und Revilla Diez (2018) zeigen aber, dass Städte als „intermediate step to resource peripheries“ dienen. Sie wirken manchmal als Filter, denn verschiedene Aktivitäten der entsprechenden Produktionsnetzwerke – und damit deren Entwicklungseffekte – ballen sich dort, anstatt an periphere Standorte verlagert zu werden. Berücksichtigt man in der Forschung zu globalen Produktionsnetzwerken Gateway Cities, lässt sich besser verstehen, warum strategisches Koppeln nicht zwangsweise zu wirtschaftlicher Entwicklung in der Peripherie führt (Breul et al., 2019).

Die Literatur zu globalen Wertschöpfungsketten ist weiter gefächert. In vielen in dieser Habilitation enthaltenen Artikeln wird das Linkage-Konzept angewendet, das von der Forschungsgruppe „Policy Research in International Services and Manufacturing“ (PRISM) der Universität Kapstadt

entwickelt wurde (Morris et al., 2012). In den auf ressourcenreiche Länder in Afrika ausgerichteten PRISM-Studien geht es darum, wie der primäre Sektor zum Motor von Industrialisierung werden kann. In Anlehnung an die Arbeiten von Hirschman (1981) werden vier Formen von Linkages untersucht:

- Wenn ein Ort Teil globaler Wertschöpfungsketten wird, entstehen fiskale Linkages. Arbeitnehmer und Unternehmen zahlen Steuern. Sie stehen dem Staat zur Verfügung, um die lokale Wirtschaft zu fördern oder Sozialleistungen zu erhöhen.
- Außerdem kommt es zu Konsum-Linkages, weil die Nachfrage nach Dienstleistungen und Waren steigt – am anschaulichsten aufgrund des höheren Einkommens lokaler Arbeitnehmer.
- Produktionslinkages treten auf, denn die Lead Firms der Wertschöpfungsketten benötigen Inputs. Ihr Output muss weiterverarbeitet werden.
- Bei horizontalen Linkages handelt es sich in den PRISM-Studien um die Expansion von Firmen in benachbarte Sektoren. Externalitäten sollten ebenso berücksichtigt werden: beispielsweise Verkehrsinfrastruktur, die für einen global verflochtenen Wirtschaftszweig ausgebaut wird und dann auch anderen zur Verfügung steht.

Die PRISM-Literatur berücksichtigt das Zusammenspiel verschiedener Orte noch weniger als die Forschung zu globalen Produktionsnetzwerken. Zumeist werden Linkages auf nationalstaatlicher Ebene erfasst, wie die Beiträge eines Themenhefts der Zeitschrift „Resources Policy“ (Band 37, Nr. 4) verdeutlichen. Der Frage, ob periphere, ressourcenreiche Regionen im Vergleich zu den Wirtschaftszentren der entsprechenden Länder weniger – oder überhaupt – von Linkages profitieren, wird kaum Aufmerksamkeit geschenkt.

Darüber hinaus berücksichtigt die PRISM-Literatur für ressourcenreiche Länder typische Probleme wie Korruption, Rechtsunsicherheit und Ähnliches nicht ausreichend. Auch diese führen dazu, dass Linkages eher in Gateway Cities als im Hinterland entstehen. In diesem Sinne erweitert diese Habilitation die PRISM-Literatur im Hinblick auf politische Einflussfaktoren.

Die drei Ds und das Linkage-Konzept führen tendenziell zu einer positiven Erwartungshaltung hinsichtlich der Entwicklungschancen peripherer Orte in globalen Wertschöpfungsketten. Gleiches trifft auf den Weltentwicklungsbericht „Trading for Development in the Age of Global Value Chains“ zu (Weltbank, 2020). Die Literatur zu globalen Produktionsnetzwerken hingegen macht keine solchen Vorgaben. Die vorgelegten Arbeiten dienen deswegen auch dazu, die optimistische Perspektive der PRISM-Forschungsgruppe und der Weltbank konstruktiv zu hinterfragen. Zu globalen Produktionsnetzwerken wurden Arbeiten aufgegriffen, die das Augenmerk auf entsprechende Schattenseiten lenken (insb. Phelps et al., 2018).

Datengrundlage und methodisches Vorgehen

Die vorgelegten Arbeiten sind im Rahmen eines von der Deutschen Forschungsgemeinschaft (DFG) geförderten Projekt zu „Gateway Cities und ihr Hinterland“ (Projektnummer 275355279) entstanden. Das Projekt wurde von 2015 bis 2018 an den Universitäten Hannover und Köln durchgeführt. Eine brasilianische Partnerorganisation, die Fundação de Amparo à Pesquisa do Estado de São Paulo, finanzierte Kollegen der Universität Campinas im Rahmen einer

Sonderförderlinie zur deutschen-brasilianisch Zusammenarbeit auf Grundlage eines inhaltlich gleichen Projektantrags. Nur ein Teil des Outputs dieses Projekts ist in der vorliegenden Habilitation enthalten. Auf andere Veröffentlichungen wird verwiesen.

Dieser Entstehungskontext erklärt, warum die Datengrundlage und das methodische Vorgehen der einzelnen Beiträge einander recht ähnlich sind. Sie stützen sich in erster Linie auf narrative Experteninterviews. Das methodische Vorgehen setzt an der oben wiedergegebenen Kritik an der GaWC-Forschung an und spiegelt eine Überzeugung wider, die Vind und Fold treffend zusammenfassen: „It is impossible to [analyse cities in global value chains] without intensive fieldwork, including corporate interviews; databases and surveys cannot provide the data needed“ (2010, S. 72).

Ausgangspunkt waren trotzdem zwei Datenbanken: „fDi Markets“ von der „Financial Times“ und die Website „A Barrel Full“. fDi Markets bietet einen umfangreichen Einblick in ausländische Direktinvestitionen weltweit, hat für Forschung zu Afrika und Lateinamerika aber den Nachteil, dass die Anzahl der Investitionsprojekte klein bleibt. Eine ursprünglich vorgesehene Netzwerkanalyse war auf dieser Grundlage nicht möglich. Allerdings half die Datenbank, wichtige Unternehmen und die Ziele ihrer Investitionen auszumachen. Teils ließen sich erste Schlussfolgerungen hinsichtlich der dahinterstehenden Motive ziehen, denn fDi Markets beinhaltet Kurzbeschreibungen für jedes Investitionsprojekt.

Bei A Barrel Full handelt es sich um eine Open Source Informationsquelle zum Öl- und Gassektor, der im genannten DFG-Projekt im Vordergrund stand. Registrierte Nutzer können Einträge ergänzen, löschen und verändern. Die Website half, Lead Firms und strategische Partner, die bestimmte Öl- und Gasfelder ausbeuten, zu identifizieren. Die entsprechenden Informationen waren umfangreicher als bei fDi Markets. Im Hinblick auf Dienstleister im Upstream-Sektor ist A Barrel Full leider unvollständig, liefert aber zumindest einen ersten Ansatzpunkt. Gleiches gilt für den Down- und Midstream-Bereich, dem weniger Aufmerksamkeit geschenkt wurde.[1] Darüber hinaus wurden deskriptive Informationen von A Barrel Full verwendet – beispielsweise zu Kapazitäten und Standorten von Erdölraffinerien und Flüssiggasterminals. Im Fall von Kapstadt stand eine weitere Datenbank zur Verfügung: das Online-Verzeichnis der South African Oil and Gas Alliance (SAOGA). Es führt Dienstleister in der Stadt auf und beschreibt ihr Tätigkeitsfeld.

Des Weiteren wurde LinkedIn genutzt, um Gesprächspartner zu finden und mit ihnen in Kontakt zu treten. Dieses Vorgehen war mittels einer schlüsselwort- und standortbezogenen Suche, beispielsweise zu „oil“ und „Accra“, überraschend ertragreich. Im Schneeballverfahren entstanden weitere Kontakte. Branchenverbände wie die Cámara Boliviana de Hidrocarburos in Santa Cruz und SAOGA waren beim Vermitteln von Kontakten hilfreich. Insgesamt habe ich 32 Interviews in Argentinien, 16 in Bolivien, 24 in Ghana, 16 in Mauritius, 21 in Namibia und 70 in Südafrika geführt. 11 Gespräche in Brasilien konnten als Input für gemeinsame Veröffentlichungen mit den Kollegen aus Campinas genutzt werden.

Die Interviews wurden entlang von Leitfäden, bestehend aus Fragen zu Standortvor- und Standortnachteilen sowie der räumlichen Organisation des Öl- und Gassektors, geführt. Es gab je

[1] Der Öl- und Gassektor wird in drei Bereiche unterteilt: Upstream beinhaltet Exploration und Extraktion. Transport, Lagerung und Verkauf an Großhändler zählen zu Midstream. Das Raffinieren von Rohöl und das Reinigen von Erdgas sowie den Verkauf an Endverbraucher rechnet man zu Downstream.

einen Leitfaden für transnationale Firmen, lokale Dienstleister und Gesprächspartner, die wie Mitarbeiter von Branchenverbänden und Ministerien den Sektor aus einer Vogelperspektive kennen. Je nach Gesprächspartner wurde der Leitfaden geringfügig angepasst. Fast alle Gespräche durften per Handy aufgezeichnet werden. Anschließend wurden zusammenfassende Protokolle erstellt, also im Unterschied zur vollständigen Transkription Gesprächspassagen übersprungen, die keinen erkennbaren Wert für das Forschungsvorhaben hatten. Die Protokolle wurden entlang deduktiv hergeleiteter Kategorien – verschiedene Verknüpfungsfunktionen von Gateway Cities, unterschiedliche Linkages an peripheren Standorten usw. – geordnet. Auf diese Weise wurden Ankerbeispiele und kausale Zusammenhänge sichtbar. Der narrative Charakter der Interviews ermöglichte es den Gesprächspartnern, auf Sachverhalte einzugehen, die durch mein Vorverständnis des Themas nicht abgebildet wurden.

Soweit möglich sind die Erkenntnisse aus den Interviews mit anderen Informationsquellen trianguliert. Hierunter fallen neben wissenschaftlicher Literatur, die entsprechende empirische Einblicke und Interpretationen liefert, Beiträge aus Zeitungen wie „Engineering News“ (Südafrika), „La Nación“ (Argentinien) oder dem „Windhoek Observer“ (Namibia). Hinzukommt sekundärstatistisches Material, das sich sich von Fallstudie zu Fallstudie unterscheidet. Es umfasst Indexe wie die Doing Business Reports und Worldwide Governance Indikatoren der Weltbank oder auch die Offshore Leaks Datenbank des internationalen Netzwerks investigativer Journalisten.

Synopse

Die Synopse gibt einen Überblick über die acht vorgelegten Zeitschriftenaufsätze – als erstes zu den Funktionen und der Vielfalt von Gateway Cities, als zweites zu ihrem Einfluss auf die wirtschaftliche Entwicklung im Hinterland. Es wird dargestellt, wie sie sich gegenseitig ergänzen und die oben genannten Leitfragen beantworten.

Funktionen und Vielfalt von Gateway Cities

Die erste im Rahmen des genannten Forschungsprojekts entstandene Publikation – Scholvin (2017) – ist in einem Schwerpunktheft der „Zeitschrift für Wirtschaftsgeographie“ erschienen, das Javier Revilla Diez und ich organisiert haben. Darin wird das Konzept der Gateway City entworfen. Über die in der Weltstadtforschung betonte Kontroll- und Managementfunktion geht es hinaus, indem vier der weiter oben erwähnten fünf Funktionen von Gateway Cities hergeleitet werden: Gateway Cities binden ihr Hinterland in die Weltwirtschaft ein, weil sie Verkehrsknoten sind und dort industrielle Verarbeitung stattfindet. Unternehmerische Kontrolle und unternehmensbezogene Dienstleistungen – sowohl betriebswirtschaftliche als auch technische – bündeln sie.

Außerdem zeigt der Artikel, dass die drei Ds aus dem Weltentwicklungsbericht 2009 (Weltbank, 2009) trotz gewisser Grenzen des Ansatzes und einer unter Geografen breiten Kritik hilfreich sind, um Gateway Cities als Impulsgeber für wirtschaftliche Entwicklung an peripheren Standorten zu untersuchen. Sie sollten in der Tradition raumwirtschaftlicher Ansätze, zum Beispiel dem Buch „Location in Space“ von Lloyd und Dicken (1972), gesehen werden. Gateway Cities sind Orte der Dichte. Positive Effekte für das Hinterland hängen von allem ab, was sie durch Barrieren/Division und Entfernung/Distance von diesem trennt. Sieht man das Überwinden von Distance und Division als notwendige Bedingung für Entwicklungsimpulse an, kommt mit Linkages im Sinne der bereits genannten PRISM-Studien eine hinreichende Bedingung hinzu.

Die Fallstudie zu Kapstadt verdeutlicht, dass diese Gateway City über ein beträchtliches Potenzial verfügt, öl- und gasreiche Standorte in Subsahara-Afrika in die Weltwirtschaft einzubinden. Es beruht in erster Linie auf technischen Dienstleistungen, weniger auf den anderen Gateway-Funktionen. Kapstadt ist kein Management- oder gar Kontrollknoten in globalen Güterketten, wohl aber ein wichtiger Bestandteil. Klein- und mittelständische Unternehmen wie Belmet und Walemarine liefern wichtige Inputs für die Öl- und Gasförderung in anderen Ländern des Subkontinents. Sie profitieren von den in Kapstadt weitaus besseren institutionellen Rahmenbedingungen und der guten Erreichbarkeit ressourcenreicher Länder. Die SAOGA bringt wichtige Akteure einschließlich transnationaler Konzerne zusammen. Mit der Saldanha Bay Industrial Development Zone wird ein Projekt verfolgt, das sich zu einem Cluster und „one stop shop“ für den Sektor entwickeln soll.

Die Bedeutung von Kapstadt ergibt sich somit aus der Dichte an wichtigen Akteuren. Ressourcenreiche Standorte in der Region profitieren aber kaum von Impulsen, wenn sie durch Distance und Division von Kapstadt getrennt sind. In solchen Fällen zieht die Gateway City viele Segmente der entsprechenden Güterketten an sich. Insbesondere der Vergleich zwischen Namibia und Ländern wie Angola und Mosambik führt zu dieser Schlussfolgerung. Namibias Währung ist im festen Wechselkurs von 1:1 an den südafrikanischen Rand gebunden. Das Rechtssystem ist dem

südafrikanischen fast gleich. Nennenswerte Einreise- oder Sprachbarrieren für südafrikanische Geschäftsleute gibt es nicht. Dass Firmen aus Kapstadt in Namibia Branchen eröffnen, ist nicht ungewöhnlich. Ganz anders sieht es in anderen ressourcenreichen Ländern der Region aus. Außerdem weist der Beitrag darauf hin, dass Probleme wie Korruption und Rechtsunsicherheit als Ursachen von Division eine große Rolle spielen. Verschiedene Gesprächspartner erläuterten, dass sie sich deswegen beispielsweise aus Nigeria zurückgezogen haben oder überhaupt nicht dort investieren.

Im zweiten Beitrag der vorliegenden Habilitation – Scholvin et al. (2019b) – werden Gateway Cities um eine Funktion erweitert: Wissenstransmission. Als Orientierung dienen Studien zu metropolitanen Innovationssystemen (z.B. Revilla Diez, 2000, 2002; Revilla Diez & Berger, 2005). Grundidee ist, dass attraktive institutionelle Rahmenbedingungen und bereits vorhandene innovative Netzwerke zusätzliche Wissensströme anziehen. Die entsprechenden Städte werden infolgedessen als Knotenpunkte wichtiger. In einer mit brasilianischen Kollegen geschriebenen Fallstudie, die nicht Teil dieser Habilitation ist, konnte darauf aufbauend gezeigt werden, dass transnationale Konzerne global vorhandenes Wissen in Gateway Cities an lokale Besonderheiten anpassen. Innovationen lokaler Firmen schaffen von dort den Sprung auf den Weltmarkt (Scholvin et al., 2019a).

Statt wie in der Studie zu Kapstadt die Chancen auf Entwicklungsimpulse aus den drei Ds abzuleiten, wird untersucht, welche Segmente von Produktionsnetzwerken sich in der Gateway City – hier Singapur – ballen und welche an periphere, öl- und gasreiche Standorte verlagert werden. In diesem Sinne liefert der Artikel auch einen Beitrag zur Literatur zu globalen Produktionsnetzwerken. Er zeigt, dass nicht nur Dynamiken globaler Netzwerke und Prozesse in den untersuchten Regionen, beispielsweise einem Ölfördergebiet in Indonesien, betrachtet werden sollten. Städte, die als Bindeglieder wirken, muss man ebenso berücksichtigen, um strategisches Koppeln beziehungsweise regionale Entwicklung zu verstehen.

Für den untersuchten Fall wird ausgeführt, dass technische Upstream-Dienstleister wie Caterpillar und National Oilwell Varco Singapur nutzen, um ganz Südostasien zu beliefern. Im Downstream-Bereich hat sich die Stadt durch ein Flüssiggasterminal als Hub für die Region positioniert. Raffinerien in Singapur verarbeiten auf dem Weltmarkt gekauftes Rohöl und liefern das Gros der Produkte, die viele südostasiatische Länder importieren. Die Gateway City ist darüber hinaus Sitz regionaler Konzernzentralen, die als Bindeglieder zwischen nationalen Niederlassungen und den Unternehmenshauptsitzen in Europa und Nordamerika dienen. Sowohl betriebswirtschaftliche als auch technische Dienstleistungen bezieht der Öl- und Gassektor aus Singapur. Firmen, die wissensintensive Dienstleistungen entwickeln, haben in Forschungseinrichtungen in der Stadt investiert. Sie werden durch staatliche Rahmenprogramme unterstützt.

Diese Dominanz Singapurs hat Auswirkungen auf Südostasien. Bemühungen, die industrielle Verarbeitung von Öl und Gas in Vietnam auszubauen, haben wenig Erfolgsaussichten. Auch als Logistikhubs können die Nachbarländer der Gateway City wenig entgegensetzen. Ein Gesprächspartner erklärte, dass „[Singapur] so gut geplant und umgesetzt ist [...]. Wenn Sie Singapur mit einem anderen Land als [mögliches] Flüssiggashub vergleichen [...] wird Singapur immer die erste Wahl sein“. Die Niederlassungen transnationaler Konzerne in Ländern wie

Indonesien liefern nur Informationen für Entscheidungen, die in Singapur getroffen werden. Dienstleistungen von Unternehmen in Öl- und Gasfördergebieten sind einfach (z.B. Catering, unkomplizierte Reparaturen von Maschinen). Auch bei betriebswirtschaftlichen Dienstleistungen, beispielsweise im Finanzwesen, spielen Anbieter aus Singapur die entscheidende Rolle, nicht ihre Repräsentanten in den Nachbarländern. Wissenstransmission findet dort kaum statt.

Doch Singapur ist ein Extremfall und somit wenig geeignet für Verallgemeinerungen: eine der am besten vernetzten und erfolgreichsten Weltstädte, die in den GaWC-Studien oft die Kategorie „alpha+“ anführt, also direkt auf London und New York folgt.[2] Als Gateway konkurriert Singapur mit Standorten in Entwicklungsländern. Vor diesem Hintergrund dient die Fallstudie zu Buenos Aires – Scholvin (2019) – dazu, zu prüfen, ob sich die Beobachtungen aus Südostasien übertragen lassen. In konzeptioneller Hinsicht macht der Beitrag stärker als die bereits vorgestellten Veröffentlichungen deutlich, dass sich die Forschungsansätze zu globalen Produktionsnetzwerken und Weltstädten gegenseitig ergänzen. Weltstädte sind wichtige Knoten in Produktionsnetzwerken, also entscheidend für die vernachlässigte räumliche Dimension solcher Netzwerke. Diese wiederum binden Weltstädte an ihr Hinterland und führen die Forschung zu Weltstädten über den Fokus auf unternehmensbezogene Dienstleistungen hinaus.

Zudem nimmt dieser Artikel die Literatur zum „Agglomerationsschatten“ von Metropolen auf. Dabei geht es darum, dass Sekundärstädte im Einflussbereich von größeren Agglomerationen beziehungsweise Primärstädten öffentliche und private Funktionen verlieren. Sie ballen sich wegen skalenbedingten Wettbewerbsvorteilen in den Primärstädten, wohingegen die Sekundärstädte im Extremfall auf grundlegende Dienstleistungen und Güter beschränkt werden (Burger et al., 2015; Cardoso & Meijers, 2016). Diese Ideen passen zum Zusammenspiel von Gateway Cities und ihrem Hinterland, denn im Hinterland finden sich neben den Ressourcen Städte, die als regionale Verwaltungssitze und untergeordnete Wirtschaftszentren eine gewisse Rolle für Öl- und Gasproduktionsnetzwerke spielen oder dies zumindest könnten.

Gezeigt wird, dass Buenos Aires für den Öl- und Gassektor nicht alle fünf Verknüpfungsfunktionen übernimmt. Entsprechend größer sind die Chancen für wirtschaftliche Entwicklung im Hinterland – gerade in Sekundärstädten wie Bahía Blanca oder Neuquén. Neben gewissen Logistikaufgaben und Wissenstransmission ist Buenos Aires vor allem ein Ort unternehmerischer Kontrolle. Unternehmensbezogene, betriebswirtschaftliche Dienstleistungen sind anscheinend weniger wichtig. Industrielle Verarbeitung und insbesondere technische Dienstleistungen finden eher an ressourcennahen Standorten statt. Mit anderen Worten, Buenos Aires wirft einen Agglomerationsschatten auf sein Hinterland. Er ist aber nicht allumfassend.

Eine weitere Erkenntnis der Fallstudie ist, dass weiche Standortvorteile – die Attraktivität von Buenos Aires als Ort zum Arbeiten und Leben – offensichtlich eine große Rolle für diese Gateway City spielen. Wissensintensive Segmente der untersuchten Produktionsnetzwerke verharren in der Stadt. Hochqualifiziertes Personal nicht bereit ist, in Sekundärstädte umzuziehen.

In einem Artikel zu afrikanischen Fallstudien – Scholvin (2020a) – wird die Idee vertieft, dass Gateways ihr Hinterland auf vielfältige Weise in globale Produktionsnetzwerke einbinden. Er knüpft an Beiträge an, die darauf abzielen, die empirische Vielfalt von Städten besser zu erfassen,

[2] Die GaWC-Klassifizierung ist online unter https://www.lboro.ac.uk/microsites/geography/gawc/gawcworlds.html abrufbar.

neben dieser Vielfalt aber die Globalisierung als verbindendes Merkmal anerkennen (insb. Hoyler & Harrison, 2018). Trotz vieler Unterschiede haben Accra, Kapstadt und Mauritius als Bindeglieder zwischen ihrem Hinterland und der Weltwirtschaft funktional eine wichtige Gemeinsamkeit. Der Untersuchungsansatz führt somit nicht dazu, konzeptionelle Abstraktion zu verneinen und sich in den Besonderheiten der Fallbeispiele zu verlieren (dazu: Scott & Storper, 2015). Stattdessen wird im Rahmen eines deduktiven Ansatzes, der mit dem Gemeinsamen der drei Fälle beginnt, die Diversität im Detail aufgezeigt.

In Ghanas Hauptstadt Accra befindet sich das Management aller wichtigen Firmen, die im Öl- und Gassektor des Landes tätig sind. Hinzukommen Behörden und Ministerien. Verschiedene Gesprächspartner betonten, dass räumliche Nähe der entscheidende Faktor sei. Der leitende Manager eines lokalen Logistikunternehmens beispielsweise sagte, sein Büro befinde sich „innerhalb von fünf Kilometern von [den Hauptsitzen] aller wichtigen Öl- und Gasfirmen“. Takoradi, der den Offshore-Vorkommen am nächsten gelegene Hafen, dient als Standort für technische Dienstleistungen. Auch Logistik wird dort abgewickelt. Für industrielle Verarbeitung spielt eine Raffinerie in Tema, 25 Kilometer östlich von Accra, eine gewisse Rolle. Wissensproduktion oder -transmission mit Bezug zum Öl- und Gassektor konnte in Ghana nicht nachgewiesen werden.

Wie im Beitrag in der „Zeitschrift für Wirtschaftsgeographie“ bereits erläutert, ist Kapstadt wegen der dort ansässigen technischen Dienstleister als Knoten in Produktionsnetzwerken für ganz Subsahara-Afrika von großer Bedeutung. Logistik spielt eine sekundäre Rolle. Die Chancen bei der industriellen Verarbeitung von Rohöl sind unklar. Während sich unternehmerische Kontrolle bestenfalls auf die nationale Ebene beschränkt, liegt mit Tullow Oil, das geologische Studien in Kapstadt durchführt, ein interessanter Fall im Bereich Wissen vor. Spin-offs von Tullow versorgen Investoren aus Übersee mit Wissen, das zweitgenannte benötigen, um ihre Produktionsnetzwerke in der Region erfolgreich zu organisieren.

Mauritius – die dritte Fallstudie des Artikels – ist natürlich keine Stadt, wird aber aufgrund seiner Größe in eine Kategorie mit Accra und Kapstadt eingeordnet. Seine Erfolgsaussichten, sich als Versorgungspunkt entlang wichtiger Schifffahrtsrouten und für Ostafrika zu etablieren, sind ungewiss, obwohl es entsprechende Investitionen transnationaler Konzerne gibt. Sie werden staatlich unterstützt, vor allem durch das Bereitstellen von Infrastruktur. Gleiches gilt für Wissenstransmission. An der University of Mauritius finden regelmäßig Seminare zum Öl- und Gassektor statt, die sich auch an Interessenten aus den Nachbarländern richten. Betrachtet man die Teilnehmer dieser Veranstaltungen, bleibt ihre Wirkung über den Inselstaat hinaus allerdings bescheiden.

Doch Mauritius hat sich zu einem Finanzhub entwickelt, der in Subsahara-Afrika tätigen Firmen Steuervorteile bietet. Eine Folge davon ist, dass unternehmerische Kontrollfunktionen auf die Insel verlagert worden sind. Aufsichtsratssitzungen finden dort statt. Marketing wird zentral von Mauritius aus durchgeführt. Hinzukommen technische Dienstleistungen im Ingenieurbereich, einschließlich Consulting. Gesprächspartner sagten, dass Firmen aus Mauritius mit dem Arbeitsumfeld in Subsahara-Afrika besser vertraut seien als ihre Auftraggeber aus dem Globalen Norden. Es falle ihren Angestellten nicht nur leichter, dort zu arbeiten. Sie können auch die lokalen

Voraussetzungen für Investitionen, zum Beispiel in eine Raffinerie oder ein Treibstofflager, besser einschätzen.

Die Rolle von Mauritius als Finanzhub deutet auf Schattenseiten von Gateways hin, die in den bisher vorgestellten Artikeln nur unter dem Gesichtspunkt der Ballung wirtschaftlicher Aktivitäten zuungunsten des jeweiligen Hinterlands betrachtet wurden. Ein weiterer Beitrag zu Mauritius – Scholvin & Breul (2021) – geht deswegen näher auf finanzielles Offshoring ein. Er knüpft an das von Parnreiter (2019) wieder aufgenommene Konzept des „geographical transfer of value" an, das ursprünglich Hadjimichalis (1984) geprägt hat.

Der Beitrag beginnt mit einem konzeptionellen Einstieg zu Effekten, die Gateways für ihr Hinterland haben: positive im Sinne des Weltentwicklungsberichts 2009 (Weltbank, 2009) und negative durch den eben genannten Transfer von Gewinnen sowie „Filtermechanismen" in Produktionsnetzwerken (dazu: Breul et al., 2019). Anschließend stellt er die Bemühungen von Mauritius vor, sich als Knoten in verschiedenen Belangen globaler Produktionsnetzwerke zu etablieren. Es wird gezeigt, dass Mauritius zumeist mit anderen Gateways wie Kapstadt und Standorten in Übersee konkurriert. Dies gilt für die Bereiche Logistik und technische Dienstleistungen. Der Transfer von Kapital zum Inselstaat allerdings hat negative Folgen für die Peripherie. Für Reinvestitionen in Länder wie Angola oder Uganda stehen diese Erträge nicht mehr zur Verfügung. Die wirtschaftliche Dynamik dort dürfte auf Extraktion und eventuell Arbeitsplatzeffekte beschränkt bleiben. Gleiches gilt für Steueroptimierungsmodelle, die für Firmen mit Sitz in Mauritius möglich sind. Sie zahlen kaum noch Steuern in den Ländern, in denen ihre Dienstleistungen benötigt werden.

Trotzdem wäre es voreilig, zu schlussfolgern, dass Subsahara-Afrikas rohstoffreiche Länder wegen Mauritius nicht mehr von der Einbindung in die Weltwirtschaft profitieren. Die Insel hat als Gateway Erfolg, weil sie über Steuervorteile hinaus einen attraktiven institutionellen Rahmen bietet, wohingegen die Länder mit umfangreichen Öl- und Gasvorkommen in dieser Hinsicht zu den am wenigsten wettbewerbsfähigen Standorten weltweit zählen. Funktionsfähige Institutionen dort würden Mauritius als Gateway vielleicht sogar überflüssig machen.

Wirtschaftliche Entwicklung im Hinterland

Den eben angesprochenen endogenen Entwicklungsbarrieren geht ein weiterer Beitrag nach (Scholvin, 2020b). Er erläutert, warum sich technische Dienstleistungen – vor allem im Ingenieurwesen und der Logistik – in Kapstadt ballen, statt in die Peripherie verlagert zu werden, wo sie zu wirtschaftlicher Entwicklung beitragen würden. Der Artikel steht für einen Perspektivenwechsel innerhalb dieser Habilitation: von Eigenschaften der Gateway Cities zu denen der Orte, die durch sie in globale Wertschöpfungsketten eingebunden sind.

Startpunkt meiner Überlegungen sind optimistische Erwartungen, dass Liberalisierung zwecks Teilhabe an globalen Wertschöpfungsketten zu wirtschaftlicher Entwicklung führe. Neben den PRISM-Studien steht dafür vor allem der Weltentwicklungsbericht „Trading for Development in the Age of Global Value Chains" (Weltbank, 2020). Erstgenannte beruhen auf der Annahme, dass transnationale Unternehmen sich auf ihr Kerngeschäft ausrichten, also eine Vielzahl von Aufgaben auslagern. Gerade in extraktiven Industrien und Entwicklungsländern mit nicht unerheblichen

Problemen beim Marktzugang mache es Sinn, Dienstleister und Zulieferer in der Nähe der Ressourcen zu suchen. Zu diesen Produktionslinkages kämen die anderen, weiter oben beschriebenen Formen von Linkages hinzu. Dass sie nicht immer gleich stark ausgeprägt sind, wird in verschiedenen PRISM-Studien herausgearbeitet (Resources Policy, Band 37, Nr. 4). Trotzdem, so Morris et al. (2012), seien stets gewisse Entwicklungseffekte zu erwarten. Diese ließen sich Schritt für Schritt ausbauen. Die Weltbank argumentiert ähnlich und spricht sich für wirtschaftliche Liberalisierung und die Einbindung in globale Wertschöpfungsketten aus, um private Investitionen zu beflügeln. Viele afrikanische Länder verfolgen entsprechende Strategien, unterstützt durch Partner aus dem Globalen Norden, beispielsweise im Rahmen des „Compact with Africa“ der G20.

Der Beitrag zeigt allerdings, dass eine ganze Reihe an Problemen in den öl- und gasreichen Ländern Subsahara-Afrikas dazu führt, dass verschiedene Segmente der Wertschöpfungsketten, die in der Peripherie beginnen, in Kapstadt verortet sind. Eine schrittweise Standortverlagerung – und damit Linkages auf Grundlage der Einbindung in globale Wertschöpfungsketten – gibt es kaum. Diese endogenen Entwicklungshürden umfassen den Zugang zu qualifizierten Arbeitskräften und Produktionsinputs, die gewisse Mindeststandards erfüllen, Korruption, Probleme mit dem Rechtssystem, geringe öffentliche Sicherheit und Sprachbarrieren. Selbst vertrauenswürdige lokale Partner zu finden, ist für potenzielle Investoren oft nicht möglich. Infolgedessen fliegen sie ganze Teams und alles Material für ihre Arbeit aus Kapstadt in Länder wie Mosambik. Bohrplattformen, die in Angola oder weiter nördlich im Einsatz sind, werden zur Wartung nach Südafrika geschleppt. Indexe wie die Doing Business Reports, der Corruption Perceptions Index und die Worldwide Governance Indikatoren bestätigen die Einschätzungen verschiedener Gesprächspartner.

Ein Artikel zu den Entwicklungschancen im Norden Patagoniens – Scholvin (2021b) – ist ebenfalls als konstruktive Fortführung mit den PRISM-Studien gedacht. In den Provinzen Neuquén und Río Negro befinden sich Argentiniens größte, nicht-konventionelle Öl- und Gasvorkommen. Man sollte annehmen, dass sich lokale Zulieferer in entsprechende Wertschöpfungsketten einbringen. Wirtschaftliche Entwicklung wäre die Folge. Dass es in Neuquén und Río Negro zu solchen Prozessen kommt, ist auch deshalb wahrscheinlicher als in afrikanischen Ländern, weil Argentinien im letzten Jahrhundert einen umfassenden Industrialisierungsprozess durchlaufen hat. Der Öl- und Gassektor hat eine über 100 Jahre lange Tradition, die durch staatliche Lead Firms und argentinische Zulieferer geprägt ist.

Fiskale Linkages, die sich aus Royalties und Steuern der Ölkonzerne ergeben, haben enorme Bedeutung für Neuquén und Río Negro. Auch Konsumlinkages dürften beträchtlich sein, geht man von den vergleichsweise hohen Löhnen aus, die im Öl- und Gassektor gezahlt werden. Im Hinblick auf horizontale Linkages steht Verkehrsinfrastruktur, die wegen der Öl- und Gasförderung ausgebaut wird, auch anderen Sektoren zur Verfügung. Dass lokale Unternehmen mit neu erworbenen Fähigkeiten über den Öl- und Gassektor hinaus expandieren, ist nicht der Fall. Produktionslinkages sind für wirtschaftliche Entwicklung am wichtigsten, weil sie zu einer strukturellen Transformation führen können – in diesem Fall der Übergang von Primärgüterextraktion zu exportfähigen, wissensintensiven Dienstleistungen. Das, was Gesprächspartner vor Ort als Zielvorstellung formulierten, kommt dem Konzept einer „lernenden Region“ nahe: Lokale Firmen profitieren von der Zusammenarbeit mit transnationalen Konzernen, indem sie sich mit neuem Wissen vertraut machen und so ihre eigenen Fähigkeiten erweitern (dazu: Hassink, 2005).

In Neuquén und Río Negro beschränken sich Produktionslinkages jedoch auf einfache Zuliefertätigkeiten. Es fehlt den lokalen Unternehmen an Kapital, um in neue Technologien zu investieren. „Die Technologien, die sie brauchen, oder [besser gesagt] das Geld, um diese Technologien zu kaufen, [...] das ist etwas, das die Unternehmen in der Provinz [Neuquén] nicht haben", so ein Ingenieur eines Ölmultis. Außerdem stehen sie unter großem Preisdruck seitens ihrer Auftraggeber. Hinzukommen weitere, für klein- und mittelständische Unternehmen typische Schwierigkeiten wie die Beschränkung auf den lokalen und volatilen Markt und die Konkurrenz um Arbeitskräfte durch nicht-lokale Firmen. Die Hoffnung, dass in der Region ein Öl- und Gascluster entsteht und lokale Unternehmen technologieintensive Dienstleistungen exportieren, dürfte vor diesem Hintergrund enttäuscht werden.

Auch in der Fallstudie zu Namibia wird das Linkage-Konzept angewendet (Scholvin, 2021a). Es wird um politische Auswirkungen eines erwarteten Rohstoffbooms ergänzt. Auf diese Weise knüpft die Studie an die politikwissenschaftliche Literatur zum „Ressourcenfluch" an. Hintergrund ist, dass in der PRISM-Literatur der Faktor Politik unzureichend berücksichtigt wird. Die entsprechenden Autoren beschränken sich auf politische Maßnahmen, die sinnvoll sind, um auf Linkages beruhende Entwicklung zu fördern. Korruption, Selbstbereicherung von Eliten und Ähnliches betrachten sie nicht (neben Morris et al., 2012 z.B. Kaplinsky et al., 2011a, b).

Darüber hinaus veranschaulicht die Fallstudie ein äußerst interessantes Merkmal des Ressourcenfluchs: Betroffen sind nicht nur Länder, die über umfangreiche Rohstoffvorkommen verfügen. Bereits die Erwartung, dass es solche geben könnte, reicht aus, um Probleme wie Rent Seeking seitens der politischen Elite und nicht tragfähige Staatsausgaben hervorzurufen.

Neben der Landeshauptstadt Windhoek spielen die Häfen Lüderitz und Walvis Bay eine wichtige Rolle für Namibias Öl- und Gassektor, der sich auf den Offshore-Bereich konzentriert. Es gibt durchaus gewisse positive Effekte: Lead Firms haben Büros in Windhoek eröffnet. Technisches Personal wird ausgebildet. Ein Gesprächspartner betonte, dass transnationale Unternehmen keinerlei Interesse daran hätten, qualifiziertes Personal zu horrenden Kosten aus Europa und Nordamerika ins Land zu holen. Die Ausbildung von Fachkräften vor Ort liege in ihrem Interesse, müsse sich aber dem noch sehr geringen Bedarf anpassen. So werden Explorationsstudien im Globalen Norden durchgeführt. Die notwendigen Daten nehmen spezialisierte Dienstleister auf, die dafür nur wenige Wochen in Namibia sind. Trotzdem wurde bereits ein auf den Sektor ausgerichteter geologischer Studiengang an der größten Universität des Landes eingerichtet. Lokale Unternehmen übernehmen einfache Dienstleistungen, die arbeitsintensiv sind. Wichtiger als der inländische Öl- und Gassektor sind zurzeit technische Dienstleistungen, die in Walvis Bay für Angola geleistet werden. Namibias größter Hafen profitiert ähnlich wie Kapstadt von den schlechten Investitionsbedingungen im Nachbarland.

Für den Ressourcenfluch ist Namibia kein typischer Fall. Das Land wird nicht autoritär regiert. Bewaffnete Konflikte, insbesondere Sezessionsbewegungen, gibt es keine. Beim Global Peace Index, dem Ibrahim Index of African Governance und den Worldwide Governance Indikatoren schneidet es gut ab. Selbst die Tendenz zu hohen, verschwenderischen Staatsausgaben trifft nicht zu oder zumindest hat die Regierung Schritte unternommen, das Haushaltsdefizit zu verringern. Lediglich in puncto Selbstbereicherung der Elite und – damit verbunden – funktionsfähige Institutionen lassen sich Probleme nachweisen. Bei der Erstvergabe von Explorationslizenzen

kamen vor allem Freunde und Verwandte hochrangiger Politiker zum Zuge. Sie verfügten weder über die Mittel noch das Interesse, nach Öl und Gas zu suchen. Wenigen Tausend US-Dollar für die Erstlizenzen standen teils Millionen beim Weiterverkauf an ausländische Unternehmen gegenüber – Geld, das vom Staat für Ausgaben zum Gemeinwohl hätte genutzt werden können.

Schlussbemerkungen

Dieser Abschnitt fasst zunächst die Erkenntnisse der Habilitation zusammen, um zu verdeutlichen, wie sie die Forschung zu Gateway Cities, Weltstädten und wirtschaftlicher Entwicklung im Globalen Süden bereichert. Anschließend wird vorgestellt, wie die vorgelegten Arbeiten in Forschungsdebatten aufgegriffen wurden.

Erkenntnisse der vorgelegten Arbeiten

Wie in der Einleitung ausgeführt, beantwortet die Habilitation zwei forschungsleitende Fragen, die Weltstädte mit globalen Wertschöpfungsketten zusammenbringen. Zunächst wird untersucht, wie Gateway Cities ihr Hinterland in die Weltwirtschaft einbinden. Dies geschieht durch fünf Funktionen. Erstens sind Gateway Cities Verkehrsknoten, vor allem im Luft- und Seeverkehr. Zweitens bündeln sie zumindest im Globalen Süden die industrielle Verarbeitung von Rohstoffen aus dem Hinterland. Drittens findet dort unternehmerische Kontrolle statt – durch die nationalen oder regionalen Hauptsitze transnationaler Konzerne. Viertens haben Anbieter unternehmensbezogener Dienstleistungen in Gateway Cities wichtige Niederlassungen. Hinzukommen technische Dienstleister. Fünftens wird in Gateway Cities global vorhandenes Wissen an lokale Besonderheiten angepasst. Lokal entwickeltes Wissen schafft von dort den Sprung auf den Weltmarkt.

Im Beitrag zu Kapstadt werden die ersten vier Gateway-Funktionen aus der Literatur zu Weltstädten und globalen Wertschöpfungsketten abgeleitet. Im Hinblick auf Dienstleistungen zeigen die empirischen Befunde, dass es nicht nur um betriebswirtschaftliche Aufgaben im Sinne der Weltstadtforschung geht, also das Bank- und Finanzwesen, die Buchhaltung, Rechtsberatung und Werbung. Auch technische Dienstleistungen werden in Gateway Cities bereitgestellt, um periphere Orte in die Weltwirtschaft einzubinden. Der in „Urban Geography“ erschienene Artikel vertieft diese vier Funktionen und erweitert sie um eine fünfte: Wissenstransmission. Transnationale Konzerne passen in Gateway Cities global vorhandenes Wissen an lokale Besonderheiten an. Innovationen lokaler Firmen schaffen von dort den Sprung auf den Weltmarkt (siehe auch: Scholvin et al., 2019a).

Weitere in dieser Habilitation enthaltene Publikationen betonen die Vielfalt von Gateway Cities. Der Artikel zu afrikanischen Fällen zeigt, dass Ghanas Hauptstadt Accra als Kontroll- oder besser Managementknoten für Wertschöpfungsketten, die in Ghana beginnen, wichtig ist. Kapstadt hingegen liefert, wie bereits erwähnt, technische Dienstleistungen für ein Hinterland subkontinentalen Ausmaßes. Mauritius ist vor allem als Finanzhub erfolgreich. Infolgedessen werden auch gewisse unternehmerische Steuerungsfunktionen in den Inselstaat verlagert. Hinzukommen technische Dienstleistungen und entsprechendes Consulting.

In diesem Sinne bringen meine Arbeiten die Forschung zu Gateway Cities und Weltstädten voran. Sie gehen über den zurecht kritisierten Fokus auf unternehmensbezogene Dienstleistungen und unternehmerische Kontrolle hinaus. Als Knotenpunkte in globalen Netzwerken übernehmen Städte auch andere Aufgaben. Dementsprechend groß ist die Vielfalt von Gateway Cities. Zwar haben andere das bereits gezeigt (u.a. Short et al., 2000; Sigler, 2013), doch fehlt es den entsprechenden Beiträgen an einer systematischen, transparenten Herleitung beziehungsweise Begründung der

Funktionen von Gateways. Die vorliegende Habilitation liefert eine klare Definition von Gateway Cities entlang der fünf genannten Funktionen, die sowohl aus vorhandener Literatur als auch aus eigenen empirischen Beobachtungen abgeleitet werden.

In methodischer Hinsicht gibt die Habilitation darüber hinaus qualitative Einblicke in die Praktiken transnationaler Konzerne. Vor dem Hintergrund solcher Praktiken – nicht wegen quantitativ erfasster Assets, die sich in Städten finden – wird erklärt, dass Accra, Buenos Aires, Kapstadt und andere Orte Knoten in globalen Wertschöpfungsketten des Öl- und Gassektors sind. Es wird klar, warum und wie sie ihr Hinterland in die Weltwirtschaft einbinden.

Die zweite forschungsleitende Frage des Projekts lautet: Wie beeinflussen Gateway Cities wirtschaftliche Entwicklung in ihrem Hinterland? Dieser Frage wird sich zunächst über die drei Ds des Weltentwicklungsberichts „Reshaping Economic Geography“ (Weltbank, 2009) angenähert. Am Fallbeispiel Kapstadt wird nachgezeichnet, wie die Ballung technischer Dienstleister die Stadt zu einem Bindeglied in globalen Wertschöpfungsketten des Öl- und Gassektors macht. Ob von Kapstadt Entwicklungsimpulse für periphere Standorte ausgehen, hängt von Entfernung sowie tarifären und nicht-tarifären Barrieren ab, sprich Distance und Division.

In anderen Veröffentlichungen wird statt der drei Ds die Literatur zu globalen Produktionsnetzwerken genutzt, um das Zusammenspiel von Gateway Cities und ihrem Hinterland zu erklären (insb. Coe et al., 2004; Coe & Yeung, 2015). Für Singapur und seine Nachbarländer wird deutlich, dass die Gateway City sich in vielen Belangen wegen höherer Effizienz und Skalenvorteilen durchsetzt. Vieles, was für das Einbinden ressourcenreicher Orte in Indonesien und Vietnam notwendig ist, findet nicht dort statt sondern in Singapur. Lediglich einfache, wenig gewinnträchtige Segmente von Öl- und Gasproduktionsnetzwerken verlagern sich ins Hinterland.

Die Studie zu Buenos Aires verdeutlicht, dass es nicht zwangsläufig zu einer derart starken Ballung von Aktivitäten in der Gateway City kommt. Die Verlagerung wichtiger Segmente der Produktionsnetzwerke an periphere Standorte ist durchaus möglich. Sekundärstädte, die vermeintlich im Agglomerationsschatten der Gateway City stehen, profitieren davon. Auch stehen Gateways nicht immer in Konkurrenz zum Hinterland. Mauritius konkurriert eher mit anderen afrikanischen oder sogar regionsexternen Gateways. Lediglich im Hinblick auf Finanztransfers und Steueroptimierungsmodelle liegt das vor, was Parnreiter (2019) in Anlehnung an Hadjimichalis (1984) als „geographical transfer of value“ beschrieben hat: in der Peripherie erzielte Gewinne werden an andere Orte verlagert, die wirtschaftliche Entwicklung der Peripherie dadurch behindert.

Berücksichtigt man zusätzlich die vielfältigen Probleme, die öl- und gasreiche Länder im Globalen Süden kennzeichnen, wird klar, dass Gateways und ihre Filtermechanismen alles andere als allein ursächlich für wirtschaftliche Stagnation im Hinterland sind. Der Beitrag zum Zusammenspiel von Kapstadt und Subsahara-Afrika veranschaulicht, dass endogene Barrieren vom Mangel an qualifizierten Arbeitskräften über Korruption und Probleme mit dem Rechtssystem bis zur geringen öffentlichen Sicherheit dazu führen, dass sich viele für den Öl- und Gassektor wichtige Tätigkeiten in einer Gateway City ballen.

Der letztgenannte Beitrag und zwei weitere wenden zudem das von Morris et al. (2012) entworfene Linkage-Konzept an und entwickeln es weiter. Im Hinblick auf öl- und gasreiche Provinzen in Argentinien wird erklärt, dass die Hoffnungen, in naher Zukunft wissensintensive Dienstleistungen zu exportieren, enttäuscht werden dürften. Für klein- und mittelständische Unternehmen typische

Probleme, vor allem der schwere Zugang zu Krediten und Technologien, führen dazu, dass lokale technische Dienstleister auf einfache Aufgaben beschränkt bleiben.

Auch in Namibia sind Linkages, wie im Artikel aus „Resources Policy“ ausgeführt, recht überschaubar, was vor allem am frühen Stadium der Öl- und Gasexploration liegt. Zusätzlich zu dieser Betrachtung, die ganz in der Tradition der PRISM-Literatur steht, sollten politische Aspekte von Ressourcenreichtum besser berücksichtigt werden. Die PRISM-Literatur leistet das bisher nicht. Der Beitrag überprüft daher, ob typische Merkmale des „Ressourcenfluchs“ auf Namibia zutreffen. Bei der Selbstbereicherung der Elite ist das der Fall. Mit anderen Worten, es wird eine weitere endogene Entwicklungsbarriere deutlich.

Die Habilitation bringt somit vor allem den PRISM-Ansatz und auch die Literatur zu globalen Produktionsnetzwerken beziehungsweise Wertschöpfungsketten voran. Die wirtschaftliche Entwicklung peripherer Standorten wird durch Städte beeinflusst, die als Bindeglieder dienen. Ihr Einfluss kann positiv oder negativ sein. Insbesondere die staatszentrische Perspektive der PRISM-Forschung in dieser Hinsicht unzureichend, denn in Gateway Cities ballen sich Aktivitäten, die zwecks wirtschaftlicher Entwicklung an periphere Standorte verlagert werden müssten. Sogenannte Schattenseiten globaler Produktionsnetzwerke werden deutlich, selbst wenn deren Ursache nicht nur die Gateways selbst sind. Endogene Hürden behindern wirtschaftliche Entwicklung an peripheren, ressourcenreichen Standorten. Dazu zählen auch politische Einflussfaktoren, die in dieser Habilitation besser als in der PRISM-Literatur berücksichtigt werden.

Forschungsbeiträge mit Bezug zu den vorgelegten Arbeiten

Das 2017 erschienene Schwerpunktheft der „Zeitschrift für Wirtschaftsgeographie“, das Javier Revilla Diez und ich organisiert haben, beinhaltet neben meinem Artikel zu Kapstadt zwei weitere Beiträge, in denen Weltstädte des Globalen Südens mit globalen Wertschöpfungsketten zusammengebracht werden. Die Autoren konzentrieren sich auf sehr unterschiedliche Phänomene. Ihre Arbeiten können als komplementär zu dieser Habilitation verstanden werden.

Parnreiters (2017) Beitrag ist an der etablierten Weltstadtforschung in der GaWC-Tradition ausgerichtet, rückt aber die bislang wenig beachteten Steuerungsfunktionen von unternehmensorientierten Dienstleistern in den Mittelpunkt. Weltstädte müssten weniger aus stadtgeografischer, sondern aus wirtschaftsgeografischer Sicht verstanden werden. Sowohl für Sassen (1991) als auch für ihre Vorläufer – zum Beispiel Cohen (1981) und Friedmann (1986) – habe die Frage nach der Rolle von Städten bei der Organisation und Steuerung weltwirtschaftlicher Prozesse entscheidende Bedeutung gehabt. Zumindest für Sassen sei es um unternehmensorientierte Dienstleister gegangen, die durch ihre Inputs Macht bei der Gestaltung der Weltwirtschaft ausübten. Weltstädte müssten deswegen als die Orte betrachtet werden, von denen unternehmensorientierte Dienstleister globale Wertschöpfungsketten steuern. Doch gerade die entsprechenden Praktiken blieben bisher unterbelichtet. Stattdessen gehe es meistens um in Weltstädten gebündelte Assets, die zur Ausübung von Macht notwendig seien.

Der empirische Abschnitt des Artikels zeigt anhand von Mexiko-Stadt, dass auch Weltstädte des Globalen Südens Governance-Knoten in Wertschöpfungsketten sind. In Mexiko-Stadt hat die große Mehrheit der in Mexiko aktiven unternehmensorientierten Dienstleister ihren Hauptsitz. Die

Landesteile, in denen die Automobil-, Computer- und Elektronikindustrie für Märkte im Ausland produziert, verfügen hingegen kaum über unternehmensorientierte Dienstleister. Auf Grundlage von Interviews mit Unternehmensvertretern erklärt Parnreiter, dass diese Dienstleister in Mexiko-Stadt nicht nur die anderen Landesteile in globale Wertschöpfungsketten einbinden. Sie beeinflussen die Entscheidungen der entsprechenden Lead Firms maßgeblich.

Der Beitrag von Haferburg und Oßenbrügge (2017) beginnt mit einer konzeptionellen und methodischen Kritik der Forschung zum Weltstädtenetzwerk, die sich an Robinson (2002) orientiert. Die Autoren argumentieren, dass sich die entsprechenden Schwächen der Weltstadtforschung – ihr Fokus auf Städte und Unternehmen aus dem Globalen Norden, einschließlich der Standortstrategien zweitgenannter – überwinden ließen, indem man Weltstädte und globale Wertschöpfungsketten gemeinsam betrachte. Im Hinblick auf städtische Wirtschaftspolitik gelte es, sich mit Clustern und regionalen Innovationssystemen zu beschäftigen. Deren Bezug zu den Strategien transnationaler Konzerne müsse untersucht und mit dem Aufwerten der Firmenaktivitäten an Standorten im Globalen Süden zusammengebracht werden. Mit anderen Worten, es geht um das „place making“ durch Weltstädte, das darauf abzielt, ihre Position in globalen Wertschöpfungsketten zu stärken.

Haferburg und Oßenbrügge wenden diese Ideen auf Johannesburg an. Sie zeigen, dass die Wirtschaft der Stadt seit der Demokratisierung Südafrikas durch die globale Einbindung geprägt ist. Bevölkerungs- und Flächenwachstum werden von Tertiärisierung begleitet. Investitionsströme, vor allem aus Europa und Nordamerika, erreichen Johannesburg. Für den Agglomerationsraum Gauteng, der neben Johannesburg die Städte Ekurhuleni und Pretoria umfasst, wird eine vielseitige Politik der Einbindung in die Weltwirtschaft verfolgt. Sie betrifft den Automobilsektor und die Pharmaindustrie, Finanzdienstleistungen, Logistik und Tourismus. Urbane Wachstumskorridore und -knoten sind zu einem wichtigen Planungsinstrument geworden. Gleichzeitig nimmt die sozialräumliche Polarisierung zu. Hochwertigen Bürostandorten mit technologisch moderner Infrastruktur und Gated Communities stehen Slums gegenüber. Der Beitrag schließt daher mit dem Appell, die Weltstadtforschung – wie von Rossi und Vanolo (2012) angeregt – enger an die Politische Geografie zu binden.

Am Ende des erwähnten DFG-Projekts stand ein Themenheft bei „Growth and Change“ – organisiert von Javier Revilla Diez, Moritz Breul, Andrés Rodríguez Pose und mir. Es beleuchtet Weltstädte als Knotenpunkte in globalen Produktionsnetzwerken. Die Beiträge entwickeln das Gateway-Konzept weiter, das im Artikel aus „Urban Geography“, der in dieser Habilitation enthalten ist, entworfen wurde. Ausgangspunkt des Themenhefts war ein von den Kollegen und mir organisiertes Panel auf der „Global Conference on Economic Geography“ im Jahr 2018.

Der oben bereits zusammengefasste Beitrag zum Themenheft von Martinus et al. (2021) geht auf Grundlage quantitativer Daten der Vielfalt von Gateway Cities nach. Die Autoren verstehen Gateway Cities als „broker“ in Handels- und Informationsströmen zwischen verschiedenen Akteuren und Sphären. In Anlehnung an Hesse (2016) schreiben sie, dass vor allem kleine Länder und Quasi-Staaten solche Rollen übernähmen, denn dort könnten lokale und nationalstaatliche Belange leicht miteinander vereint werden. Kleine Länder und Quasi-Staaten spezialisierten sich zudem wirtschaftlich, besetzten also Nischen, und führten so wichtige Aufgaben für größere Volkswirtschaften aus. Ihre herausragende Rolle in Netzwerken ermögliche es ihnen, hochwertige

wirtschaftliche Funktionen herauszubilden, die über ihre eigenen Möglichkeiten hinausgingen. Angewendet werden diese Gedanken auf Hongkong, Luxemburg, Panama-Stadt und Singapur. Martinus und ihre Co-Autoren zeigen, dass die Broker-Rolle von Fall zu Fall unterschiedlich ist. Das Hinterland in die Weltwirtschaft einzubinden, so wie es in dieser Habilitation erläutert wurde, ist eine dieser Formen.

Hutchinson (2021) weist in seinem Beitrag darauf hin, dass die Beziehungen zwischen einer Gateways City und ihrem Hinterland nicht zwangsweise auf die Gateway City ausgerichtet und in diesem Sinne hierarchisch sein müssen. Parallel zur Einbindung in weltwirtschaftliche Prozesse über die Gateway City kann es zu direkten und intensiven Beziehungen zwischen verschiedenen Teilen des Hinterlands kommen. Hutchinson verbindet das Gateway-Konzept daher mit dem Ansatz der grenzüberschreitenden Regionen. Diese sind seit den 1980er Jahren weltweit aufgrund einer Vielzahl politischer, sozialer und wirtschaftlicher Entwicklungen entstanden (siehe auch: Perkman & Sum, 2002).

Das Fallbeispiel des Artikels ist Singapur. Die Weltstadt diente während der 1990er und 2000er Jahre als Gateway nach Johor (Malaysia) und zu den Riauinseln (Indonesien). Einheimische Firmen und in Singapur ansässige transnationale Konzerne begannen, arbeitsintensive Tätigkeiten nach dort auszulagern. Kapital- und wissensintensive Komponenten globaler Produktionsnetzwerke verblieben in Singapur. Johor und die Riauinseln versorgen Singapur bis heute mit Lebensmitteln und Trinkwasser. Hunderttausende Arbeitsmigranten kommen täglich in den Stadtstaat. Gleichzeitig dienen Johor und die Riauinseln als Bindeglieder – also Gateways – zwischen Singapur auf der einen Seite und Indonesien beziehungsweise Malaysia auf der anderen. Darüber hinaus verfolgen beide Regionen Wirtschaftsstrategien, die eine direkte Interaktion unabhängig von Singapur ermöglichen. Bewohner der Riauinseln nutzen Bildungs- und Gesundheitsdienstleistungen in Johor. Für dessen Einwohner sind die Riauinseln ein Tourismusziel geworden.

Atienza et al. (2021) wenden das Gateway-Konzept, vor allem die von Breul et al. (2019) am Beispiel Singapurs nachgewiesenen „Filtermechanismen“, auf den Kupferbergbau in Chile an. Dieser ist im Norden des Landes, in der Region Antofagasta, konzentriert. Als Gateway bindet aber eher die mehr als 1.000 Kilometer entfernte Landeshauptstadt Santiago den Sektor in die Weltwirtschaft ein. Fast alle Lead Firms haben ihren chilenischen Hauptsitz in Santiago. Gleiches gilt für technische Dienstleister. Bei denjenigen, die ihren Sitz in Antofagasta haben, handelt es sich um klein- und mittelständische Unternehmen, die vergleichsweise einfache Dienstleistungen anbieten. Patentdaten deuten darauf hin, dass Wissen ebenfalls eher in Santiago als in Antofagasta geschaffen wird.

Für die Provinzhauptstadt Antofagasta prägen Atienza und seine Co-Autoren den Begriff der „backdoor city“. Darunter verstehen sie eine Stadt, die ein oder zwei Gateway-Funktionen übernimmt, aber kaum Aussichten auf nachhaltige Entwicklung und einen bedeutenden Anteil an den Gewinnen hat, die in den entsprechenden Produktionsnetzwerken erzielt werden. Sie möchten so eine konzeptionelle Lücke im Hinblick auf Städte schließen, die zwischen Gateways und dem Hinterland stehen. Sie zeigen, dass Antofagasta lediglich als Hafen, über den Kupfer verschifft wird, eine wichtige Rolle spielt. Zu Filtermechanismen wird außerdem herausgearbeitet, dass eine Vielzahl institutioneller, lokaler und unternehmensbezogener Faktoren dazu führt, dass im Kupfersektor erzielte Erträge in Santiago und nicht in Antofagasta realisiert werden. Dies ergänzen

die Autoren um die territoriale Einbettung des Sektors, die ebenfalls Vorteile für Santiago und Nachteile für Antofagasta mit sich bringt.

Der letzte Artikel, der hier Erwähnung finden sollte, wird demnächst in einem Themenheft von „Regional Studies“ erscheinen, in dem es um „brokerage“ in Regionen und Städten geht. Moritz Breul, Javier Revilla Diez und ich haben ebenfalls einen Beitrag für dieses Themenheft geschrieben (Scholvin et al., 2021). Während wir die Ergebnisse unseres DFG-Projekts zusammenführen und die Vielfalt von Städten als Gateways hinsichtlich ihrer Funktionen aufzeigen, greifen Sigler et al. (2021) die von Martinus et al. (2021) entworfenen fünf Brokerage-Formen auf. Dabei handelt es sich um konzeptionelle Abstraktionen, die ähnlich wie die verschiedenen Gateway-Funktionen miteinander kombiniert werden können. Auf diese Weise entstehen Broker-Typen – von „global city regions“, die wie London und Tokio alle Broker-Formen aufweisen, bis zu „nationalen Brokern“, die sich wie Moskau und Rom auf eine Koordinatorenrolle in einer Region beschränken. Sigler und seinen Co-Autoren geht es nicht darum, dass Städte als Bindeglieder in der Weltwirtschaft eine Vielzahl von Aufgaben übernehmen. Sie konzentrieren sich auf unternehmensinterne Netzwerke, also das Zusammenspiel von Konzernzentralen und untergeordneten Niederlassungen.

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Das Tor nach Sub-Sahara Afrika? Kapstadts Potenzial als Gateway City für den Öl- und Gassektor

The gateway to Sub-Saharan Africa? Cape Town's potential as a gateway city for the oil and gas sector

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Zusammenfassung: Aufstrebende Wirtschaftsmächte sind Impulsgeber für den Globalen Süden. Weltstädte in diesen Ländern binden periphere Standorte in globale Güterketten ein und ermöglichen somit dort wirtschaftliche Entwicklung. In diesem Artikel wird das Konzept der „Gateway Cities" entworfen und am Beispiel Kapstadts und des Öl- und Gassektors veranschaulicht. Konzepte, die den drei Ds – Density, Distance und Division – aus dem Weltentwicklungsbericht 2009 zugrunde liegen, sowie Linkages bilden den Ausgangspunkt, um die Rolle von Gateway Cities zu erklären.

Schlüsselwörter: Gateway Cities; globale Güterketten; Kapstadt; Linkages; Weltstädte.

Abstract: Emerging economies generate impulses for the Global South. World cities in these countries integrate peripheral places into global commodity chains, enabling the peripheral places to develop economically. In this article the concept of 'gateway cities' is drafted and exemplified by Cape Town and the oil and gas sector. The starting point of my explanation of the role of gateway cities is the three Ds – density, distance and division – from the 2009 World Development Report and linkages.

Keywords: Cape Town; gateway cities; global value chains; linkages; world cities.

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1 Einleitung

Seit den 1980er Jahren, verstärkt ab Beginn dieses Jahrtausends, haben einige Länder des Globalen Südens beeindruckende wirtschaftliche Aufholprozesse vollzogen. Besonders dynamisch ist Sub-Sahara Afrika – so titelte das Magazins *The Economist* vor vier Jahren „Emerging Africa: A Hopeful Continent". Selbst als steigende Zinsen in den USA zu einem massiven Kapitalabfluss aus Ländern wie Brasilien und Indien führten, blieb die wirtschaftliche Entwicklung in Sub-Sahara Afrika weitgehend positiv. Im Weltentwicklungsbericht von 2009 beschreiben Experten der Weltbank herausragende Wirtschaftsmächte des Globalen Südens, unter anderem Südafrika, als „Leading Areas". Wegen der Größe und Dynamik ihrer Volkswirtschaften komme ihnen die Rolle regionaler Wachstumsmotoren zu. Entwicklungsländer sollten die wirtschaftlichen Verflechtungen mit den Leading Areas in ihrer Nähe stärken, um so von Entwicklungsimpulsen zu profitieren.

Es gibt zahlreiche Untersuchungen dazu, wie China und Indien – die beiden größten aufstrebenden Wirtschaftsmächte – den Globalen Süden beeinflussen (u. a. Bangar/Kumar 2013; Gu 2009; Humphrey/Schmitz 2008; Kaplinski/McCormick/Morris 2007). Der Stand der Forschung zu anderen Schwellenländern ist hingegen lückenhaft und widersprüchlich. Außerdem leidet die Forschung zu diesen Ländern unter einer staatszentrischen Perspektive. Jedoch gehen die Impulse für wirtschaftliche Entwicklung in der Peripherie nicht von Schwellenländern als Ganzes, sondern von deren Weltstädten aus. Diese sind in vieler Hinsicht auf dem Niveau von Weltstädten des Globalen Nordens angekommen, wie Studien zu Doha, Dubai, Johannesburg, Mexiko-Stadt und Panama-Stadt zeigen (Sigler 2013; Parnreiter 2010; Parnreiter/Haferburg/Oßenbrügge 2013). Darüber hinaus sind Weltstädte im Globalen Süden Standort wichtiger Industrien. So ist

in Südamerika vor allem São Paulo Ausgangspunkt regionalwirtschaftlicher Verflechtungen, beispielsweise im Automobilsektor (Humphrey 2003; Ramos Schiffer 2002; Santos 2001). Südafrikas Provinz Gauteng, in der Johannesburg liegt, ist das industrielle Zentrum Sub-Sahara Afrikas (Akinboade/Lalthapersad-Pillay 2009; Tribe 2002). Mit anderen Worten: Wenn wir die Rolle aufstrebender Wirtschaftsmächte – oder Leading Areas – als wirtschaftliche Impulsgeber für den Globalen Süden verstehen wollen, müssen wir uns auf die globalen und insbesondere die regionalen Verflechtungen der Weltstädte in diesen Ländern konzentrieren.

Ich erhebe mit dieser explorativen Studie nicht den Anspruch, ausgehend von Kapstadt und dem Öl- und Gassektor Aussagen zu treffen, die im Detail notwendigerweise für andere Weltstädte und andere Wirtschaftssektoren gültig wären. Die hier vorgestellte Empirie dient dazu, das Konzept der Gateway Cities zu veranschaulichen. Dieser Artikel sollte als konzeptioneller Beitrag gelesen werden, der Anregungen dafür liefert, wie wir weltwirtschaftliche Prozesse, die den Globalen Süden prägen, und die Bedeutung von Weltstädten in Schwellenländern für diese Prozesse besser verstehen können. Das Konzept der Gateway Cities führt außerdem die Bemühungen von Parnreiter (2010, 2015) fort, globale Güterketten und Weltstädte zusammen zu denken.

Kapstadt ist gemäß der Untersuchungen der Forschungsgruppe Globalisation and World Cities (GaWC) eine der wenigen Weltstädte in Sub-Sahara Afrika. In der GaWC-Klassifizierung, die erfasst, wie stark Städte ins Weltstädtenetzwerk eingebunden sind, stieg Kapstadt vom Status „gamma“ in den Jahren 2000 und 2004 zu „gamma +“ 2008, „beta“ 2010 und „beta +“ 2012 auf, was die Bedeutung der Stadt verdeutlicht.[1] Der Öl- und Gassektor ist allein schon aufgrund der Lage entsprechender Ressourcen durch Verflechtungen zwischen Zentren, Semi-Peripherie und Peripherie der Weltwirtschaft gekennzeichnet. Er ermöglicht es, das Zusammenwirken von Orten unterschiedlichen Entwicklungsstandes zu untersuchen. Zudem betrachten die Regierungen der Stadt Kapstadt und der Provinz Western Cape, in der Kapstadt liegt, den Öl- und Gassektor als strategisch wichtig. Sie streben danach, Kapstadt zu einem Knotenpunkt für diesen Sektor in Sub-Sahara Afrika zu machen (City of Cape Town 2016; Western Cape Government 2002).

In diesem Artikel arbeite ich auf Grundlage von zwei in der Wirtschaftsgeografie prominenten Konzepten: globale Güterketten und Weltstädte. Ich zeige, dass Kapstadt das Potenzial hat, Sub-Sahara Afrika im Öl- und Gassektor global zu verknüpfen, und untersuche hierfür die Agglomeration transnationaler Unternehmen und mit dem Öl- und Gassektor verbundener Industrien sowie Dienstleistungsanbieter. Diese Faktoren, die sich im Sinne des Weltentwicklungsberichts von 2009 als „Density“ zusammenfassen lassen, wirken zusammen mit den im regionalen Vergleich hervorragenden institutionellen Rahmenbedingungen und der Rolle der Stadt als Verkehrsknoten. Die Verflechtung Kapstadts mit Sub-Sahara Afrika und entsprechende Entwicklungsimpulse, die sich aus Linkages ergeben, werden beeinflusst von „Distance“ – also die Kosten und Zeit, die Transport erfordert – und „Division“, was tarifäre und nicht-tarifäre Handelsbarrieren wie beispielsweise verschiedene Sprachen umfasst.

Dieser Artikel ist in fünf Abschnitte untergliedert: Zunächst erörtere ich, inwiefern sich globale Güterketten, Weltstädte und die Konzepte, die Density, Distance und Division – den drei Ds – zugrunde liegen, miteinander vereinbaren lassen. Anschließend stelle ich mein methodisches Vorgehen vor. Im vierten Abschnitt beschäftigte ich mich näher mit Density in Kapstadt sowie den dortigen institutionellen Rahmenbedingungen und Verkehrsinfrastruktur. Im fünften Abschnitt geht es um Distance, Division und Linkages. In den Schlussbemerkungen werden weiterführende Erkenntnisse und Probleme des Konzepts der Gateway Cities angesprochen.

2 Globale Güterketten, Weltstädte und die drei Ds

Die Forschung zu Weltstädten geht – neben zwei heute selten aufgegriffenen Vorläufern (Hymer 1972; Cohen 1981) – auf einen Artikel von Friedmann und Wolff zurück, die Weltstädte als „basing points“ des globalen Kapitals beschrieben. Weltstädte dienten als „banking and financial centres, administrative headquarters [and] centres of ideological control [...]. Without them, the worldspanning system of economic relations would be unthinkable“ (1982, 311 f.). Forschung in der Tradition von Friedmann und Wolff zielt auf die Beziehungen zwischen Konzernzentralen und untergeordneten Niederlassungen (u. a. Alderson/Beckfield 2004, 2012; Wall/van der Knaap 2012). Weitere Merkmale von Weltstädten und ihren Netzwerken werden aufgegriffen: unternehmensbezogene Dienstleistungen, insbesondere der Finanzsektor, und Infrastruktur für Kommunikation und Transport (u. a. Cai/Sit 2003; Knox/Taylor 1995).

1 Die GaWC-Klassifizierungen sind online verfügbar: www.lboro.ac.uk/gawc/gawcworlds.html.

Andere Forscher, vor allem diejenigen aus dem GaWC-Kontext, haben die Kontrolle weltwirtschaftlicher Prozesse mittels unternehmensbezogener Dienstleistungen in den Mittelpunkt gerückt. Ihr Argument in Anlehnung an Sassen (2001) ist, dass unternehmensbezogene Dienstleistungen – sogenannte „Advanced Producer Services" im Bank- und Finanzwesen, bei der Buchhaltung, bei der Rechtsberatung sowie für Werbung – entscheidend dafür seien, dass transnationale Unternehmen trotz steigender Komplexität internationalisierter Produktions- und Konsumprozesse effizient arbeiten können. Weltstädte seien die Orte, an denen hochwertige unternehmensbezogene Dienstleistungen geschaffen werden. Das mache Weltstädte – wegen unternehmensbezogener Dienstleister, nicht wegen Konzernzentralen – zu „highly concentrated command points" (Sassen 2001, 3), von denen aus die Weltwirtschaft organisiert werde. In Fortführung von Sassens Untersuchungen haben Beaverstock, Taylor und verschiedene Co-Autoren (1999, 2002a, 2002b) versucht, Netzwerke, in denen Weltstädten die Knoten und deren Verflechtungen die Kanten bilden, quantitativ zu fassen. Hierfür werden wichtige Dienstleister wie KPMG und Standard Chartered und ihre Niederlassungen gezählt. Letztendlich verharrt die GaWC-Methode somit allerdings dabei, zu zählen, was wir in Weltstädten finden.

Globale Güterketten – als Forschungskonzept geprägt durch Sammelband *Commodity Chains and Global Capitalism* – helfen, dieses Problem anzugehen. Sie stellen entlang einer Kette alle Akteure dar, die am Produktions- und Konsumprozess eines spezifischen Gutes mitwirken. Auf diese Weise lassen sich die Auswirkungen von Dynamiken an einem Ort auf andere Orte erklären. Globale Güterketten zeigen also die einzelnen Segmente von Produktions- und Konsumprozessen auf. Eine solche Betrachtung ermöglicht es mir, mich im Öl- und Gassektor auf diejenigen Segmente von Güterketten zu konzentrieren, die sich in Kapstadt, in der Gateway City, befinden. Allgemeiner gesprochen: Gewisse Segmente von Güterketten – diejenigen, die Güterketten kontrollieren oder zumindest managen – sind in Weltstädten verortet; so die Schlussfolgerung aus der eben zusammengefassten Forschung.

Der Begriff der Gateway City ist in verschiedenen Kontexten in der Stadt- und Wirtschaftsgeografie verwendet worden. Er geht zurück auf einen Beitrag von Burghardt, der Gateway Cities als „an entrance into (and necessarily an exit out of) some area" (1971, 269) definiert und sie als Orte versteht, von denen Kontrolle über die Verbindungen zwischen dem Hinterland und der restlichen Welt ausgeübt wird. Burghardt bezog sich neben Verkehrsinfrastruktur auf unternehmensbezogene Dienstleistungen – von Immobilienmaklern und Kreditinstituten bis zu Hotels und Restaurants – als Indikatoren. Ohne auf ihn Bezug zu nehmen, arbeiten andere Autoren heraus, dass Gateway Cities Stabilitätsanker in ansonsten problematischen Regionen sind (Kanna 2007; Nijman 2007). Grant und Nijman (2002) untersuchen Accra und Mumbai als Gateway Cities. Ihr Interesse beschränkt sich darauf, wie sich einzelne Stadtteile als Standorte lokaler, nationaler und internationaler Unternehmen entwickelt haben.

In der Weltstadtforschung machen Taylor et al. (2002) sogenannte „Regional Command Centres" aus, allerdings ohne deren Rolle näher zu untersuchen. Die Arbeiten von Martinus und Tonts (2015) und Martinus et al. (2016) zeigen, dass „Globalizing Centres" regionale Wirtschaftssysteme in die Weltwirtschaft einbetten. Wie und warum Städte entsprechende Verbindungen schaffen, beantworten die quantitativen Studien allerdings nicht. Rossi, Beaverstock und Taylor (2005, 2007) untersuchen brasilianische Städte als „Service Cities", deren unternehmensbezogene Dienstleistungen entscheidend für die Internationalisierung brasilianischer Firmen seien. Ob diese Städte helfen, dass brasilianische Hinterland in globale Güterketten einzubinden, bleibt offen. Auch beschränken sich diese Beiträge genauso wie die Arbeiten von Parnreiter (2010, 2015) zu Hamburg und Mexiko-Stadt auf unternehmensbezogene Dienstleistungen. Dies entspricht der Forschungstradition zu Weltstädten, ist aber, wie ich weiter unten ausführe, ein eingeschränkter Blick, der viele Verknüpfungsfunktionen von Gateway Cities nicht erfasst. Wesentlich breiter angelegt ist Siglers (2013) Beitrag zu „Relational Cities", die er als Städte versteht, die eine intermediäre Rolle einnehmen. Unklar bleibt zumindest bei einigen der Merkmale, die Sigler herausarbeitet, inwiefern sie für eine Gateway-Rolle wichtig sind.

Auch bisher nicht näher untersucht ist, wie sich Gateway Cities auf die peripheren Standorte auswirken, die sie in weltwirtschaftliche Prozesse einbinden. In Sinne der eingangs erwähnten Debatte zu aufstrebenden Wirtschaftsmächten des Globalen Südens soll in diesem Artikel herausgearbeitet werden, dass Gateway Cities nicht nur entscheidende Bindeglieder in globalen Güterketten sind, sondern auch Entwicklungsimpulse an periphere Standorte übermitteln. Somit lassen sich Gateway Cities als Knoten in globalen Güterketten, als zentrale Elemente in einem System von Hubs and Spokes verstehen. In dieser Perspektive liegt der wesentliche Unterschied zwischen Gateway Cities und der etablierten Forschung zu Weltstädten: Bei Gateway Cities geht es um die wirtschaftliche Rolle von Städten für nicht-urbane Räume und weniger um die Verflechtungen von Weltstädten miteinander.

Ein Grund für diese Rolle von Gateway Cities sind Vorteile, die sich aus der räumlichen Ballung von Firmen

ergeben. Institutionelle Rahmenbedingungen ermöglichen es Unternehmen zudem, in Weltstädten die aus ihrer Sicht besten Formen der Zusammenarbeit mit Partnern zu wählen (Meyer/Revilla Diez 2014; Meyer/Schiller/ Revilla Diez 2012). Darüber hinaus haben verschiedene Forscher herausgestellt, dass einige Weltstädte – gerade solche, die eine Gateway-Rolle einnehmen – Verkehrsknoten sind (Grubesic/Matisziw 2012; Hesse 2010; Jacobs et al. 2010). Verkehrsknoten sind Orte, an denen Güterketten besonders anschaulich territorial eingebettet sind. Güterketten und Weltstädte als Ansätze zusammenzubringen, macht darüber hinaus wegen der oben erwähnten Rolle von Weltstädten im Globalen Süden als bedeutende Industriestandorte Sinn. Sie verarbeiten Inputs aus ihrer Peripherie und beliefern diese mit Konsumgütern (Scholvin/Draper 2012). Im Globalen Süden sollte man des Weiteren unter Dienstleistungen mehr als nur Advanced Producer Services fassen. Um Orte wie Port Gentil in Gabun oder Pemba in Mosambik global zu verknüpfen, bedarf es zusätzlich zu betriebswirtschaftlichen Dienstleistungen im Banken- und Finanzwesen, der Buchhaltung, Rechtberatung und Werbung auch technische Dienstleistungen wie das Ausbilden von Arbeitskräften oder das Warten von Maschinen. Dies ist an peripheren Standorten zumeist nicht machbar.

Aus diesen konzeptionellen Überlegungen folgt, dass für Kapstadts Rolle als Gateway nach Sub-Sahara Afrika vier Faktoren von Bedeutung sind. Diese Faktoren können als zu überprüfende Hypothesen im Sinne von „Kapstadt ist eine Gateway City, weil …“ verstanden werden: Erstens ist in Kapstadt eine Ballung transnationaler Öl- und Gasunternehmen zu erwarten. Zweitens sollte es dort mit dem Öl- und Gassektor verwandte Industrien und Dienstleistungen in großer Anzahl und Vielfalt geben. Drittens müssten institutionelle Rahmenbedingungen besser als an konkurrierenden Standorten sein. Viertens sollte Kapstadt durch Verkehrsinfrastruktur global und regional gut verflochten sein. Diese Faktoren begründen einen weiteren Unterschied zwischen Untersuchungen von Gateway Cities und Weltstädten, denn bei erstgenannten geht es um mehr als unternehmensorientierte Dienstleistungen.

Diese Argumente finden sich teils auch im Weltentwicklungsbericht des Jahres 2009, der als eine Synthese von Konzepten, die in der Geografie traditionell als bedeutsam angesehen werden, gelesen werden sollte. Der Weltentwicklungsbericht bietet keine Grundlagentheorie. Er fasst wichtige Debatten in der Wirtschaftsgeografie und den Wirtschaftswissenschaften zusammen, illustriert Kausalfaktoren und übersetzt all dies in politische Handlungsempfehlungen. Wirtschaftsgeografen haben den Weltentwicklungsbericht und die damit in Verbindung stehenden Arbeiten von Krugman teils heftig kritisiert (u. a. Martin/Sunley 1996; Rodríguez-Pose 2010). Für meinen Ansatz ist der Weltentwicklungsbericht dennoch hilfreich, weil er mit den drei Ds einen Rahmen bietet, der hier als Startpunkt für Untersuchungen und strukturierendes, nicht aber erklärendes Element genutzt werden soll.

Im Weltentwicklungsbericht wird herausgearbeitet, dass Density entscheidend für wirtschaftliche Entwicklung ist. Density lässt sich als das verstehen, was die Geographical Economics als Agglomerationseffekte begreift (Krugman 1991a, 1991b, 1992). Diese führen unter gewissen Bedingungen zu einer räumlichen Ballung wirtschaftlicher Tätigkeiten wegen Skalenerträgen: Effekte der Input-Beschaffung, sprich Backward Linkages, und Effekte der Output-Verwendung, also Forward-Linkages (Krugman 1991b; Krugman/Venables 1990, 1995; Venables 1996). Bereits Lloyd und Dicken (1972) betonten in ihrem Werk *Location in Space*, das als Klassiker der Raumwirtschaftslehre gelten kann, die Bedeutung räumlichen Ballung und damit einhergehender Skalenerträge. Density verdeutlicht zudem die Verknüpfung von Güterketten und Weltstädten: In Weltstädten ballen sich Akteure, deren räumliche Nähe dafür entscheidend ist, dass globale Güterketten funktionieren. Allerdings ist das an Dienstleistungen orientierte Verständnis von Density der Weltstadtforschung nur schwer mit dem auf industrielle Produktion ausgerichteten Ansatz der Geographical Economics vereinbar. Statt Skalenerträgen geht es um nicht-kodifizierbares Wissen, das räumliche Nähe erfordert, wie beispielsweise Parnreiter (2015) empirisch und Storper (1995, 1997) konzeptionell zeigen.

Um zu untersuchen, wie Orten der Dichte Entwicklungsimpulse in die Peripherie übertragen, werden im Weltentwicklungsbericht 2009 die Kategorien Distance und Division verwendet. Auch diesen Kategorien liegen klassisch raumwirtschaftliche Konzepte zugrunde (u. a. Lloyd und Dicken 1972). Distance und Division machen die Vielzahl an Weltstädten und die unternehmensbezogenen Dienstleistungen, die für transnationale Unternehmen dort angeboten werden, erst erforderlich. Die weltweit verstreuten Orte, an denen transnationale Unterhemen aktiv sind, sind kulturell und politisch, bei Rechtssystemen und Sprachen sowie Produktspezifikationen und anderen Faktoren so divers, dass transnationale Unternehmen ohne die Hilfe vor Ort vertretener unternehmensbezogener Dienstleister nicht effizient arbeiten könnten (Bryson et al. 2004). Doch auch Distance und Division lassen sich nicht reibungslos mit der Forschung zu Weltstädten vereinbaren, weil sich diese erstens auf die Verbindungen zwischen Weltstädten beschränkt, also deren Verbindungen mit peripheren Orten nicht berücksichtigt, und

zweitens bei der Untersuchung des Weltstädtenetzwerkes nicht auf etwaige Barrieren zwischen Weltstädten eingeht. Betrachtet man Weltstädte allerdings als Impulsgeber für Entwicklung an peripheren Standorten, so sind Distance und Division von Bedeutung. Sie beeinflussen, in welchem Ausmaß ein peripherer Standort in globale Güterketten eingebunden wird.

Jedoch ist das Überwinden von Distance und Division eine notwendige, keine hinreichende Bedingung für wirtschaftliche Entwicklung an peripheren Standorten. Es kommt darauf an, wie deren Einbettung in globale Güterketten im Detail gestaltet ist. Um dies zu untersuchen, haben zahlreiche Arbeiten, die an der Universität Kapstadt als „Policy Research in International Services and Manufacturing", kurz PRISM, entstanden sind, den von Hirschman (1958, 1981) geprägten Begriff der Linkages aufgegriffen.[2] In den PRISM-Studien geht es darum, wie der primäre Sektor zu einem Motor der Industrialisierung werden kann. Dienstleistungsanbieter und das produzierende Gewerbe sollen, so die Erwartung, von Backward- und Forward-Linkages profitieren. Das wiederum habe positive Effekte auf Beschäftigung, Kapitalbildung, das innovative Potenzial lokaler Firmen und die Qualifikation von Arbeitskräften. Durch Forward-Linkages stiegen zudem die Exporterlöse, weil verarbeitete Güter statt Rohstoffen ausgeführt würden.

Linkages, die sich aus der Einbindung eines Ortes in globale Güterketten ergeben können, lassen sich in drei Bereiche unterteilen: Steuerliche Linkages entstehen, wenn Unternehmen und deren Angestellte Steuern zahlen. Beim Abbau von Rohstoffen kommen Royalties hinzu. Diese Gelder können zur Wirtschaftsförderung, zum Beispiel durch den Ausbau von Infrastruktur, verwendet werden. Konsumlinkages beziehen sich auf die gesteigerte Nachfrage nach lokal produzierten Konsumgütern, für die im Rohstoffsektor erwirtschaftete Löhne und Gewinne ausgegeben werden. Produktionslinkages sind entweder Vorwärtsverknüpfungen – Rohstoffe werden weiterverarbeitet und Industrialisierungsprozesse so in Gang gesetzt – oder Rückwärtsverknüpfungen, die die Nachfrage nach Inputs betreffen, zum Beispiel Maschinen für Abbau und Verarbeitung der Rohstoffe.

Während man das Auftreten von steuerlichen Linkages und Konsumlinkages schwer in Frage stellen kann, hängen Produktionslinkages von zwei Aspekten ab: Sind die lokalen Bedingungen ausreichend, um Dienstleistungen und Produkte, die den Ansprüchen transnationaler Konzerne genügen, herzustellen? Entscheiden sich diese Konzerne für entsprechende Outsourcing-Strategien? Bezüglich der zweiten Frage legen PRISM-Studien nahe, dass transnationale Unternehmen, die in Sub-Sahara Afrika Ressourcen fördern, prinzipiell andere Segmente ihrer Güterketten dorthin verlagern, insofern die Rahmenbedingungen dies ermöglichen (u. a. Morris/Kaplinsky/Kaplan 2012). Auf die erste Frage, also eben diese Rahmenbedingungen, konzentriere ich mich in diesem Artikel.

3 Methodisches Vorgehen

Meine empirische Untersuchung beginnt mit der lokalen Einbettung der Öl- und Gasgüterkette in Kapstadt. Hierbei handelt es sich um Segmente, die diese Güterkette managen oder kontrollieren, wichtige, betriebswirtschaftliche und technische Dienstleistungen liefern und Rohstoffe industriell verarbeiten. Ich beziehe mich auf Informationen von den Websites transnationaler Unternehmen, die Datenbank „A Barrel Full" und das Oil and Gas Directory – eine Online-Datenbank der South African Oil and Gas Alliance (SAOGA), die lokale Dienstleister aufführt. Außerdem werte ich 14 narrative Interviews mit Vertretern aus Politik und Wirtschaft, die ich 2014 und 2016 in Namibia und Südafrika geführt habe, sowie vier Indexe aus: den Liner Shipping Connectivity Index und den Logistics Performance Index mit Hinblick auf Kapstadt als Verkehrsknoten; die Doing Business Reports und die Worldwide Governance Indikatoren bezüglich institutioneller Rahmenbedingungen. Anschließend geht es um die Verflechtungen zwischen Kapstadt und peripheren Orten. Hierfür habe ich Daten zu Flug- und Seeverbindungen Kapstadts erhoben. Diese Informationen werden mit Erkenntnissen aus den zuvor erwähnten Interviews und bereits veröffentlichten Studien zusammengebracht. Hinzu kommen Erörterungen zur regionalen Integration, die auf vorhandener Literatur basieren.

Die Interviews wurden entlang eines Leitfadens, bestehend aus acht Fragen zu Standortvor- und Standortnachteilen sowie regionalwirtschaftlichen Verflechtungen, geführt. Je nach Gesprächspartner wurde der Leitfaden vorab geringfügig angepasst. Für jede Frage habe ich vor den Gesprächen Kategorien entlang des hier entworfenen konzeptionellen Rahmens gebildet. Diese Kategorien dienten dazu, während der Interviews sicher zu stellen, dass alle relevanten Themen angesprochen werden. In der Auswertung habe ich die Informationen aus den Gesprächen in Skizzen und Tabellen entsprechend der Kategorien geordnet, kausale Zusammenhänge nachgezeichnet und miteinander verglichen. Der narra-

2 Die PRISM-Studien sind online verfügbar: www.prism.uct.ac.za/publications.aspx.

tive Charakter der Interviews ermöglichte es meinen Gesprächspartnern, auf Sachverhalte einzugehen, die durch meine ursprünglichen Kategorien nicht abgebildet wurden. Die Interviewpartner habe ich mithilfe des Oil and Gas Directory und im Schneeballverfahren identifiziert. Sie spiegeln die Bandbreite des Öl- und Gassektors wider: von Ingenieursfirmen mit weniger als 20 Angestellten über international agierende Chemieunternehmen bis zu multinationalen Konzernen wie BP und Shell. Auch Lobby- und Wirtschaftsförderorganisationen wurden befragt.

4 Density: der Öl- und Gassektor in Kapstadt

Anadarko, Chevron, Eni, PetroSA, Sasol, Total und Tullow Oil sind die wichtigen transnationalen Konzerne, die in Kapstadt ansässig sind. Ihnen stehen zahlreiche Firmen wie Ernst & Young und KPMG als Partner zur Verfügung. Die Dienstleister-Datenbank der SAOGA zeigt, dass speziell für den Öl- und Gassektor wichtige Dienstleistungen von Offshore-Ingenieurarbeiten über Helikoptertransporte bis zur Beschaffung von Arbeitsvisa angeboten werden. Darüber hinaus finden in Kapstadt wichtige jährliche Konferenzen wie die Africa Oil Week und die Oil & Gas Africa Conference statt. Bei diesen Konferenzen kommen führende Manager transnationaler Konzerne mit südafrikanischen Politikern und Öl- und Gasexperten zusammen. Lokale und auswärtige Firmen stellen Dienstleistungen und Produkte vor. Die lokale Ölraffinerie bringt es auf ein maximales Output von 110.000 Barrel pro Tag. Sie ist im Besitz von Chevron und einer der nur drei Versorgungsknoten, die dieses Unternehmen weltweit betreibt. Kapstadt ist damit einer der wenigen und hinsichtlich seiner Kapazität herausragenden Raffineriestandorte in Sub-Sahara Afrika, wenn auch nicht der Bedeutendste.

Die Zusammenarbeit von lokalen Firmen, vor allem solchen, die technische Dienstleistungen anbieten, und transnationalen Konzernen wird von der Provinz Western Cape und der Stadt Kapstadt gefördert. Unter lokale technische Dienstleister fallen Unternehmen wie DCD Marine und Dormac, die an verschiedenen Standorten in Sub-Sahara Afrika aktiv sind, und Belmet, dessen Internationalisierung erst begonnen hat. Hinzu kommt eine Vielzahl von Firmen, die wie beispielsweise Walemarine auf Kapstadt beschränkt sind. Im Jahr 2003 gründeten Provinz und Stadt zusammen die Cape Oil and Gas Supply Initiative (COGSI). Sie beruht auf einem Papier der Beratungsfirma McKinsey, in dem vier strategisch wichtige Sektoren identifiziert werden, auf die sich das Western Cape in seiner Wirtschaftsförderung konzentrieren soll. Mittlerweile ist die COGSI in die SAOGA übergegangen. Die SAOGA ist eine öffentlich-private Partnerschaft, die darauf zielt, den Mid- und Upstream-Bereich zu fördern.[3] In ihrem Aufsichtsrat sind einige der weltweit größten Akteure des Öl- und Gassektors vertreten. Auch wenn die SAOGA die Entwicklung des Öl- und Gassektors landesweit vorantreiben möchte, spielt Kapstadt für den Öl- und Gassektor eine herausgehobene Rolle.

Kapstadt profitiert von seiner Nähe zu den Öl- und Gasfeldern Sub-Sahara Afrikas. Andere Städte wie Accra und Dubai, die versuchen, sich als Gateways für den Sektor ins Spiel zu bringen, erreichen entweder die Felder an der Ost- oder Westküste des afrikanischen Kontinents, nicht wie Kapstadt beide. Da im Öl- und Gassektor, zum Beispiel bei kurzfristig anfallenden Reparaturen, ein enormer Zeitdruck herrscht, sollte man den Standortvorteil Nähe nicht unterschätzen. Des Weiteren sind die größten Öltanker zu groß für den Suez-Kanal und kommen auf ihrem Weg vom Persischen Golf nach Europa oder an die Westküste Nordamerikas an Kapstadt vorbei. Gleiches gilt für Tanker, die von Westafrika nach Fernost fahren. Diese Lage an einer der wichtigsten Schifffahrtsrouten der Welt steigert Kapstadts Attraktivität und eröffnet Chancen, den Hafen der Stadt für Reparatur- und Versorgungsarbeiten sowohl an vorbeifahrenden Schiffen als auch für Bohrplattformen, die in China oder Indien gebaut und in Westafrika eingesetzt werden, zu nutzen. Ein leitender Mitarbeiter der SAOGA stellte diese Lagevorteile in einen historischen Zusammenhang und sagte, dass Kapstadt seit der Kolonialzeit eine aktive und global verknüpfte Hafenstadt gewesen sei. Dies habe den ersten Impuls für die lokale Ballung von Industrien und Dienstleistungen, die für den Öl- und Gassektor wichtig sind, gegeben.[4]

Diese Standortvorteile werden durch die Entwicklung des Hafens von Saldanha Bay, etwa 120 Kilometer nördlich von Kapstadt, bestärkt. Während der Hafen in Kapstadt durch Grenzen für den Tiefgang von Bohrplattformen und Schiffen eingeschränkt ist, handelt ist sich bei Saldanha Bay um einen natürlichen Tiefseehafen. 2013 startete mit der Saldanha Bay Industrial Development Zone (SBIDZ) ein Projekt, dass Saldanha Bay zu einem Cluster für den Öl- und Gassektor, zu einem „one stop shop", machen soll. Von Saldanha Bay aus soll ganz Sub-Sahara Afrika ver-

3 Der Öl- und Gassektor wird für gewöhnlich in drei Bereiche unterteilt: Der Upstream-Bereich beinhaltet Exploration, einschließlich Testbohrungen. Zum Midstream-Bereich zählen Transport, Lagerung und Verkauf von Öl und Gas an Großhändler. Das Raffinieren von Rohöl und das Reinigen von Erdgas sowie den Verkauf an Endverbraucher rechnet man zum Downstream-Bereich.

4 Persönliches Gespräch in Kapstadt am 4. März 2014.

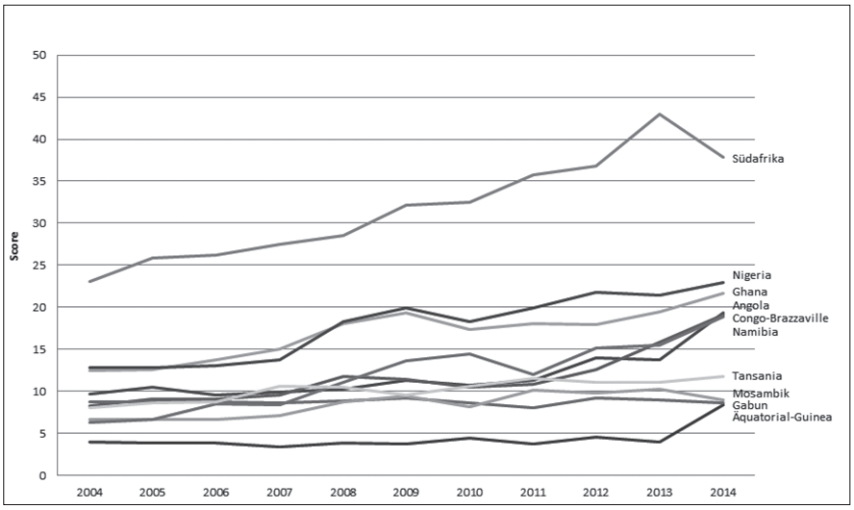

Abbildung 1: Liner shipping connectivity index. Quelle: UN Conference on Trade and Development 2015.

sorgt werden, insbesondere bei lukrativen Reparatur- und Wartungsarbeiten an Bohrplattformen, aber auch für die Reparatur und Wartung von Schiffen, die im Öl- und Gassektor eingesetzt werden, die Herstellung von Ausrüstung und Maschinen sowie auf den Sektor zugeschnittene Logistikaufgaben. Die SBIDZ wird als Freihafen entwickelt. Investoren wird also die Mehrwertsteuer erlassen. Sie zahlen keine Zölle für Güter, die sie in die SBIDZ ein- oder aus ihr ausführen.[5]

Kapstadts Standortvorteil im Seeverkehr – im Vergleich zu Häfen in sub-saharischen Ländern, die momentan Öl und Gas exportieren oder dies in Zukunft machen dürften – lässt sich durch den Liner Shipping Connectivity Index bestätigen.[6] Der Index ist auf nationaler Ebene aggregiert, gibt also nur bedingt Auskunft über Kapstadt. Da Kapstadt nach Durban und Richards Bay der drittgrößte Hafen in Südafrika ist, kann aber davon ausgegangen werden, dass der Index Kapstadts Verflechtung zu See zutreffend wiedergibt. Darüber hinaus bietet Kapstadt ein Logistikumfeld, das, gemessen über den Logistics Performance Index,[7] deutlich besser als der Durchschnitt in Sub-Sahara Afrika ist (Weltbank 2014). Unternehmen, die auf Logistik angewiesen sind, sollten Kapstadt oder zumindest einen Standort in Südafrika in Erwägung ziehen (Abbildung 1).

Öl- und Gasgüterketten werden aufgrund der Kapital- und Technologieintensivität des Sektors von einer sehr geringen Anzahl transnationaler Unternehmen kontrolliert. Diese entscheiden, welche Firmen, welche Aufgaben zu welchem Preis und an welchem Ort übernehmen (Gereffi 1994). Vertreter von Dienstleistungsanbietern gaben deswegen an, dass sie in Kapstadt seien, weil sich ihre „Ankerkunden" beziehungsweise „alle unsere wichtigen Kunden" dort befänden.[8] Dieses Argument spielt besonders im Upstream-Bereich eine große Rolle, denn es gibt in Sub-Sahara Afrika noch großes Potenzial für die Exploration von Öl- und Gasvorkommen. Nur in Kapstadt findet sich die Vielfalt an Dienstleistern und mit dem Öl- und Gassektor verbundenen Industrieunternehmen, die transnationale Konzerne benötigen, um erfolgreich arbeiten zu können, so die Einschätzung des nationalen Repräsentanten eines multinationalen Konzerns, der sich auf Exploration und Förderung spezialisiert hat. Dieser Gesprächspartner und der Vertreter eines multinationalen Unternehmens, das Öl und Gas in Namibia exploriert, betonten jedoch, dass die Lead Firms des Sektors in den Hauptstädten der Länder, in denen sie aktiv sind, Repräsentanzen haben. Diese seien zumeist direkt den Konzernzentralen, manchmal Regionalmanagern an unterschiedlichen Standorten

5 Diese und weitere Informationen zur SBIDZ sind online verfügbar: www.sbidz.co.za.

6 Der Liner Shipping Connectivity Index setzt sich aus fünf Bestandteilen zusammen: der Anzahl an Schiffen, deren Kapazität im Containertransport, der maximalen Schiffsgröße, der Anzahl an Dienstleistungen und der Anzahl an Firmen, die Containerschiffe in die Häfen eines Landes schicken. Der Wert für das Land mit der besten Leistung im Jahr 2004 wird gleich 100 gesetzt. Alle anderen Werte beziehen sich darauf.

7 Der Logistics Performance Index stützt sich auf eine weltweite Umfrage mit Logistikunternehmen. Diese machen Angaben zum Arbeitsumfeld in den Ländern, in denen sie aktiv sind. Der Index nimmt Werte zwischen 0 (sehr schlecht) und 5 (sehr gut) an. Er setzt sich aus sechs Komponenten zusammen: Infrastruktur, Logistikleistung, Nachvollziehbarkeit, Pünktlichkeit, internationaler Versand und Zollabfertigung.

8 Persönliche Gespräche in Kapstadt am 26. Februar 2014 und 5. März 2014.

Tabelle 1: Ölraffinerien in Sub-Sahara Afrika.

Raffinerie	Standort	Kapazität (Barrel)
Port Harcourt Refinery	Port Harcourt (Nigeria)	210.000
Sapref Durban Refinery	Durban (Südafrika)	172.000
Engen Durban Refinery	Durban (Südafrika)	125.000
Warri Refinery	Warri (Nigeria)	125.000
Caltex Capetown Refinery	Kapstadt (Südafrika)	110.000
Kaduna Refinery	Kaduna (Nigeria)	110.000
Natref Sasolburg Refinery	Sasolburg (Südafrika)	87.500
Mombasa Refinery	Mombasa (Kenia)	90.000
Abidjan Refinery	Abidjan (Elfenbeinküste)	71.000
Tema Refinery	Tema (Ghana)	45.000
Limbe Refinery	Cape Lemboh Limbe (Kamerun)	42.000
Luanda Refinery	Luanda (Angola)	39.000

Quelle: A Barrel Full 2017. Hinweis: Es sind nur Raffinerien mit einer Kapazität von mindestens 30.000 Barrel pro Tag aufgeführt.

untergeordnet. Den Büros in Kapstadt komme selten keine Kontroll- oder Steuerungsfunktion zu.[9]

Für Kapstadts Potenzial als Gateway City entscheidend sind somit die technischen Dienstleister. So betonte ein Vertreter der Organisation Wesgro, die Handel und Investitionen im Western Cape fördert, dass Südafrikas Expertise im Bereich Ingenieurwesen einzigartig in Sub-Sahara Afrika und entscheidend für Öl- und Gasexploration sei.[10] Der Gesprächspartner von der SAOGA merkte allerdings an, dass Johannesburg hier besser aufgestellt sei. Der Mitarbeiter von Wesgro ergänzte, dass Südafrikas Wirtschaftsmetropole einen größeren und besser verknüpften Flughafen habe. Weil Explorationsprojekte momentan eher in Mosambik und Ostafrika als entlang der afrikanischen Atlantikküste stattfinden, hat zudem Durban einen gewissen Standortvorteil: räumliche Nähe. Noch deutlicher sind Durbans Vorteile im Downstream-Bereich, denn die beiden größten Raffinerien des Landes befinden sich dort. Sie sind per Pipeline mit Gauteng – wie bereits gesagt dem Wirtschaftszentrum Südafrikas – verbunden. Kapstadts Potenzial als Gateway im Downstream-Bereich stützt sich, so der Gesprächspartner der SAOGA, darauf, dass in der Region die Nachfrage nach Benzin und Diesel, getragen von einer generell positiven Wirtschaftsentwicklung und der wachsenden Mittelschicht, steigt. Wie in Tabelle 1 gezeigt, gibt es in Sub-Sahara Afrika kaum Raffineriekapazitäten – abgesehen von Nigeria und Südafrika und mit Einschränkungen auch Angola, der Elfenbeinküste, Ghana, Kamerun und Kenia. Letztgenannte haben zu kleine Kapazitäten, um wettbewerbsfähig zu produzieren. Von Kapstadt aus kann also ein recht großer und vergleichsweise dynamischer Markt erschlossen werden. Gleiches gilt natürlich für Durban.

Ein weiterer Standortvorteil Kapstadts sind rechtliche und steuerrechtliche Rahmenbedingungen, die sich in Südafrika wenig, dafür in Sub-Sahara Afrika umso mehr unterscheiden. So zeigen die Worldwide Governance Indikatoren,[11] dass Südafrika in den letzten zehn Jahren der Berichterstattung stets weit vor den aktuellen und zukünftigen öl- und gasexportierenden Ländern Sub-Sahara Afrika hinsichtlich effizienter Regierungsführung und des regulatorischen Umfelds lag. Bei Korruptionskontrolle und Rechtstaatlichkeit erreichten Ghana und Namibia vergleichbar gute Werte (Weltbank 2015a). Die Doing Business Reports legen darüber hinaus nahe, dass die Bedingungen in Kapstadt für mögliche lokale Partner transnationaler Unternehmen günstig sind.[12] Solche Partner, die Dienst-

9 Persönliches Gespräch in Kapstadt am 11. August 2016 und in Windhuk am 18. August 2016.

10 Persönliches Gespräch in Kapstadt am 6. März 2014.

11 Die Worldwide Governance Indikatoren bewerten das institutionelle Umfeld in 215 Ländern. Sie beinhalten sechs Dimensionen: Effektivität verschiedener Regierungsebenen, Kontrolle von Korruption, regulatorische Rahmenbedingungen, Rechtstaatlichkeit, politisches Mitspracherecht und Verantwortlichkeit der Elite sowie politische Stabilität und Gewalt.

12 Die Doing Business Reports beinhalten Indikatoren zur Regulierung der Wirtschaft und zum Schutz von Unternehmenseigentum. Diese können für 189 Länder verglichen werden und zeigen, wie schwer es ist, ein kleines oder mittelgroßes Unternehmen zu gründen und zu führen, unter anderem mit Hinblick auf Baugenehmigungen, Rechtssicherheit, Stromversorgung und Zugang zu Krediten.

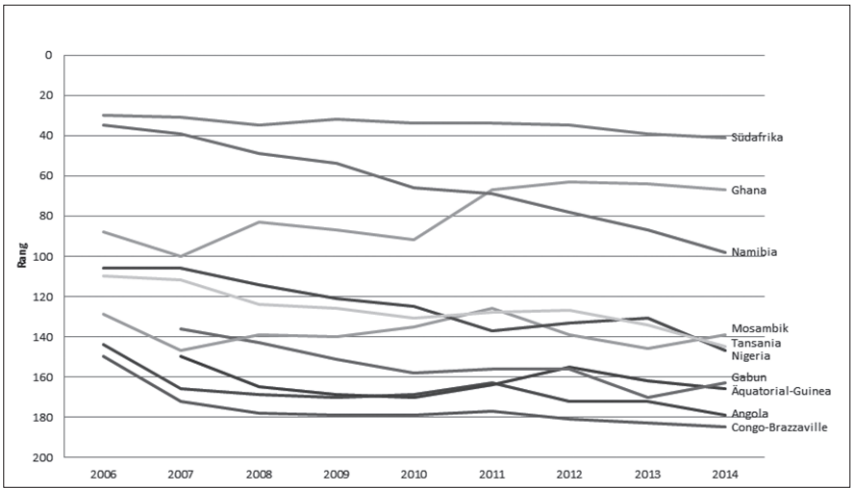

Abbildung 2: Doing business ranking. Quelle: Weltbank 2015b.

leistungen und Industrieprodukte in die Öl- und Gasgüterkette einspeisen, dürften eher in Südafrika als anderswo in Sub-Sahara Afrika erfolgreich sein (Abbildung 2).

Ein Gesprächspartner betonte zudem, dass Kapstadt und das Western Cape aus seiner Sicht ein besseres, „verlässlicheres" Umfeld als der Rest Südafrikas böten.[13] Stadt und Provinz werden von der liberalen, unternehmerfreundlichen Demokratischen Allianz regiert; alle anderen Provinzen Südafrikas und bis zu den Kommunalwahlen im August 2016 auch alle anderen Städte vom Afrikanischen Nationalkongress, dessen linke Strömungen sich für Verstaatlichungen und andere weitreichende Eingriffe in die Wirtschaft aussprechen. Mangels Datenmaterial lässt sich diese Einschätzung leider nicht näher prüfen. Angemerkt werden sollte, dass der Handlungsspielraum von Kommunal- und Provinzpolitikern in Südafrika recht überschaubar ist. In Bezug auf den Öl- und Gassektor beschränkt er sich auf Maßnahmen der Wirtschaftsförderung wie das Knüpfen von Kontakten zwischen ausländischen Investoren und lokalen Partnern, das Verringern des Verwaltungsaufwands bei verschiedensten Anträgen und Vergleichbares. Gesetze besonderer Bedeutung oder gar der generelle Wirtschaftskurs des Landes liegen jenseits des Einflusses von Kommunal- und Provinzpolitikern.

Ein Standortvorteil Kapstadts, der in nahezu jedem Gespräch erwähnt wurde, aber nicht in den Rahmen der drei Ds passt, ist die Lebensqualität. Kapstadt biete ausgezeichnete Freizeitmöglichkeiten. Die Stadt habe ein angenehmes Mittelmeerklima und sei durch vergleichsweise große öffentliche Sicherheit gekennzeichnet. Interviewpartner, die sich mit den internen Praktiken transnationaler Öl- und Gasunternehmen näher auskennen, gaben in diesem Zusammenhang zu bedenken, dass hochrangige Mitarbeiter dieser Unternehmen „für weniger Geld als sie andernorts verdienen" bereit seien, nach Kapstadt zu kommen, beispielsweise um die Wartung einer Bohrplattform zu überwachen. Für die entsprechenden Konzerne sei es nur schwer möglich, ihre Mitarbeiter zu überzeugen, an andere Orte in Sub-Sahara Afrika zu ziehen.[14] Diese sind entweder unsicher (z. B. Kenia und Nigeria) oder missen viele Annehmlichkeiten eines gehobenen westlichen Lebensstils (z. B. Mosambik und Namibia).

5 Distance, Division und Linkages: Entwicklungsimpulse für periphere Orte

Auf den ersten Blick können einige Segmente der Öl- und Gasgüterkette nicht durch Unternehmensentscheidungen verlagert werden. Wo es zu Exploration von Öl und Gas – also zum Upstream-Bereich – kommt, ist durch geologische Gegebenheit bestimmt. Die Vermarktung beziehungsweise der Konsum hängen von kaufkräftiger Kunden ab. Der restliche Down- und der gesamte Midstream-Bereich sind räumlich flexibel. Öl- und Gaskonzerne entscheiden, wo sie ihre Produkte raffinieren beziehungsweise reinigen und lagern. Auf den zweiten Blick ist allerdings auch der Upstream-Bereich räumlich flexibel. Die Experten, die Öl- und Gasvorkommen prosperieren, und die Firmen, die Bohrlöcher anlegen, sind nicht dort ansässig, wo sich

13 Persönliches Gespräch in Kapstadt am 5. März 2014.

14 Persönliches Gespräch in Kapstadt am 26. Februar 2014.

Abbildung 3: Internationale Flugverbindungen von Kapstadt. Quelle: Eigene Darstellung auf Grundlage von Informationen der Websites von Fluggesellschaften, die Kapstadt ansteuern. Hinweis: Die aufgeführten Flüge nach Istanbul und Singapur beinhalten einen Zwischenstopp in Johannesburg, nach dem die Passagiere mit der gleichen Maschine weiterreisen. Air France, Condor, Edelweiss Air und Lufthansa bieten saisonal Verbindungen mit Frankfurt, Paris, München und Zürich an. Diese sind nicht in die Abbildung aufgenommen.

die entsprechenden Ressourcen befinden. Sie arbeiten per Fernerkundung und schicken für begrenzte Zeiträume Mitarbeiter zu den Fundorten der Ressourcen. Die Vermarktung ist noch flexibler, weil Firmen wie BP, Chevron, Shell und Total entscheiden, wo sie aktiv werden. Für jedes Segment der Öl- und Gasgüterkette sind daher Standortentscheidungen zu treffen. Wie bereits gezeigt, spricht Vieles für Kapstadt. Kapstadt kann aber nur als Gateway City wirken und Entwicklungsimpulse für Sub-Sahara Afrika schaffen, wenn einige Segmente der Güterkette in die Peripherie verlagert werden.

Wie im konzeptionellen Abschnitt dieses Artikels erklärt, liegt die Erwartung nahe, dass Distance und Division Kapstadts Beziehungen mit peripheren Orten, einschließlich etwaiger Entwicklungsimpulse, maßgeblich beeinflussen. Eine erste Annäherung an Distance lässt sich über Verkehrsinfrastruktur machen. Kapstadts Flughafen ist der zweitgrößte in Südafrika. Er kommt auf 600.000 bis 800.000 Passagiere pro Monat. 15 internationale Fluglinien bieten von dort Verbindungen an. Manager internationaler Konzerne können Kapstadt von verschiedenen Städten Europas und zumindest einigen in Nah-, Mittel- und Fernost erreichen. Direkte Flugverbindungen nach Amerika und Australien gibt es nicht. China und Japan, die beiden wichtigsten Öl- und Gasimporteure in Ostasien, sind ebenfalls nicht direkt mit Kapstadt verbunden. Das von Kapstadt ausgehende regionale Flugnetz beschränkt sich auf einige wenige Ziele im südlichen Afrika, Addis Abeba und Mauritius. Die aktuellen und zukünftigen Öl- und Gasexporteure in Ost- und Westafrika sowie Mosambik können von Kapstadt nicht direkt erreicht werden.[15] Für Unternehmen, die im Downstream-Bereich Märkte erschließen oder schnell Güter aus Übersee dorthin transportieren möchten, sind Flugverbindungen sehr wichtig. Dass Kapstadt nur bedingt über Direktflüge global und regional verflochten ist, erklärt, warum Downstream-Unternehmen zumindest für die Planung ihrer Expansion nach Sub-Sahara Afrika eher auf Johannesburg setzen.[16] Im Upstream-Bereich spielen Flugverbindungen hingegen keine entscheidende Rolle (Abbildung 3).

Zu See ist Kapstadt wesentlich besser verflochten (Abbildung 4). Lediglich nach Ostafrika gibt es keine direkten Linien. Güter müssen also in anderen Häfen, beispiels-

15 Entsprechende Informationen sind in Abbildung 3 zusammengefasst und online verfügbar: www.airports.co.za. Allerdings ist eine gewisse Einschränkung notwendig: Unternehmen, die mehr als nur ein oder zwei Mitarbeiter an einen anderen Ort in Sub-Sahara Afrika schicken möchten, sind nicht von Linienflügen abhängig. Wie weiter unten ausgeführt, mieten sie Flugzeuge, um Material und Reparaturcrews zum Beispiel nach Nordmosambik zu bringen. In diesen Fällen reicht das Vorhandensein von Flughäfen, um Kapstadt regional zu verknüpfen.

16 Persönliches Gespräch in Johannesburg am 23. Juni 2016.

Abbildung 4: Verbindungen von Kapstadt zu See. Quelle: Eigene Darstellung auf Grundlage von Informationen der Websites von Reedereien, die Kapstadt ansteuern. Hinweis: Es konnten keine detaillierten Informationen zu den Linien von GAL, Hamburg Süd und MACS gefunden werden.

weise in Durban, umgeladen werden.[17] Positiv im regionalen Vergleich ist ebenfalls, dass der Hafen von Kapstadt eine Effizienz erreicht, die mit derjenigen von Antwerpen und Port Klang vergleichbar ist (Merk/Dang 2012). Container werden in Kapstadt günstiger und schneller als in den meisten anderen Häfen der Region umgeschlagen. Durban, Mombasa, Tema und Walvis Bay sind jedoch konkurrenzfähig (African Development Bank 2010). Allerdings werden westafrikanische Häfen nicht allzu oft von Kapstadt angesteuert. So sagten Gesprächspartner, dass sie wegen der geringen Frequenz der Routen manchmal Güter über Europa nach Westafrika verschiffen müssten.[18] Dies stellt ein enormes Problem für Zulieferer im Öl- und Gassektor dar, denn die Preise dieser Rohstoffe verändern sich teils innerhalb weniger Tage beträchtlich. In diesem Sinne erläuterte der Chef eines südafrikanischen Unternehmens, das Ausrüstungsgegenstände auf Bohrplattformen repariert: „Wenn heute bei einem Kunden – sagen wir irgendwo vor der Küste Angolas – eine Pumpe kaputt geht, dann möchte er, dass wir sie austauschen und zwar am besten gestern. Jeder Tag Wartezeit kann den Kunden mehrere hunderttausend Dollar kosten.“[19]

Transregionale Korridore, bestehend aus asphaltierten, zweispurigen Straßen, verbinden die Gateway City auf dem Landweg mit Botsuana, dem Süden Mosambiks, Namibia, Sambia und Simbabwe und darüber hinaus. Die Qualität dieser Korridore nimmt jedoch in Angola, im Süden der Demokratischen Republik Kongo und im zentralen Mosambik deutlich ab (Scholvin 2017). Spätestens dort werden auch Entfernungen ein hemmender Faktor. Darüber hinaus behindern Grenzkontrollen – Korruption und lange Wartezeiten – den intraregionalen Handel und damit auch Kapstadts Rolle als Gateway City (Scholvin 2017). Während Botsuana, Namibia und Sambia aus Sicht der Interviewpartner unproblematisch sind, kommt es in vielen anderen Ländern zu Schwierigkeiten, die über zeitliche Verzögerungen hinausgehen. So berichtete der Gesprächspartner des bereits genannten südafrikanischen Zulieferers: „Zehn Minuten nach der Grenze hält dich der erste [simbabwische] Polizist an. Er sagt dir, der Luftdruck [der Reifen des LKWs] sei zu gering. Der Luftdruck ist natürlich völlig in Ordnung, aber damit der Polizist deinen LKW nicht beschlagnahmt, musst du zahlen. Der nächste

17 Wie bei Flugverbindungen ist zu bedenken, dass die in Abbildung 4 gezeigten Schiffrouten kein vollständiges Bild wiedergeben. Große Unternehmen können Schiffe chartern, sind also lediglich davon abhängig, dass es Häfen mit ausreichen Tiefgang und Umschlagkapazitäten gibt. So unterhält beispielsweise die Reederei Unicorn zwei Tanker, die Produkte an Häfen zwischen Richards Bay und Walvis Bay nach Bedarf liefern (Email-Korrespondenz, 7. Januar 2016).

18 Persönliches Gespräch in Kapstadt am 11. August 2016.

19 Persönliches Gespräch in Durban am 15. Juli 2016.

Polizist wird dann sagen, deine Windschutzscheibe sei zu schmutzig. Auch er will Geld."[20]

Neben Distance hat auch Division weitreichende Auswirkungen auf das Zusammenspiel von Kapstadt und Standorten des Öl- und Gassektors in Sub-Sahara Afrika. Subregionale Integrationsprojekte wie die East African Community (EAC), die Southern African Customs Union (SACU) und die Southern African Development Community (SADC) können gewisse Erfolge beim Abbau tarifärer Handelsbarrieren vorweisen: Die EAC und die SACU sind Zollgemeinschaften. Innerhalb der SADC werden 85 Prozent aller Güter zollfrei gehandelt. Lesotho, Namibia und Swasiland haben ihre nationalen Währungen zum Kurs von 1:1 an den südafrikanischen Rand gebunden, der in diesen drei Ländern als Zahlungsmittel akzeptiert wird. Von räumlich weitaus größerem Ausmaß ist die Tripartite Free Trade Area (TFTA), ein Zusammenschluss der EAC, des Common Market for Eastern and Southern Africa (COMESA) und der SADC. Offiziell wurde dieser Integrationsprozess im Jahr 2008 gestartet. Der Abbau tarifärer und nicht-tarifärer Handelshemmnisse sowie eine gemeinsame Industriepolitik sind die Kernpunkte, für die seit dem an einer gemeinsamen Agenda gearbeitet wird.

Die Ergebnisse all dieser Integrationsbemühungen bleiben allerdings weit hinter den Erwartungen zurück. Eine gemeinsame Wirtschaftspolitik, vor allem mit Hinblick auf Industrialisierung, wurde bereits 2002 als Ziel für die SACU verkündet. Ihre Umsetzung steht aus. In den 1990er Jahren war geplant, die SADC bis 2008 zu einer Freihandelszone, bis 2010 zu einer Zollunion und bis 2015 zu einem gemeinsamen Markt zu entwickeln. Selbst die Freihandelszone ist unvollendet, weil Angola, der zweitgrößte Ölexporteur in Sub-Sahara Afrika, ihr nicht beigetreten ist. Die angolanische Regierung beharrt darauf, den nationalen Markt vor der vermeintlich übermächtigen südafrikanischen Konkurrenz zu schützen (Redvers 2013). Zur TFTA bemerken wenig optimistische Experten mittlerweile, dass sie zu „a rather lean exercise for concluding a few bilateral market access deals" verkommen sei (Erasmus 2014, 5 f.).

Die Gesprächspartner in Kapstadt hoben zusätzlich hervor, dass Sprachbarrieren oft ein Problem bei Handel mit oder Investitionen in Sub-Sahara Afrika sind. Die Mitarbeiter von Firmen aus Kapstadt sprechen fließend Afrikaans und Englisch. Transnationale Konzerne im Öl- und Gassektor nutzen Englisch als Unternehmenssprache. In vielen Ländern Sub-Sahara Afrikas ist Englisch offizielle Sprache oder wird von einem Großteil der Bevölkerung gesprochen. Einige für den Öl- und Gassektor sehr wichtige Länder gehören aber nicht zum englischen Sprachraum, darunter Angola, Äquatorialguinea, Gabun, die Republik Kongo und Mosambik. Sprachbarrieren sollte man nicht unterschätzen, denn es geht dabei nicht nur um die einfache Verständigung im Berufsalltag. Verträge und rechtliche Vorschriften sind oft nur in der Landessprache zugänglich und bereits leichte Missverständnisse können ernste Probleme für Investoren nach sich ziehen. Werden Aufträge durch die im Öl- und Gassektor dominanten Staatsunternehmen beispielsweise nur auf Portugiesisch ausgeschrieben, schließt dies viele Firmen aus Kapstadt praktisch aus.

Eine weitere Barriere, die meine Gesprächspartner ansprachen, ist Korruption. Diese erreiche derartige Ausmaße, dass es in vielen Ländern der Region nicht denkbar sei, ohne einen lokalen Partner tätig zu werden.[21] Ein lokaler Partner bringt für ein Joint Venture nur selten technische und unternehmerische Fähigkeiten oder gar Geld in nennenswertem Umfang mit. Seine Aufgabe besteht darin, informelle Netzwerke aufrechtzuhalten, die sicherstellen, dass beispielsweise behördliche Anträge positiv und zügig bearbeitet werden. Südafrikanische Unternehmen, die ohne solche Unterstützung versuchen, in besonders korrupten Ländern aktiv zu werden, scheitern in der Regel. Eine Gesprächspartnerin berichtete, dass ihre Kollegen in Nigeria bei jedem Kontakt mit Behörden zur Zahlung einer „Bearbeitungsgebühr" aufgefordert worden seien.[22] Letztendlich zog sich das Unternehmen aus Nigeria zurück und entschied sich bei einem späteren Projekt in Mosambik, lokale Partner mit zweifelhaften Arbeitspraktiken zu akzeptieren. Eng mit Korruption verwoben ist Rechtsunsicherheit. So gaben Gesprächspartner zu bedenken, dass sie in vielen Ländern Sub-Sahara Afrikas keine Chance hätten, mit Rechtsmitteln erfolgreich gegen vertragsbrüchige Geschäftspartner oder nicht zahlende Kunden vorzugehen.[23] Dies ist im Öl- und Gassektor besonders problematisch, weil oft Maschinen im Wert von mehreren Millionen Euro eingesetzt werden. Die oben bereits angesprochenen World Governance Indikatoren bestätigen die Einschätzung der Gesprächspartner.

Je nach ihren Möglichkeiten passen sich Unternehmen aus Kapstadt den genannten Problemen beim Handeln mit beziehungsweise bei Investitionen in Sub-Sahara Afrika auf unterschiedliche Weise an. Dies beeinflusst Linkages. So lässt ein vergleichsweise großes Unternehmen, das im Downstream-Bereich tätig ist, seine Produktionsanlagen in Angola von einem Brasilianer managen. Der Brasilianer

20 Persönliches Gespräch in Durban am 15. Juli 2016.

21 Persönliches Gespräch in Kapstadt am 26. Februar 2014.

22 Persönliches Gespräch in Mossel Bay am 27. Juli 2016.

23 Persönliches Gespräch in Kapstadt am 26. Februar 2014.

kommt mehrmals pro Monat nach Kapstadt, hat in Angola keine Verständigungsprobleme und ist, so zumindest die Meinung seiner Vorgesetzten, wegen der Erfahrungen, die er im Öl- und Gassektor in Brasilien gesammelt hat, besser als ein Südafrikaner in der Lage, mit Korruption und Rechtsunsicherheit umzugehen.[24] In diesem Fall kommt es zu nicht unerheblichen Entwicklungsimpulsen. Das Unternehmen zahlt Steuern in Angola. Konsumlinkages durch die angolanischen Arbeiter und den brasilianischen Manager treten auf. Produktionslinkages entstehen, weil ein Rohstoff im Land verarbeitet wird. Dass Inputs in Angola erworben würden, dass es also zu Rückwärtsverknüpfungen käme, verneinte der Gesprächspartner allerdings. Während sich dies mit dem geringen Entwicklungsstand Angolas erklären lässt, spielt auch Divison eine gewisse Rolle. Sie beschränkt die Entwicklungsimpulse, die von Kapstadt als Gateway City für Angola ausgehen, denn Angolaner steigen nicht ins Management des investierenden Unternehmens auf. Die Effekte auf dem Arbeitsmarkt, auch mit Hinblick auf die Qualifizierung von Arbeitnehmern, sind überschaubar.

Eine kleinere Firma aus Kapstadt, die Ausrüstungsgegenstände für Öl- und Gaskonzerne im Upstream-Bereich repariert, hat für Aufträge in Nordmosambik südafrikanische Ingenieure mit gecharterten Maschinen nach Nacala und Pemba fliegen lassen. Material und Werkzeuge transportierte man wegen Problemen beim Grenzübergang zu Land ebenfalls per Flugzeug.[25] Entwicklungsimpulse durch Linkages im Bereich Konsum und Produktion entstehen nicht – abgesehen vom zeitlich begrenzten Catering für die Südafrikaner und Transport vom Flughafen zur Unterkunft und von dort zum Arbeitsplatz. Selbst steuerliche Linkages dürften ausbleiben, weil die Verträge zwischen südafrikanischen Dienstleistern und transnationalen Unternehmen in der Regel in Südafrika oder in Steueroasen wie Mauritius abgeschlossen werden und die Zahlungen auf entsprechende Konten erfolgen. Der Besitzer einer anderen Firma, die Schiffe für Explorationsvorhaben technisch hochwertig ausrüstet, betonte, dass er Verträge mit ausländischen Kunden nur in Südafrika schließe. Die Kunden müssten ihre Ware am Hafen beziehungsweise Flughafen von Kapstadt in Empfang nehmen. Mittelfristig wolle er in Nigeria eine Filiale eröffnen. Dies werde er aber nur in Zusammenarbeit mit einem anderen südafrikanischen Unternehmen machen, das sich dort bereits etabliert habe und wisse, „wie man sich als ausländischer Unternehmer in Nigeria verhalten muss".[26] Die aktuelle Strategie dieses Unternehmens führt zu keinerlei Linkages außerhalb der Gateway City.

Am aufschlussreichsten ist das Verhalten eines Unternehmens, das Reparatur- und Wartungsarbeiten an Schiffen durchführt und Taue herstellt, die auf Bohrplattformen zum Einsatz kommen. Die Manager dieses Unternehmens erläuterten mir, dass sie großes Interesse am angolanischen und mosambikanischen Markt haben. Es sei ihnen jedoch nicht gelungen, dort einen vertrauenswürdigen Partner zu finden. Neben Kapstadt ist dieses Unternehmen lediglich in Walvis Bay aktiv. Eine Filiale in Namibia zu betreiben stelle, so meine Gesprächspartner, kein Problem dar. Das namibische Rechtssystem sei dem südafrikanischen sehr ähnlich und funktioniere. Es gebe keine Sprachbarriere. Sowohl Güter als auch Personen könne man nahezu problemlos dorthin bringen. Zumeist stünden sie im Rahmen der Ansprüche ihres Unternehmens ohnehin vor Ort zu Verfügung.[27] Kurz: Im Falle Namibias ermöglichen geringe Distance und Division Entwicklungsimpulse, die von Kapstadt ausgehen. Es kommt zu Linkages in den Bereichen Konsum, Produktion und Steuern. Die großen Hürden in Bezug auf Angola und Mosambik verhindern all dies.

6 Zusammenfassung und Ausblick

Kapstadt hat ein beträchtliches Potenzial, im Öl- und Gassektor verschiedene Orte in Sub-Sahara Afrika in globale Güterketten einzubinden. Es kann als Gateway City wirken und verdeutlicht als solche die Bedeutung von Leading Areas für den Globalen Süden. Dabei entspricht die Rolle Kapstadts jedoch nur bedingt dem, was sich als Erwartungen oder Hypothesen aus dem Stand der Forschung zu Weltstädten ableiten lässt. So finden wir in Kapstadt zwar eine Vielzahl transnationaler Öl- und Gaskonzerne. Auch Anbieter betriebswirtschaftlicher Dienstleistungen sind vorhanden. Allerdings sind diese in den öl- und gasreichen Ländern der Region selbst präsent. Kapstadt ist für sie nur in Ausnahmen ein Bindeglied. Der Schlüssel zum Verständnis von Kapstadt als Gateway City sind im Sinne von Density die mit dem Öl- und Gassektor verwandten Industrien (im Downstream-Bereich) und vor allem die technischen Dienstleistungen (im Upstream-Bereich). Sie profitieren von den im regionalen Vergleich hervorragenden institutionellen Rahmenbedingungen, die Kapstadt bietet. Hierzu zählen auch die SBIDZ und verschiedene sektorspezifische Messen. Das Logistikumfeld ist eben-

24 Persönliches Gespräch in Kapstadt am 28. Februar 2014.
25 Persönliches Gespräch in Kapstadt am 5. März 2014.
26 Persönliches Gespräch in Kapstadt am 10. August 2016.
27 Persönliches Gespräch in Kapstadt am 26. Februar 2014.

falls vorteilhaft, grenzüberschreitende Verkehrsinfrastruktur hingegen oft unzureichend und schränkt Kapstadts Gateway-Potenzial ein. Wegen dieser unerwarteten Ausprägung der Gateway-Funktion sollte man im Falle Kapstadts nicht von einem Management- oder gar Kontrollort globaler Güterketten sprechen, wohl aber von einem essenziellen Bestandteil.

In diesem Sinne bestärken die Erkenntnisse zu Kapstadt die Kritik, dass die Weltstadtforschung Advanced Producer Services mit dem Status Weltstadt gleichsetze (u. a. Coe et al. 2010). Dies mag den von Sassen und Taylor vorgelegten Definitionen entsprechen. Es verschleiert aber, dass Weltstädte und deren Rolle in der Weltwirtschaft, also in globalen Güterketten, vielfältiger sind, als auf betriebswirtschaftliche Dienstleistungen fokussierte Referenzpunkte wie London, New York und Tokio vermuten lassen (u. a. Amin/Graham 1997). Gleichzeitig zeigt Kapstadt, dass auch die Obsession für Lead Firms, die Forschung zu Globalen Produktionsnetzwerken prägt (u. a. Coe/Yeung 2015), zu einem eingeschränkten Blickfeld führt. Um das Konzept der Gateway Cities voranzubringen, wäre nun zu prüfen, welche Rolle andere Gateway Cities spielen, um zu einer Typologie von Gateway Cities zu gelangen.

Das Konzept der Gateway Cities hilft außerdem, zu verstehen, wie von Städten wie Kapstadt Entwicklungsimpulse für periphere Standort ausgehen. Im Falle von Kapstadt und dem Öl- und Gassektor unterscheiden sich diese Impulse beträchtlich von einem Land zum anderen. Sie sind eingeschränkt aufgrund unvollständiger regionaler Integration und wegen Problemen beim Transport. Korruption, Rechtsunsicherheit und Sprachbarrieren wirken sich negativ aus. Unternehmen aus Kapstadt investieren nur selten in Ländern, die durch solche Barrieren – also durch hohe Distance und Division – von Südafrika getrennt sind. Wenn es doch dazu kommt, bleiben Entwicklungsimpulse durch Linkages begrenzt, denn südafrikanische Firmen meiden engen Kontakt mit der Wirtschaft des Ziellandes. Hinzukommt, dass der geringe Entwicklungsstand Linkages einschränkt. In diesem Sinne bildet mein Artikel ein gewisses Gegengewicht zu den optimistischen PRISM-Studien. Linkages entstehen nicht, wie Hirschman (1981) schlussfolgerte, nahezu zwangsweise aufgrund von Kräften des freien Marktes nach einer gewissen zeitlichen Verzögerung. Dass Linkages zwar stark sektorabhängig sind, prinzipiell aber immer auftreten (Morris/Kaplinsky/Kaplan 2012), bestätigen meine Gespräche mit südafrikanischen und internationalen Firmen nicht.

Abschließend möchte ich Kritikpunkte am hier entworfenen Ansatz darlegen. Zunächst führt der Fokus auf Kapstadt dazu, dass man alternative Gateway Cities vernachlässigt. Johannesburg dürfte der wichtigste Konkurrent für Kapstadt sein. So stellt ExxonMobil (2013) dort verschiedene Treibstoffe her und nutzt den Standort, um Explorationsvorhaben in Südafrikas küstennahen Gewässern zu planen. BP (2016) hat seine Filiale, die für Marketing in Südafrika zuständig ist, von Kapstadt nach Johannesburg verlegt. Treibstoffe stellt das Unternehmen zusammen mit Shell in Durban her. Außerdem bedeutet Kapstadts Potenzial als Gateway City trotz der Vielzahl an technischen Dienstleistern und den Chancen im Downstream-Bereich nicht, dass die Wirtschaft der Stadt vom Öl- und Gassektor dominiert wäre. Knapp 29,9 Prozent der Wirtschaftsleistung des Western Cape entfallen auf Finanzdienstleistungen, Versicherungsdienstleistungen und Ähnliches. Das produzierende Gewerbe, zu dem auch die technischen Dienstleistungen für den Öl- und Gassektor zählen, bringt es auf 15,5 Prozent (Provincial Treasury 2015). Kapstadt als Gaterway City zu betrachten, spiegelt zudem wirtschaftsliberale Überzeugungen wider und legt entsprechende Politikempfehlungen nahe. Es war allerdings nicht Zielsetzung dieses Beitrags, zu erörtern, ob eine Gateway-Strategie im Öl- und Gassektor für Kapstadt sinnvoll ist. Extraktive Industrien und die industrielle Verarbeitung von Kohlenwasserstoffen gehen mit zahlreichen ökologischen und sozio-ökonomischen Problemen einher. Angesichts der Auswirkungen, die der Klimawandel bereits heute in Südafrika hat, sollte man sich auch in Kapstadt fragen, ob fossile Energieträger ein zukunftsfähiger Weg sind. Gleiches gilt für die peripheren Standorte, die über Kapstadt in globale Öl- und Gasgüterketten eingebunden werden.

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Revisiting gateway cities: connecting hubs in global networks to their hinterlands

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ABSTRACT

Gateway cities have received much attention from urban geographers. In spite of outstanding contributions being made, we think that the concept needs to be revisited with regard to regional development implications. Bringing together research on global production networks (GPNs) and world cities, this article shows that gateway cities are critical for development in networks, generating impulses for peripheral locations by engaging them in processes of "strategic coupling." Yet, gateway cities also concentrate segments of GPNs to the detriment of their hinterlands. We conceptualize gateway cities with the aid of five features: logistics and transport, industrial processing, corporate control, service provision and knowledge generation. Our concept allows for an understanding of cities in global and regional economic processes beyond corporate headquarters, corporate services and governance – that is, beyond the boundaries of existing research. It unsettles traditional understandings of strategic coupling and world cities, filling a lacuna on city–hinterland connections.

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Introduction

City–hinterland relations are a traditional topic in urban geography. Related to this, some cities have been conceptualized as gateways, connecting their respective hinterlands to global flows. According publications deal with a variety of topics such as air and maritime transport (Lee & Ducruet, 2009; Notteboom, 2007; Ordóñez, Juan, & García, 2010) and migration (Ley, Tutchener, & Cunningham, 2002; Price & Benton-Short, 2008; Price, Cheung, Friedman, & Singer, 2005). Flows of trade and foreign investment through gateway cities have been studied (Chubarov & Brooker, 2013; Drennan, 1992; Grant, 2008); so have corporate headquarters (Parnreiter, Haferburg, & Oßenbrügge, 2013), corporate services (Parnreiter, 2015; Rossi, Beaverstock, & Taylor, 2007; Zhang & Kloosterman, 2016) and intra-firm decision making (Meyer, Schiller, & Revilla Diez, 2009; Parnreiter, 2010, 2017). Despite many outstanding contributions being made, we contend that gateways cities are insufficiently conceptualized with regard to their role in economic processes. They need to be revisited accordingly.

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This relates to a puzzle of high relevance for economic and urban geographers: how do cities influence regional development, especially development at peripheral sites that they interlink globally? In corresponding debates, organizations such as the World Bank (2009) picture cities as drivers of growth, whereas our own research – in line with recent calls to study the "dark sides" of GPNs (Phelps, Atienza, & Arias, 2018) – suggests that gateway cities sometimes bundle economic activities to the detriment of other places (Breul & Revilla Diez, 2018; Scholvin et al., 2017b). In particular literature on global production networks (GPNs) fails to address this crucial role of cities in processes of "strategic coupling." Beyond that, this article shows that a focus on city–hinterland relations enables us to better understand cities. This is somewhat similar to Kanai's (2014) observation that urban globalization cannot be adequately understood with a narrow focus on cities. Our approach moreover reflects on post-colonial criticism of world city research.

We combine debates on GPNs and world cities. Capturing the wider context of commodity chains, GPNs "incorporate all kinds of network relationships [and] encompass all relevant sets of actors" with regard to a specific process of production and commercialization (Coe, Dicken, & Hess, 2008, p. 272). World cities, meanwhile, serve as "basing points" of global capital (Friedmann, 1986, p. 69). They are "highly concentrated command points" from where global economic processes are controlled (Sassen, 2001, p. 3). There has been some initial research on combining GPNs (and chain approaches) with world cities, which suggests that the role of world cities in GPNs shapes urban processes (Grant & Nijman, 2002; Parnreiter et al., 2013) and cities provide services that are critical for the governance of GPNs (Parnreiter, 2010, 2017; Rossi et al., 2007). We, however, think that the relevance of cities for GPNs goes beyond governance through service provision and, for that matter, corporate headquarters being located there. In our understanding, regional development is the outcome of processes of strategic coupling and these depend on gateway cities. Hence, the role of gateway cities in strategic coupling builds the link between GPNs and world cities as analytical approaches and real world phenomena. We explain how GPNs and cities interact on the basis of five essential features: logistics and transport, industrial processing, corporate control, service provision and knowledge generation. These features make world cities gateways. Not all of them are not necessarily present in every world city and traces of them can sometimes be found in non-world cities: the five features also extend into the respective hinterlands of world cities.

This article starts with an overview of other approaches that bring GPNs and world cities together. We then advance our own approach, which is broader than existing concepts, deriving additional gateway features from a body of existing literature and explaining how these tie GPNs and world cities together. We highlight how our approach contributes to explaining what Derudder and Witlox (2010) conceptualize as regional development in global networks. For each feature, we draw on our own research on the oil and gas sector in Southeast Asia so as to illustrate its importance.

World cities in GPNs

Bringing GPNs and world cities together enables a reframing from the prism of what is taking place in contemporary cities of the Global South, which leading urban geographers have strongly argued for to rebalance theorizations away from centering on the experiences of the Global North (Kanai, Grant, & Jianu, 2017; McFarlane, 2010; Robinson, 2002, 2006, 2014). A merger of GPNs and world cities compels us to recognize that there is more to world cities than corporate headquarters and corporate services (more on this later). The contributions of world cities from the Global South to GPNs thus represent what Krätke (2014) and others term "multiple globalizations."

But let us begin with the state of the art on world cities, which focuses on – or, we should say, is limited to – what happens in and between cities (Derudder & Taylor, 2016; Taylor & Derudder, 2016). It deals with corporate services and corporate headquarters. Corporate service providers and corporate headquarters obviously organize economic activities that take place beyond world cities, ranging from agriculture and mining, through industrial production, to retail and wholesale. The particularities of these activities determine what sort of corporate services and corporate headquarters characterize a specific world city. The GPN perspective therefore allows us to understand why, for example, the activities of transnational enterprises in Buenos Aires differ from those in Cape Town or Singapore. To better understand cities, one must look beyond their boundaries, addressing city–hinterland relations. We hence suggest gateway cities as an alternative perspective: gateway cities are about city–hinterland relations, not city–city relations, which form the centerpiece of research on world cities.[1]

The idea from the debate on world cities that interests us most is that some world cities economically connect their respective hinterlands with the rest of the world. Grant and Nijman (2002) analyze the development of central business districts (CBDs) in Accra and Mumbai: both cities have local, national and global CBDs, which are shaped by the integration of the two cities into GPNs. Parnreiter et al. (2013) apply this concept, suggesting that firms from overseas use Mexico City and Johannesburg as gateways to the wider hinterlands. For our research interest, this approach has certain limitations, as it does not merge GPNs and world cities in a way that would help to explain regional development. In these publications and many others alike (Grant, 2006, 2008; Thompson & Grant, 2015), urban dynamics stand at the analytical core. They are seen as a result from city–hinterland relations but the hinterlands are not an object of investigation.

Focusing on networks of cities, Taylor, Walker, Catalano, and Hoyler (2002) label certain world cities "regional command centres" but do not go into detail. Rossi et al. (2007) demonstrate how Brazilian "service cities" interlink companies operating in Brazil globally. Parnreiter (2010, 2015, 2017)) shows how corporate service providers from Hamburg help their clients to become globally active and how corresponding firms in Mexico City interlink other places in the country worldwide. Meyer et al. (2009) assess the front office–back factory division of labor between Hong Kong and the Pearl River Delta. While these approaches generate important insights, especially with regard to GPN governance, we find that they limit the intermediary role of cities, not paying enough attention to certain relevant issues (more on this later).

It is not possible to summarize all publications here that use the term gateway as a catchword. An article by Sigler (2013), who refers to Doha, Dubai and Panama City as "relational cities," comes close to our own research interest but does not, at least in our view, explain sufficiently why each feature of Doha, Dubai and Panama City that is described makes these cities intermediaries. Prior to world cities research, Burghardt defined gateway cities as "an entrance into (and necessarily an exit out of) some area" (1971, p. 269). He pointed out that gateway cities perform outstandingly well in terms of business services such as loan and trust companies, real estate agencies, hotels and restaurants; the latter two being a basic condition for travelling businesspeople. We adopt Burghardt's definition but concentrate on characteristic features that better fit the early 21st century and derive from existing literature, as summarized below.

In distinction from much that has been published on city–hinterland relations, especially Scott's (1998, 2001) approach to "world city-regions," we conceptualize hinterlands as relatively large spheres, usually transcending national borders. They are characterized by the initial segments of GPNs, meaning resource extraction and sometimes basic processing. Our understanding of hinterlands is functional: their existence and spatial scope is part of the empirical analysis (instead of being defined a priori). The extent to which hinterland locations can realize economic development depends on their interaction with gateway cities within GPNs, as gateway cities may generate impulses for peripheral development or bundle GPN segments at the expense of their hinterlands. Research on GPNs addresses the creation, enhancement and capture of value in networks, their embeddedness and the distribution of power among all actors involved (Henderson, Dicken, Hess, Coe, & Yeung, 2002). It focuses on processes of strategic coupling, in other words the incorporation of local assets into GPNs (Coe, Hess, Yeung, Dicken, & Henderson, 2004; Coe & Yeung, 2015; Yeung, 2015, 2016). A key idea in research on GPNs is that regional development should be analyzed as an interdependent process, meaning that development in any given region cannot be understood without taking into account what occurs in places linked to this region via GPNs (Coe & Yeung, 2015).

However, research on GPNs pays surprisingly little attention to intermediaries in strategic coupling (such as gateway cities). In their seminal article, Coe et al. (2004) derive regional development from the interaction of GPNs, meaning external players, with regional assets and regional institutions. There appears to be no layer that would connect external players to the region in consideration. This absence of in-depth research on intermediaries is particularly striking because, as Phelps notes, "the value of a logistics and transport perspective within GPNs is that it draws attention to [...] intermediate places" (2017, p. 30) – gateway cities in our wording. Yet for example, Coe (2014) argues that logistics services are decisive for global industries, labelling them the "missing links" in GPNs. He stresses the relevance of their territorial embeddedness but mentions cities merely as a side note. Hesse and Rodrigue (2006) better acknowledge the relevance of cities for GPN logistics. Still, they also fail to ask how and why cities serve as logistics hubs and whether there is a division of labor between primary and secondary hubs.

What is more, there is uncertainty regarding the impact of cities on regional development in global networks. The 2009 *World Development Report* suggests that developing countries bind themselves to nearby "leading areas," allowing for the free flow of capital, goods and people, so as to benefit from impulses for economic

development that leading areas generate. We concur that gateway cities are leading areas. An assessment of their impact on peripheral locations is critical because we remain skeptical when it comes to the supposedly positive role of leading areas. As noted, our own research suggests that gateway cities sometimes bundle economic activities to the detriment of other places (Breul & Revilla Diez, 2018; Scholvin et al., 2017b). It also appears that the integration of peripheral places into GPNs can be disadvantageous, leading rather to downgrading than to upgrading – as demonstrated, for instance, by Fabinyi (2016), Murphy and Carmody (2015), Ponte and Ewert (2009) and Smith, Pickles, Buček, Pástor, and Begg (2014) – or to a problematic co-occurrence of economic upgrading and social downgrading (Godfrey, 2015; Pegler, 2015; Rossi, 2013). Interestingly, this appears to be a blind spot of the concept of strategic coupling, as this concept carries the notion that integrating into GPNs is a sufficient condition for development in networks. Our gateway concept reveals that this is not the case and it serves as a tool to analyze under which conditions strategic coupling leads to results that are beneficial for peripheral places.

City–hinterland connections are also a rare issue in the literature on world cities, although it is increasingly recognized that global flows are just one aspect of the connectivity of cities (Smith, 2014; Surborg, 2011). Studies that aim at bringing GPNs (and chain approaches) together with world cities have been published in the volume *Commodity Chains and World Cities*. Therein, Brown et al. (2010) argue that world cities are critical nodes in production networks, providing control and service functions that are vital to GPNs – or, more broadly, governance.

We think that concentrating on corporate services (or, even worse, corporate headquarters) – the first link between GPNs and cities – yields an incomplete picture. These aspects matter but they are only two features of gateways. A survey of existing literature on cities and regional economies led us to additional features of gateway cities. All of them show how cities matter to GPNs, being critical for processes of strategic coupling. First, world cities in the Global South are home to large-scale industries, as demonstrated by Johannesburg being the industrial heartland not only of South Africa but also of the whole of sub-Saharan Africa (Akinboade & Lalthapersad-Pillay, 2009; Tribe, 2002). Car manufacturing in Bangkok and São Paulo also exemplifies the relevance of world cities in the Global South as sites of industrial production that are linked across borders (Dicken, 2015; Humphrey, 2003; Ramos Schiffer, 2002). Second, when it comes to globally interlinking peripheral places in the Global South, integrating them into GPNs, it is not only highly sophisticated business services that matter. Maintaining and repairing equipment on oil platforms and training the crews that work on them, for example, are also relevant (Scholvin, 2017).

Third, various researchers have shown that some world cities – especially those that fulfill a gateway role – are transport hubs (Grubesic & Matisziw, 2012; Hesse, 2010; Jacobs, Ducruet, & de Langen, 2010). Coe and Yeung (2015) consider logistics providers to be critical intermediaries in GPNs. Ducruet et al. (2014) define gateway cities by interlinking due to corporate control, corporate services and logistics. Sigler's (2013) relational cities play a key role in the global network of flows because they are, first of all, hubs for logistics, warehousing and wholesaling. Burghardt (1971) also emphasized the relevance of transport infrastructure and wholesale trade. Related to this, there is an extensive literature on port cities as gateways, which has historically dealt with transport

corridors connecting harbors in the global periphery to their hinterlands (Hance & van Dongen, 1957; Norman, 1975) and the growth of port agglomerations, especially with regard to industrial development (Hoyle, 1983; Stabler, 1968; Takel, 1974). Lately, the focus has shifted to hub ports and port networks (Lee & Ducruet, 2009; Notteboom, 2007) and aerotropoles (Appold & Kasarda, 2013; Cidell, 2015).

Fourth, although world city literature pays little attention to knowledge generation, numerous other publications show that creativity and innovation are characteristic of some urban areas (Florida, 2005; Hospers, 2003; Yusuf & Nabeshima, 2005). Knowledge generation is also critical in research on GPNs (Coe & Yeung, 2015; Ernst & Kim, 2002; Irawati, 2012; Yusuf, Altaf, & Nabeshima, 2004). The main reason for the existence of metropolitan innovation systems is that cooperation among firms or between firms and public organizations increases access to information and tacit knowledge. Sophisticated institutional frameworks as well as existing innovative networks attract additional flows of knowledge, enabling some cities to assume nodal positions in global innovation processes, meaning that they become gateways (Fischer, Revilla Diez, & Snickars, 2001; Revilla Diez & Berger, 2005).

Functions of gateway cities and effects on the periphery

We now address the five features that make cities gateways. These features are not necessarily additive. They can stand on their own or be combined in different ways, describing distinct types of gateways. This implies that the gateway features do not necessarily work together. Whereas a place that matters for industrial processing can reasonably be expected to serve as a transport hub, it is difficult to see how knowledge generation would relate to these physical features. It is this diversity that we have in mind when saying that our gateway concepts broadens the understanding of cities in networks.

For empirical examples, we refer to statistical data from various sources and 20 interviews that we conducted with representatives of companies involved in the Southeast Asian oil and gas sector, including lead firms such as Total, major service providers like Halliburton and domestic Indonesian, Singaporean and Vietnamese enterprises (see Table 1). The interviewees were identified via LinkedIn and by snowball sampling. Open-ended, narrative interviews covered topics such as location advantages and disadvantages, intra-firm organization and relations with contractors and suppliers. The interviews were transcribed and analyzed with regard to previously defined categories that reflect the five features of gateway cities.

Singapore is a suitable case study because of its outstanding integration into GPNs, which allows us to cover a maximum of related processes, and its status as a role model for world cities in the Global South (Pow, 2014). We focus on the oil and gas sector for two reasons. First and somewhat counter intuitively, the oil and gas sector is rather transparent. Basic information on investments, ownership of/service provision to oil and gas fields as well as processing facilities is available online. We also found lead firms and numerous small enterprises to be accessible for interviews and willing to provide details on their location strategy and cooperation with other companies. Second, the oil and gas sector is highly suitable to show the concentration of segments of a GPN in a gateway city. It allows us to assess to what extent and how a leading area generates economic impulses for peripheral locations. We do not maintain that our empirical analysis is representative of

Table 1. Interviewees and their professional affiliations.

Interview	Activities of interviewee's firm	Nationality	Place of interview	Date of interview
Interview 1	Developer of energy infrastructure	Indonesian	Jakarta	9 March 2017
Interview 2	Upstream service provider	US-American	Singapore	29 September 2016
Interview 3	Upstream service providers	US-American	Jakarta	14 March 2017
Interview 4	Upstream service providers	Indonesian	Jakarta	20 March 2017
Interview 5	Distribution and trading company	Vietnamese	Ho-Chi-Minh-City	8 May 2017
Interview 6	Lubricant manufacturer	US-American	Haiphong	4 May 2017
Interview 7	Major oil company	French	Singapore	16 November 2016
Interview 8	Major oil company	US-American	Jakarta	9 March 2017
Interview 9	Major oil company	US-American	Singapore	21 September 2016
Interview 10	Exploration and production company	Singaporean	Singapore	12 October 2016
Interview 11	Provider of corporate services	British	Singapore	16 November 2016
Interview 12	Major oil company	French	Balikpapan	31 March 2017
Interview 13	Exploration and production company	Indonesian	Jakarta	14 March 2017
Interview 14	Petroleum-related institute	Vietnamese	Hanoi	25 April 2017
Interview 15	Major oil company	Italian	Ho-Chi-Minh-City	5 May 2017
Interview 16	Upstream service provider	US-American	Ho-Chi-Minh-City	2 June 2017
Interview 17	Advisory on technical standards	Norwegian	Singapore	14 October 2016
Interview 18	Upstream service provider	Multinational	Jakarta	15 March 2017
Interview 19	Upstream service provider	Norwegian	Vung Tau	25 May 2017
Interview 20	Upstream service provider	Vietnamese	Ho-Chi-Minh-City	22 May 2017

Source: Authors' own compilation.

all GPNs Singapore is involved in or of all oil and gas gateway cities. The following sections merely serve to illustrate the insights gained by our gateway approach.

Logistics and transport

The fact that some places interlink the periphery of the global economy is not new. In the colonial era, there were numerous gateways in the Global South. The European conquest of Africa, the Americas and large parts of Asia started in bays that provided protection from ocean currents and storms or at least in places that made it possible to load and unload goods safely (Braudel, 1982). Today, geographically and functionally fragmented processes of production and commercialization, which are often just in time, make logistics and transport essential for the smooth functioning of GPNs (Coe, 2014). Locations that are not adequately endowed with logistics and transport options risk being excluded from global economic processes, as is exemplified by the electronics industry in Southeast Asia (Bowen & Leinbach, 2006).

Singapore was an important transport hub as early as the 19th century. The British recognized the advantageous location of an island at the southern tip of the Malay Peninsula, founded Singapore there and turned it into a vibrant port, which served as a bulk-breaking station for goods that were subsequently distributed in Southeast Asia. Commodities that the British acquired in the region were also collected in Singapore and then shipped to Europe (Bastide, 2011). This gateway role persists still, although logistics capacities in the neighboring countries have since developed. Port Kelang and Tanjung Pelepas, both located in Malaysia, reach considerable cargo volumes of 220,000 and 136,000 tons a year respectively. This remains far behind Singapore's 576,000 tons though (American Association of Port Authorities, 2015). Whereas ports in Singapore's neighboring countries are usually less expensive, the gateway city plays an outstanding role due to the sophistication of its logistics services. A representative of a company that

manages energy infrastructure projects argued that "the bulk of business is still in Singapore. Why? The time to move a cargo in Singapore is phenomenal" (Interview 1). The average container dwell time – the time it takes to change the status of a container at a port – is two days in Singapore, three in Tanjung Pelepas, five in Leam Chabang (Thailand) and six in Tanjung Priok (Indonesia) (Bassinette, 2015).

What is more, transnational equipment and service providers such as Caterpillar, Halliburton and National Oilwell Varco have established spare part inventories in Singapore in order to supply sites all over Southeast Asia. The delivery of this kind of equipment is highly time-sensitive (Interview 2, 3, 4).Hence, there is a need for a hub in relative proximity to oil and gas fields; and Singapore's sophistication in logistics makes it such a hub – that is, a gateway city. Singapore's sophistication is the result of continual investment and upgrading of port facilities, driven by public authorities that have a clear vision for the city-state. For example, in 2006 the government decided to build Asia's first open-access multi-user terminal for importing and re-exporting liquefied natural gas (LNG). Its open-access character has encouraged trading houses such as Trafigura and Vitol to use Singapore as a hub. A representative of an Indonesian company confirmed that the city-state has successfully positioned itself as a gateway for the booming LNG trade in Southeast Asia: "How are we going to compete with [Singapore]? Again, I hate to say that but [Singapore] is so well planned and executed [...]. If you put Singapore versus another country as an LNG hub, where will you most likely put your money? Singapore [always comes] first" (Interview 1).

Industrial processing

Oil refineries illustrate how certain places, including world cities, interlink their respective peripheries globally by processing raw materials. Owing to economies of scale, large refineries are increasingly concentrated in relatively few locations. Around 650 refineries exist worldwide. Shifting markets and a tendency to locate refineries close to markets account for growing capacities in the Global South, especially in the Far East (Bridge & Le Billon, 2013). Resource-poor Singapore is the major oil processing hub in Southeast Asia, as shown by Figure 1. Other refineries in the region tend to be located on the periphery of major metropolitan areas, for example in Limay (40 kilometers from Manila) and Rayong (140 kilometers from Bangkok).

ExxonMobil (592,000 barrels a day), Shell (500,000) and a joint venture of Chevron and PetroChina (290,000) have set up outstanding refining capacities in the city state since the 1960s. About 80 percent of the crude oil processed in Singapore's refineries is sourced from the Middle East. Australia (4 percent), Indonesia (4 percent) and Russia (3 percent) supply minor shares. Various oil-based products are exported from Singapore, mainly to Indonesia (23 percent), Malaysia (19 percent) and Australia (12 percent). Counted together, other countries in East, South and Southeast Asia account for 31 percent of these exports. Some countries in the region are dependent on Singapore: 53 percent of the refined petroleum imports of Indonesia and Malaysia come from the gateway city (United Nations, 2017). Hence, Singapore serves as an outside-in gateway in terms of industrial processing. The Singaporean government has continuously assisted the development of domestic industrial processing capacities. With regard to the oil and gas sector, the best example of these efforts is Jurong

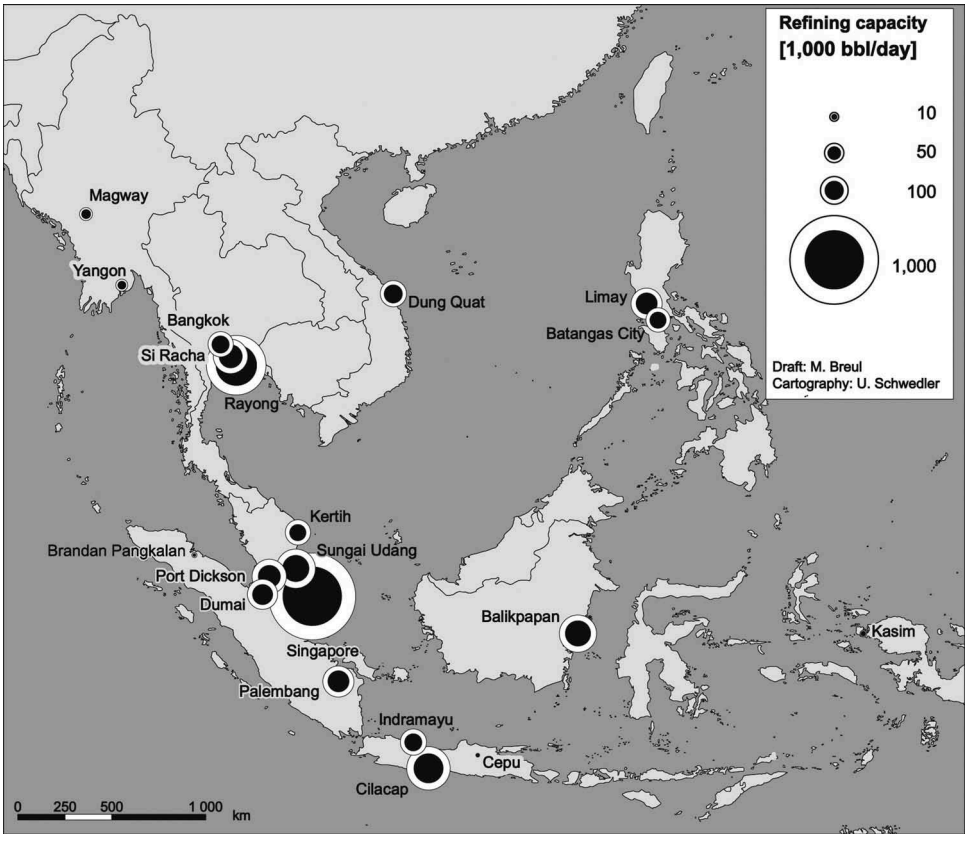

Figure 1. Oil refineries in Southeast Asia.
Source: A Barrel Full, 2016.

Island – a petrochemical complex of 32 square kilometers, formed from the amalgamation of seven islands through public land reclamation (Vu, 2017).

The neighboring countries, meanwhile, have struggled to build corresponding capacities of their own. Vietnam opened its first oil refinery in 2009. A second is about to become operational. Dung Quat, the first refinery, suffers from technical problems and is not competitive. Petroleum products imported from Singapore remain cheaper (Interview 5). Vietnamese blending plants source their feedstock for lubricants from Singapore. These critical inputs are hardly available in Vietnam (Interview 6). One might argue, of course, that the imports provided by the gateway city permit blending to be carried out in Vietnam but, similar to logistics functions, it appears that Singapore's competitiveness rather works against development in the hinterland.

Corporate control

Dispersing economic activities globally causes transaction costs. Transnational companies save transaction costs by establishing a network of headquarters, each of them specializing in a specific region (Enright, 2005; Poon, 2000). Following this pattern, oil

and gas majors such as Chevron, ExxonMobil and Total have set up their Asia-Pacific headquarters in Singapore. Focusing on the downstream segment,[2] a representative of one of these firms explained that the office of his company in Singapore is responsible for corporate activities in 27 countries in the Asia-Pacific region and the Middle East. Most importantly, it is in charge of preparing the long-term strategy for corporate activities in that region. The office in Singapore furthermore provides support to the national subsidiaries on issues such as supply chain management. The national subsidiaries are responsible for the daily operational business, for instance customs and labor (Interview 7). In other cases, the concentration of decision making in Singapore is even stronger. An interviewee from Jakarta pointed out that he and his colleagues are only responsible for domestic sales. Decisions on investments in Indonesia, for example the construction of a blending plant, are first passed to the Asia-Pacific director of his company, who is based in Singapore, and, if the decision is approved, it will be forwarded to the company's global headquarters (Interview 8).

Oil and gas majors have also established regional headquarters for upstream activities in Singapore, simultaneously running business units in each country where they extract resources. The national subsidiaries are fully staffed with technical employees and a general manager. Instead of reporting directly to the global headquarters, each business unit reports to Singapore, which serves as a "coordinator and partly a conveyor" between the global headquarters and the national subsidiaries (Interview 9). Business opportunities are detected and first evaluated by the national subsidiaries. An interviewee from Singapore stressed that "our teams on the ground hear about opportunities before we would do so" (Interview 10). Intense interactions with national regulatory bodies and national oil and gas companies as well as legislation on local content are further drivers of decentralization (Breul & Revilla Diez, 2017).

Service provision

Not only lead firms but also providers of corporate services open regional headquarters in gateway cities. As Bryson, Daniels, and Warf (2004) point out, places integrated into GPNs are so diverse in terms of culture, language, legal institutions, politics, product specifications and technology that the in-house capabilities of even the largest transnational companies are insufficient to operate without the support of service providers. Hence, service providers themselves have to maintain a global network of local affiliates (Daniels, 2007; Dicken, 2015).

Singapore – along with Chicago, Paris and Tokyo among others – is an alpha+ city in the classification of the Globalization and World Cities research group (GaWC, 2011), which indicates a very high connectivity in terms of corporate services. An interviewee from Jakarta stressed the relevance of corporate services that his firm obtains in the gateway city: "So if you want to meet banks, banks typically involved in capital-intensive projects, you will find that you have to travel to Singapore [...]. Like project finance, you wouldn't have a project finance team [in Jakarta]. You might have one person who knows a bit but then he or she doesn't do more than take down information and pass it to Singapore" (Interview 1). However, some key services are provided in the capital cities of Singapore's neighboring countries. As noted, firms such as KPMG and PwC do not organize their business in a centralized manner. An

interviewee from the Singapore office of one of these service providers explained that "if, say, [the Indonesian oil and gas giant] Pertamina engages us for a specific project, then the people who are driving this project sit in Jakarta; so they will contact [our office there] and [colleagues there] will link Pertamina up with [our offices elsewhere in the world], depending on the needs of the project" (Interview 11).

As we have shown in other publications, gateway cities are crucial service hubs but the services they provide are not restricted to corporate services (Breul & Revilla Diez, 2017; Scholvin, 2017). Singapore serves as a hub for such technical products and maintenance services, in particular for offshore operations. For instance, a worldwide provider of drilling equipment provides its services for the Asia Pacific region from the city state, having numerous engineers based there who "fly out [...] to Korea, to Australia, to wherever they are needed" (Interview 2). A representative of a major upstream company in Indonesia added: "if you need a wellhead, if you don't have a wellhead here in Indonesia, you will go to Singapore" (Interview 12). Still, some interviewees argued that many services for upstream operations are available in Indonesia and Vietnam. Catering and the manufacturing and maintenance of standardized drilling equipment, for example, are provided by domestic companies. More sophisticated, knowledge-intensive services are obtained from providers that have a presence in the respective country (Interview 12, 13, 14, 15). Customers sometimes demand that these service providers be present in the country (Interview 16); so as to increase their local content and guarantee quick supply. Given that local entities are integrated into the wider network of their parent company, they source expertise and technologies that would not, otherwise, be available in developing countries.

Knowledge generation

By knowledge generation we mean cooperative processes that involve local and non-local firms that work together so as to adapt existing technologies to local particularities or to market locally developed knowledge globally (Scholvin et al., 2017a). Existing technologies are modified this way, hence knowledge is generated, and the places where this knowledge generation occurs serve as intellectual links between different scales. The company DNV GL, which is engaged in advisory services related to technical standards and their classification and development, established a deep-water technology center in Singapore in 2012. Ernst Meyer, vice president of DNV GL, reported that the center was to "spread its innovation genes instilled in [DNV GL] towards Asia" (Energy Boardroom, 2014). The center serves as a platform for the cooperation of oil and gas majors with equipment providers. It focuses on the challenges of deep-water operations in the Far East. An interviewee from DNV GL explained to us that Singapore was chosen because of the government's supportive attitude. The availability of highly qualified employees, including flexible regulations on the immigration of skilled labor, and the general efficiency of the city-state were also important factors (Interview 17). Again, it appears that the gateway status is, to a significant extent, the result of corresponding policies and private-public cooperation. The Singaporean government has, moreover, set up its own research facilities: the Center for Offshore Research and Engineering (CORE) was founded in 2003 and aims to develop skilled labor and facilitate innovation. The numerous projects carried out under the umbrella of CORE

include research into mitigating spudcan-footprint interaction,[3] conducted by ConocoPhillips, ExxonMobil, Fugro, GL Noble Denton, Keppel Offshore & Marine, Maersk Drilling and the Maritime and Port Authority of Singapore. This research illustrates how transnational companies and local enterprises – Keppel Offshore & Marine being an outstanding example – are brought together in a cooperative process of knowledge generation. It also indicates that such processes facilitate the participation of Singaporean firms in GPNs, enabling them to expand to other parts of the world.

Similar dynamics are practically non-existent in the Southeast Asian periphery. Domestic and transnational companies source knowledge-intensive inputs for their operations in Indonesia and Vietnam from abroad (Interview 13, 18, 19). Companies there nevertheless benefit from joint ventures with enterprises based in Singapore. "My firm does not own any particular technology [of its own] but we do a joint venture with Baker Hughes [...]. So Baker Hughes shares technologies with us," a representative of a Vietnamese service provider explained (Interview 20). This means that innovative processes are likely to remain bundled in the gateway city but their application creates opportunities for firms in the hinterland.

Conclusion

The article has revisited the city–hinterland ties. It contributes to the concept of gateway cities, offering an interpretation that is informed by combining and integrating GPN and world city research. Our understanding of city–hinterland relations refers to relatively large spheres of influence, not to the nearby surroundings of urban areas. This way, we refine the conceptualization of gateway cities by concentrating on their role in GPNs and related impact on regional development through global networks: along five features discussed in this article, gateway cities shape processes of strategic coupling by either generating impulses for peripheral development or concentrating economic activities to the detriment of their hinterlands. Our gateway approach goes beyond corporate headquarters and corporate services. It contributes to overcoming the bias towards the Global North in theory-building on world cities and is part of the theory-building efforts seeing global networks and their local economic effects from the lens of cities from the Global South. What is more, gateway cities – and, we would argue, cities in general – cannot be understood without taking their respective hinterlands into consideration. This is best demonstrated by the fact that Singapore hosts large refineries and other petrochemical industries but it does not have any oil resources of its own. Without the hinterland, these industries cannot function (or, for that matter, be understood).

We have explained that gateway cities – that is, world cities that serve as nodes in GPNs – are characterized by up to five features that influence development along global networks in their peripheries. Not all of these features matter for GPN governance but they are critical for understanding the role of world cities as intermediaries in global economic processes. This finding already makes an interesting contribution to the state of the art. To illustrate the five gateway features, we referred to Singapore and the Southeast Asian oil and gas sector. Correcting overly optimistic predictions on economic development voiced by organizations like the World Bank, we have shown that the gateway city generates impulses for peripheral development but also concentrates certain segments of oil and gas GPNs to the detriment of its hinterland (as summarized in Figure 2):

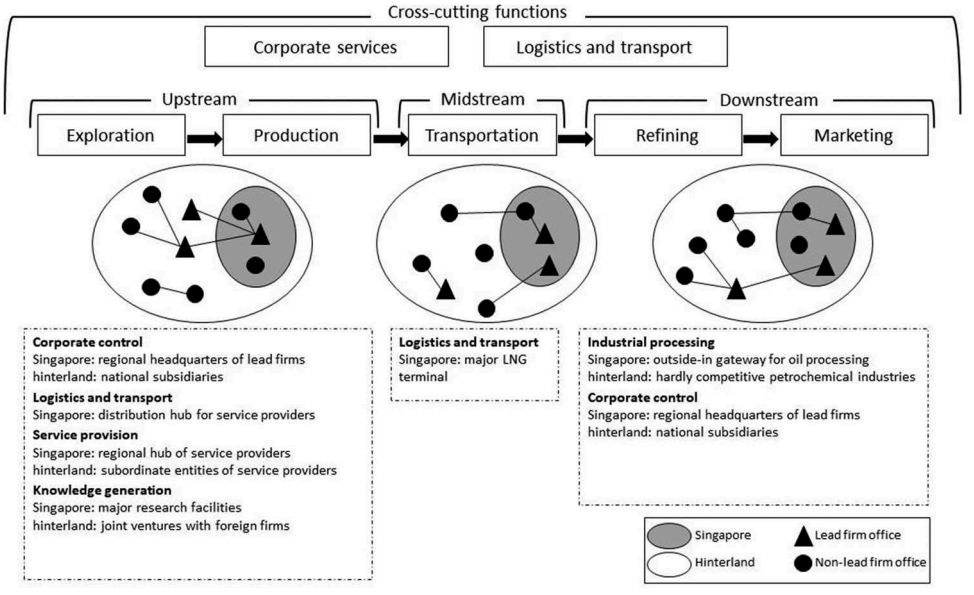

Figure 2. Singapore and its hinterland in a schematic oil and gas GPN.

Note: The relations between lead firm offices and non-lead firm offices depicted in this figure should not be over-interpreted. They are meant to indicate that there is diversity in down-, mid- and upstream networks, as explained in the previous sections. Source: Authors' own draft.

- Logistics and transport: Physical infrastructures such as harbors and, in the case of the oil and gas sector, LNG terminals make gateway cities critical nodes in GPNs. At least in the case of Singapore, corresponding infrastructures in the hinterland develop in competition to the gateway city, not as a result of impulses generated by it.
- Industrial processing: Gateway cities process globally sourced inputs and supply their hinterlands. They also process regionally sourced inputs to insert them into GPNs. We have shown that industrial activities related to oil and gas concentrate in Singapore. As a consequence, the neighboring countries have difficulty developing industrial capacities of their own.
- Corporate control: Major companies concentrate their strategic decision making and management in gateway cities. Our research suggests that national subsidiaries, usually located in capital cities, remain responsible for the day-to-day operational work. They also propose new projects, which then depend on approval from Singapore.
- Service provision: Corporate services and even more so technical services are concentrated in gateway cities. Our interviews have revealed that basic services are provided independently in resource-rich countries. The development of more sophisticated services there is closely linked to activities in Singapore, which implies a positive effect on peripheral development.
- Knowledge generation: Gateway cities generate knowledge, linking its local and global application. These highly sophisticated activities cannot be found in Singapore's neighboring countries – at least not related to oil and gas – but firms there have entered into joint ventures with transnational companies based in the gateway city so as to apply their partners' technologies locally.

There are, of course, limits to what can be explained by the concept developed in this article. While we are convinced that it is worthwhile to apply our gateway concept to other cases, one should not try to generalize our findings on Singapore, which is a very particular case because of its high level of economic development and political stability. Moreover, Singapore is not only a city but also a sovereign state, having more policy options that cities usually have. We therefore think that it would be worthwhile to further develop the gateway concept, concentrating on urban economic policies and the ways cities brand themselves as attractive locations for transnational companies and a transnational knowledge elite (Turok, 2009) – the players that turn cities into gateways. Context matters and gateway cities in other parts of the world (and in other sectors) are likely to be different; but understanding how places are different as well as similar has always been an objective for geographers. This implies that future research on gateway cities should be comparative (Nijman, 2015), following inroads built, for instance, in a special issue of this journal (volume 28, number 1). With regard to our gateway approach, a typology in line with the five gateway features could be advanced. Such an agenda would acknowledge multiple globalizations and further help to overcome the bias towards the Global North that remains characteristic of theory-building in research on world cities also 16 years after the publication of Robinson's seminal article.[4]

Notes

1. Gateway cities are primarily a different analytical perspective than world cities (and world city-regions), not a different real world phenomenon. We would argue that every world city somehow serves as a gateway or, using a synonymous term, an intermediary. For some cases, the gateway role is of marginal relevance compared to global connectivity. For others, being a gateway is a critical feature, as we show in this article.
2. The oil and gas industry is usually divided into three sectors: down-, mid- and upstream. The upstream sector includes searching for oil and gas fields, drilling wells and operating these wells. The midstream sector involves transport, storage and wholesale marketing of crude or purified/refined products. The downstream sector comprises refining crude oil and purifying raw natural gas as well as the marketing and distribution of products derived from oil and gas.
3. The temporary installation of mobile platforms by spudcans creates footprints on the seabed. A subsequent installation of another platform into these footprints can cause damage. The project aims to reduce this risk by exploring the effectiveness of various mitigation measures.
4. This is exemplified by the second edition of the book *World City Network: A Global Urban Analysis* and Grant's (2017) review thereof.

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ORIGINAL ARTICLE

Buenos Aires as a gateway city: how it interlinks the Argentinean oil and gas sector globally

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ABSTRACT

World cites are critical nodes in global production networks (GPNs). Being 'gateways', they serve as hubs for transport and logistics, industrial processing, corporate control and service provision as well as knowledge transmission. In this article, the concept of gateway cities is applied to Buenos Aires and the oil and gas sector. The author explains processes of concentration and dispersal, showing that Buenos Aires concentrates corporate control, whereas the other gateway elements can also be found at peripheral locations. The competition of gateway cities and places subordinate to them relates to debates about downsides of integration into the global economy that may result from a gateway's 'agglomeration shadow'. From a conceptual perspective, the article brings the GPN approach and the world city literature together so as to better understand the territoriality of GPNs and draw attention to city-to-hinterland relations. Being an open heuristic, the concept allows for incorporating experiences from the Global South and overcoming the bias of the world city literature towards advanced producer services and corporate control. Against the backdrop of the findings on Buenos Aires, the author suggests to better recognize a city's attractiveness as a place to live and work.

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Introduction

When Mauricio Macri and a centre-right alliance won the presidential election in 2015, Argentina embarked on a course of liberalization and reintegration into the world economy. Being part of global markets became the new political paradigm. Among a variety of approaches that help to understand relating processes, global production networks (GPNs) and world cities have gained particular prominence. The former has been coined by geographers from Manchester and Singapore (Coe et al. 2004; Coe and Yeung 2015; Henderson et al. 2002).[1] It is particularly suitable to explain spatially unequal development. Research on world cities has produced valuable insights into networks of cities where providers of advanced producer services (APS) cluster (Derudder and Taylor 2016; Taylor, Catalano, and Walker 2002a, 2002b; Taylor and Derudder 2016). These are the places from where global economic processes are controlled or at least organized.

For Argentina and other cases, it makes sense to think GPNs and world cities together because world cities serve as critical nodes in GPNs. As summarized below, surprisingly few publications integrate the two approaches. The edited volume *Commodity Chains and World Cities* (Derudder and Witlox 2010) is an explicit effort in this regard, but it has been criticized by leading GPN scholars because of biases in the world city literature towards APS and supposed role models such as London

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and New York (Coe et al. 2010). Sassen (2010) is less sceptical on merging the approaches. She limits her comments to how a world city perspective informs GPN analysis though, saying nothing about the GPN approach reinforcing her own research.

I argue that conceptualizing cities in economic networks as 'gateways' helps to close gaps that mark research on both GPNs and world cities. Being spatial intermediaries, gateway cities interlink their respective hinterlands globally, integrating them into economic networks (Scholvin 2017; Scholvin, Breul, and Revilla Diez 2019a; Scholvin et al. 2019b). Their assessment is vital to fully grasp the territoriality of GPNs, which tends to be insufficiently addressed in the mainstream literature. GPNs, meanwhile, bind world cities to places beyond the world city network – important ties that have been neglected, in spite of recent contributions that remind us that global flows are just one aspect of the interconnectivity of cities (Smith 2014; Surborg 2011). The gateway concept moreover overcomes the bias of the world city literature towards APS (and, as shown below, corporate control) because it broadens the understanding of global interlinking. It also allows for recognizing experiences from the Global South and captures processes of concentration and dispersal of GPN-related activities in world cities and their hinterlands (Brown et al. 2010; Parnreiter 2014). This means that the concept draws our attention to downsides of integration into the global economy, in particular, what Burger et al. (2015) call 'agglomeration shadows'.

Applying a heuristic proposed by Scholvin, Breul, and Revilla Diez (2019a) as well as Scholvin et al. (2019b), gateway cities can be assessed against the backdrop of five elements: transport and logistics, industrial processing, corporate control, corporate services and transmission of knowledge. I refer to this heuristic in my analysis of Buenos Aires and the oil and gas sector, answering the following question: How does Buenos Aires interlink Argentina globally?

The relevance of Argentina's capital for oil and gas GPNs appears to be a particularly insightful and interesting case because of the country's recent liberalization, which the now outgoing centre-right government expected to trigger foreign investment and thus drive economic growth. The most important target for investment from abroad is oil and gas, especially unconventional resources in north Patagonia, whose integration into global markets have euphorically been labelled 'the key to Argentina's development' (La Nación 2019b).[2] In addition to this empirical objective and the value added by combining the GPN approach and world city research, the case study on Buenos Aires generates insights that inform the concept of gateway cities.

The article is divided into four sections. First, I argue how the GPN approach and research on world cities can be brought together. I elaborate on the benefits of this combination. Second, I explain my case selection and provide background information on the oil and gas sector. Third, my own methodological approach is summarized. The fourth section contains the empirical analysis of Buenos Aires. In conclusion, it is argued how the empirical findings help to revise the concept of gateway cities.

Tying the GPN approach to the world city literature

Friedmann and Wolff conceptualize world cities as 'basing points' of global capital that serve as 'banking and financial centers, administrative headquarters [and] centers of ideological control' (1982, 312). Research in this tradition has largely lost its anti-capitalist orientation, but it still focusses on the relationship of corporate headquarters and subordinate branches (Alderson and Beckfield 2004, 2012; Wall and Van der Knaap 2012). Other scholars, particularly those from the Globalization and World Cities (GaWC) research network, concentrate on the control of global economic processes through APS (Derudder and Taylor 2016; Taylor, Catalano, and Walker 2002a, 2002b; Taylor and Derudder 2016). Reflecting on Sassen's seminal book *The Global City*, their core argument is that services in accounting, advertising, banking and finance, and the law enable transnational corporations to cope with the increasing complexity of globalized production. Because of APS, world cities are 'highly concentrated command points' (2001, 3).

Although there are, as noted, rather few publications that bring world cities together with GPNs, some tie-ins on cities interlinking peripheral sites globally are part of the world city literature. Drennan (1992) characterizes gateway cities by export of producer services, arguing that they serve distant markets as well as contiguous hinterlands. Sassen writes that 'financial centers of many countries […] increasingly fulfill gateway functions […]: each of these centers is the nexus between […] foreign investors and that country's investment opportunities' (2001, 173). Scott (1998) suggests that the expansion of global capitalism into frontier areas happens through islands of prosperity and opportunity such as Guangzhou and São Paulo. Taylor et al. (2002) have coined the term 'regional command centres' for cities that host the regional headquarters of APS firms (and presumably also other transnational corporations). Nijman (1996) distinguishes the roles of Miami in the urban system of the United States and the global one, finding that Miami is not particularly relevant in the former but connects Central America to the world. Brown, Taylor, and Catalano (2002) come to a similar conclusion on Miami's gateway role. They also suggest that world cityness depends on sufficiently large regional hinterlands that can be serviced.

Adding further examples, Rossi, Beaverstock, and Taylor (2007) identify 'decision cities' (for corporate control) and 'service cities' (for APS) that connect the whole of Brazil globally. Parnreiter (2015) as well as Parnreiter, Haferburg, and Oßenbrügge (2013) analyse how Hamburg, Johannesburg and Mexico City interlink their hinterlands through APS and corporate control. Meyer, Schiller, and Revilla Diez (2009) concentrate on intra-firm hierarchies and relating decision-making processes in Hong Kong, which they identify as a spatial intermediary. The contributions to *Commodity Chains and World Cities* deal with APS and governance of GPNs (Parnreiter 2010), corporate networks that shape labour markets, migration and hinterlands of cities (Vind and Fold 2010), industrial production and APS in logistics (Jacobs, Ducruet, and De Langen 2010) as well as APS relating to high-tech firms in greater metropolitan areas (Lüthi, Thierstein, and Goebel 2010).

Some contributions address features of global interlinking beyond APS and corporate control. Revitalizing a key idea from Gottmann's (1964) book *Megalopolis*, Phelps conceptualizes cities as hinges that develop 'specialised economic niches within city systems' (2019, 9). He argues that they connect other places globally or, in my words, integrate them into GPNs. Related research by Li and Phelps (2016, 2019) shows how Shanghai bundles flows of knowledge from and to the Yangtze river delta. In another publication, Phelps points out that 'the value of a logistics and transport perspective within GPNs is that it draws attention to […] intermediate places' (2017, 30), meaning to gateways that specialize in this particular niche. Being economies in-between, intermediate places also connect to networks in other ways, for example through export processing zones or trade fairs.

Leading GPN scholars, meanwhile, seldom refer to cities, although Coe and Yeung (2015) acknowledge the importance of world cities as nodes of command and control that bring APS together with lead firms and their strategic partners. The neglect of spatial intermediaries in GPN research is particularly problematic because such sites are potentially critical for economic development elsewhere in the network. For instance, Breul, Revilla Diez, and Sambodo (2019) show that Singapore serves as a gateway to South-East Asia, but the city is so competitive that it concentrates many GPN-related activities, instead of facilitating their dispersal to the periphery. Research on secondary cities in Europe indicates that these may fall within the shadow cast by nearby hubs, suffering from a competitive disadvantage with respect to all but basic goods and services (Burger et al. 2015; Cardoso and Meijers 2016; Meijers and Burger 2017). This literature confirms a conviction that has been central to our understanding of cities in economic networks: Sheppard points out that 'the futures of places depend on their interdependencies with other places' (2002, 308) and Massey reminds us that 'some [places] are more in charge […] than others; some initiate flows and movement, others don't; some are effectively on the receiving end [whereas others] are effectively imprisoned' (1993, 61).

In other words, thinking GPNs and world cities together allows us to better understand processes of concentration and dispersal of economic activities. It uncovers downsides of integration into the global economy via spatial intermediaries, which may lead to unequal development. An accordingly

critical notion of the dynamics of the world economy not only revives the neglected anti-capitalist orientation of the world city literature. It also pushes GPN research towards the dark sides of corresponding phenomena. As Phelps, Atienza and Arias reason, 'the words ["]uneven development["] do occur frequently in [Coe and Yeung's seminal contributions] but they remain largely words of an implicit rather than explicit theoretical possibility or an empirical reality' (2018, 240).

The publications mentioned in the second and third paragraphs of this section focus on providers of APS and, to a lesser extent, the headquarters of transnational companies. As noted, this basic orientation of the world city literature has been criticized for narrowing our understanding of cities in the global economy, including the role that they play in economic networks. It has also been pointed out that cities from the Global South are less frequently studied (Kanai, Grant, and Jianu 2017) and, more importantly, that they are not taken into consideration for theory building (Robinson 2002, 2006; Roy 2009). Admittedly, the world city literature has diversified. It now also covers city networks of sectors such as automotive, biotechnology, media, energy, pharmaceutics, and technology hardware and equipment (Krätke 2014a, 2014b; Krätke and Taylor 2004; Martinus et al. 2015; Toly et al. 2012). Yet, this research retains the established understanding of features that define world cityness, provoking the question of whether there is not more than APS and corporate control to global interlinking. It also says little about city-to-hinterland connections or the gateway role of some world cities.

The aforementioned publications by Phelps (2017, 2019) build inroads into a broader understanding of global interlinking. They relate to research on gateway cities, which goes far beyond APS and corporate control. Burghardt (1971) once referred to transport infrastructure, wholesale trade and numerous services that travelling businesspeople rely on – from banks to hotels to restaurants. Sigler's (2013) 'relational cities' are essential to the global network of flows because they are, first of all, hubs for logistics, warehousing and wholesaling. Other publications deal with gateway cities as first destinations of international migrants (Price and Benton-Short 2008), nodes in flows of investment and trade (Chubarov and Brooker 2013; Grant 2008), and hubs of air and maritime transport (Córdoba Ordóñez and Gago García 2010; Lee and Ducruet 2009; Notteboom 2007). Grant and Nijman (2002) – who have probably most shaped the concept in recent years – explore how local, national and international business districts in Accra and Mumbai evolve in relation to the changing integration of the two cities into the global economy.

To shed light on ways of economic interlinking not covered by research grounded in the world city literature, Scholvin, Breul, and Revilla Diez (2019a) as well as Scholvin et al. (2019b) suggest that gateway cities are marked by up to five elements that allow for the functioning of spatially fragmented production, meaning for efficient GPNs. Gateways cities are (1) hubs for transport and logistics, (2) locations where industrial processing takes place, (3) sites of corporate control and (4) corporate service provision as well as (5) places of knowledge transmission. Corporate service provision goes beyond APS. The reason for this is that the integration of peripheral sites into GPNs also depends on technical services – offshore engineering and the training of crews that work on oil rigs, for example. Such services are not available in many locations across the Global South, at least not at the level of sophistication required for offshore oil and gas extraction (Scholvin 2017). Being a starting point and an open heuristic, this approach allows for incorporating new features based on experiences from the Global South.

Relating gateway cities to GPNs is easy. They are critical nodes within these networks and connect peripheral locations to the outer world. The distinction of gateways and world cities is less straightforward, albeit important for conceptual clarification. Transport and logistics as well as industrial processing as features of gateway cities indicate that the concept is wider. Further to that, the gateway perspective captures city-to-hinterland relations. This implies that corporate control aims at regional headquarters that are in charge of subsidiaries at more peripheral sites, instead of global headquarters controlling worldwide networks. Service provision refers to services needed in the hinterland, as just explained. Knowledge generation comprises more than innovation in APS, which Sassen (2001) ascribes to world cities. It is about adapting global knowledge of any kind to local specificities or,

alternatively, making local knowledge suitable for commercialization all over the world, as Scholvin et al. (2019b) explain with regard to a science and technology park in Rio de Janeiro. As a research perspective, gateways cities hence address empirical phenomena that are hardly covered by the world city literature.

Case selection

Argentina has been extracting oil since 1907. Today, it is South America's largest natural gas producer and a significant producer of oil too. The corresponding reserves amount to 2.4 billion barrels of proven conventional oil, 27 billion barrels of technically recoverable shale oil as well as 11.1 trillion cubic feet of conventional and unconventional natural gas. Most of the unconventional resources are part of the Vaca Muerta field in north Patagonia, which is one of the largest shale deposits in the world (Energy Information Administration 2017). The aforementioned liberalization policies have boosted the attractiveness Argentina's upstream sector. Most importantly, foreign exchange controls were lifted and a stimulus programme for natural gas extraction was launched at the beginning of the Macri presidency. The conservative government also successfully negotiated with investors and trade unions to reduce the cost of operation and avoid strikes. Hence, the Argentinean oil and gas sector has gone through an intensive process of integration into GPNs since 2015 and this process depends on a gateway city that interlinks resource peripheries globally.

The oil and gas industry consists of three sectors. Upstream includes searching for resources, drilling wells and operating these wells. Such activities are intensive in capital and technology. Less than a dozen firms worldwide perform the most sophisticated tasks that oil field operators like Shell and the semi-statal Argentinean giant Yacimientos Petrolíferos Fiscales (YPF) outsource. Each of these firms has to take decisions on where to carry out geological studies – these are done remotely – and where to maintain and store equipment. They also subcontract other companies for less sophisticated tasks, having to choose where to seek these partners. Midstream activities are transport, storage and wholesale marketing of crude or purified/refined products. Downstream comprises refining crude oil and purifying raw natural gas as well as the marketing and distribution of products derived from oil and gas. Again, the respective lead firms have to choose suitable locations, either in proximity to oil and gas fields or elsewhere.

There are, of course, numerous endogenous and exogenous conditions that determine the prospects of resource peripheries in GPNs. This article is not meant to address all of them. By revealing how Buenos Aires interlinks the Argentinean oil and gas sector globally, the article sheds light on the concentration of some segments of oil and gas GPNs in the gateway city or, in other words, the agglomeration shadow of the hub. This territorial feature of economic networks is not only crucial for development at different places. As said, it also tends to be neglected in GPN research.

Being a national primate city, Buenos Aires plays a politically and economically dominant role in Argentina. It once belonged to the top world cities – culturally and economically at par with London and Paris – but then stagnated in the course of the last century, as much as the entire country did (Della Paolera and Taylor 2004; Taylor 1992). GaWC (2018) researchers consider Buenos Aires being an alpha-word city, comparable to Frankfurt and Melbourne regarding its relevance for the world city network. For the analysis below, it is particularly important that Buenos Aires is much further away from Argentina's largest oil and gas fields than, for example, Rio de Janeiro from those of Brazil. This implies that processes of agglomeration in the gateway city are likely to co-occur with a dispersal of some gateway elements to peripheral locations, promising interesting insights into how Buenos Aires interlinks its hinterland globally.

Methodology

The world city literature has been shaped by the GaWC approach. Research that stands in this tradition seeks to uncover the world city network by counting branches of APS providers such as

KPMG and Standard Chartered and then draws conclusions on their connections, which leads to conclusions on the connections of the respective cities. This quantitative method has generated impressive insights. However, it cannot answer everything and there are important limitations of its usefulness for the study of gateway cities. Capturing APS branches and their ties may help to identify which world city qualifies as a gateway. Yet, studies based on quantitative approaches do not elaborate much on why firms have adopted corresponding location strategies and how exactly gateway cities fulfil their role as spatial intermediaries. This is largely tacit knowledge, held by leading managers of the companies in consideration. Hence, expert interviews must be conducted to learn how a specific city serves as a gateway and why so. As Vind and Fold emphasize, it is impossible to understand the role of APS and corporate headquarters (and other features, I would add) for cities in GPNs 'without intensive fieldwork, including corporate interviews; databases and surveys cannot provide the data needed' (2010, 72). In other words, qualitative research is needed to analyse how cities serve as gateways instead of merely uncovering whether they achieve this status – a shift in perspective also demanded by scholars who have shaped the world city literature against the backdrop of quantitative methodologies (Martinus et al. 2015; Martinus et al. 2019).

I conducted 19 interviews with companies, consultants, ministries and public authorities. The interviews are listed in Table 1. Contact was established via the interviewees' personal sites on LinkedIn and by snowball sampling. Appointments were made with the most important oil field operators (Pan American Energy and YPF, among others) and technical service providers (Calfrac and Halliburton, for example). During the interviews, I used a guideline of eight questions, covering intra-firm organization, location strategy, location advantages of Buenos Aires and interdependencies with the local economy, both in Buenos Aires and at peripheral sites. The open nature of the interviews enabled the interviewees to address issues not included in the guideline. Further to that, I refer to data on air and maritime transport in Argentina, rankings of Latin American universities and the website 'A Barrel Full', which provides information on the down- and upstream sectors worldwide.

In order to present information obtained from interviews, I make use of direct and indirect quotes, thematic matrices and cognitive diagrams. Thematic matrices summarize interviews one by one, following themes deemed to be relevant such as the five gateway elements (Ritchie et al. 2014). Cognitive diagrams illustrate how an interviewee sees a particular issue. They allow drawing conclusions about the interviewee's behaviour, as demonstrated in seminal contributions by Axelrod (1976) and Hart (1977).

Table 1. Interviews.

Interview	Date	Description of the firm/organization
1	8 June 2016	Former employee of the Ministry of Energy and Mining
2	10 June 2016	Foreign integrated oil and gas company
3	27 April 2017	Argentinean upstream company
4	3 May 2017	Foreign upstream company
5	5 May 2017	Foreign upstream service provider
6	5 May 2017	Argentinean integrated oil and gas company
7	5 May 2017	Foreign integrated oil and gas company
8	5 May 2017	Argentinean upstream service provider
9	5 May 2017	Argentinean integrated oil and gas company
10	9 May 2017	Foreign upstream service provider
11	10 May 2017	Ministry of Energy and Mining
12	10 May 2017	Foreign integrated oil and gas company
13	12 May 2017	Consultant with a focus on energy policy
14	15 May 2017	Public authority involved in downstream natural gas
15	16 May 2017	Foreign integrated oil and gas company
16	17 May 2017	Foreign upstream service provider
17	17 May 2017	Foreign integrated oil and gas company
18	4 December 2017	Foreign upstream service provider
19	14 December 2017	Foreign upstream service provider

Note: All interviews were conducted in person and in Buenos Aires.

Simple cognitive diagrams result from sketching the content of individual interviews, which I did by using the categories from the guideline. Central thoughts are shown as boxes, interlinked by arrows in accordance with the explanation given by the respective interviewee. With the help of adjacency matrices, several interviews can be merged into a single diagram – one that shows how all interviewees understand a specific issue. Figure 1 further below is a complex cognitive diagram that reflects the statements by 17 interviewees.[3] It is important to point out that one must not conclude that a factor mentioned by six interviewees is six times as relevant as a factor mentioned in one interview. Cognitive diagrams provide an overview of a large number of interviews, but they have to be interpreted with the help of other methods. They complement direct and indirect citations, explanations based on information from secondary sources and the toolkit provided by qualitative content analysis.

Buenos Aires and the territoriality of oil and gas GPNs

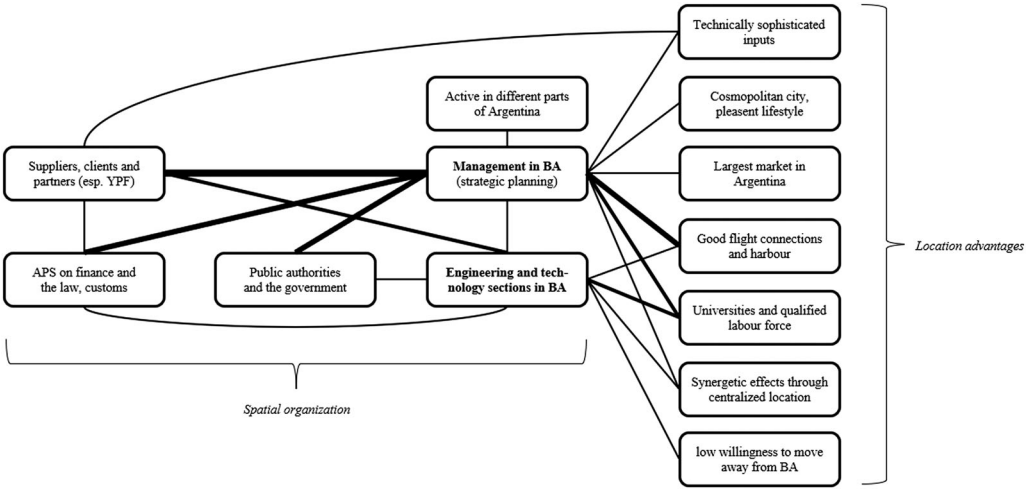

Figure 1. Cognitive diagram of Buenos Aires as an oil and gas gateway city. Source: Author's own draft, based on 17 interviews (see Table 1). Note: BA stands for Buenos Aires. The figure explains the gateway status of Buenos Aires. It does not cover GPN-related activities in other parts of Argentina.

As shown in Figure 1, the information obtained from 17 interviews with stakeholders in the oil and gas sector relates to the sector's spatial organization on the urban scale and location advantages of Buenos Aires. Interviewees argued that Buenos Aires serves as a gateway because of a dense network of key players in the city. Proximity to a variety of important organizations – clients, strategic partners and specialized suppliers, public authorities and the government as well as APS firms that focus on finance and the law – explains why major companies have their management and, in many cases, their engineering and technology departments in Buenos Aires. Concerning the city's location advantages, the interviews were characterized by diversity rather than overlap. There are few boxes connected by thick arrows for spatial organization (frequently mentioned causalities), whereas many boxes with thin arrows show the findings on location advantages (seldom mentioned causalities).

Table 2 is a thematic matrix of eight interviews – those that contained the most relevant information. It is structured according to the five gateway elements and specifies how Buenos Aires matters to each company individually. The thematic matrix reveals that there appear to be few differences among oil and gas firms with regard to how they use Buenos Aires as a gateway. An overall pattern becomes apparent, not several distinct ones. Corporate control – that is, the density of key

Table 2. Thematic matrix of Buenos Aires as an oil and gas gateway city.

Interview	Transport and logistics	Industrial processing	Corporate control	Corporate services	Knowledge transmission
3	Ports	–	Density of oil and gas firms; contact with public authorities and the government	APS in finance and the law	–
4	Hub for air travel (leads to centralization)	–	Density of oil and gas firms (face-to-face interaction)	APS in finance and the law	–
5	Domestic and international air travel (leads to centralization)	–	Density of oil and gas firms (esp. YPF); contact with the government (face-to-face interaction)	–	Universities and qualified workforce
6	Domestic and international air travel (leads to centralization)	–	Density of oil and gas firms; contact with the government (face-to-face interaction)	–	Universities and qualified workforce
7	Ports	–	Density of oil and gas firms (esp. YPF); contact with the government	APS in finance and the law	Universities and qualified workforce
8	Hub for air travel (leads to centralization)	–	Density of oil and gas firms	–	Qualified workforce
12	Largest and most efficient ports	Supply industry	Density of oil and gas firms; contact with the government	–	–
17	–	–	Density of oil and gas firms (face-to-face interaction)	–	Research institutes

Source: Author's own draft.
Note: Generalized descriptions of the companies listed here can be found in Table 1.

players in Argentina's capital – is critical. In contrast to the cognitive diagram, which also includes information from consultants and interviewees who work for public authorities, APS appears to be less relevant. Transport and logistics as well as knowledge transmission are confirmed as gateway elements. The marginal role of industrial processing becomes clear.

The location advantages of Buenos Aires shown in Figure 1 relate to the first gateway element, among others: transport and logistics. The harbours of the city (Puerto Nuevo) and province (Dock Sud) – the latter is adjacent to the city, thus practically being part of it – are by far the largest container terminals in the country, with a turnover of a respective 845,000 and 526,000 TEU in 2017.[4] For bulk goods, which are insignificant for the upstream sector, Bahía Blanca and Quequén (both for grain exports) as well as Caleta Córdova, Caleta Olivia and Rosales (all for crude oil) have the highest turnover (Ministerio de Transporte 2018). The three main ports for shipping crude oil are close to large oil fields – in the provinces of Chubut, Santa Cruz and at the edge of Bahía Blanca, which connects by pipeline to Neuquén and Río Negro (see Figure 3 further below). Hence, not all flows relevant to oil and gas GPNs pass through Buenos Aires.

Figure 2 shows that Buenos Aires is a hub for domestic flights. There are few direct connections between other cities: only once a day between Comodoro Rivadavia, Mendoza and Neuquén, which are of major importance to the oil and gas sector. Since most companies involved in this sector participate in projects in different parts of the country, it makes sense to centralize equipment and staff needed in more than one province in Buenos Aires, as interviewees explained (Interview 4, 5, 6, 8). With regard to international flights, Buenos Aires plays an even more important role, thus being the preferred administrative location of foreign firms (Interview 5, 6).[5]

Industrial processing, the second gateway element, does not define Buenos Aires as a gateway city. In the interviews, it was hardly ever mentioned (see Figure 1 and Table 2). The status of the metropolitan area of Buenos Aires as the industrial core zone of Argentina is reflected by the fact that suppliers, including industrial ones, are part of the network of players that marks the gateway city. However, interviewees usually referred to commercial dealings with these companies, not to the manufacturing and procurement of inputs (exceptions: Interview 4, 7, 12). Due to the considerable distance between Buenos Aires and the resource peripheries (about 1000 kilometres to Mendoza and Neuquén, more than 2000 kilometres to Santa Cruz and Tierra del Fuego), oil field operators and

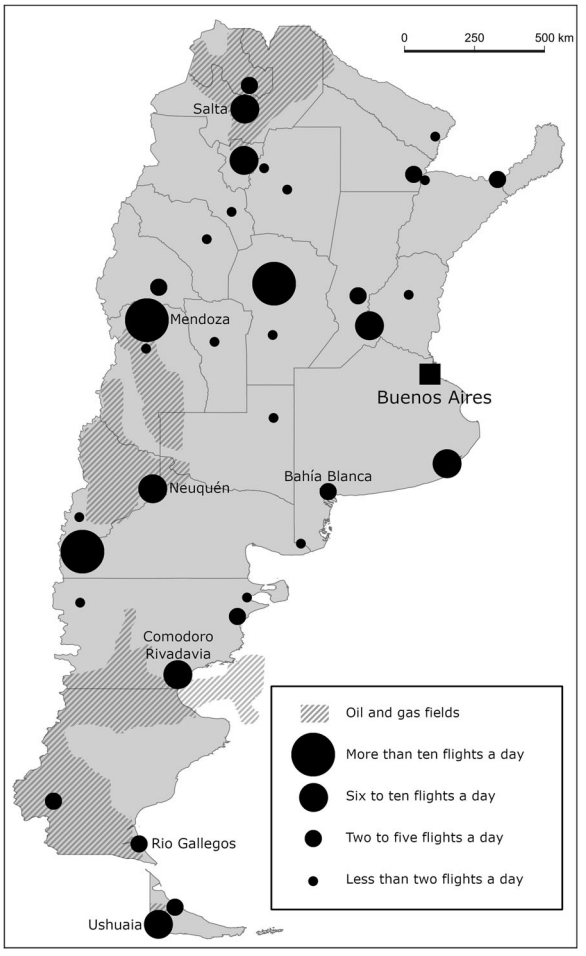

Figure 2. Domestic flights from Buenos Aires. Source: Author's own draft, based on data from www.flightstats.com. Note: Names are provided for the destinations that matter most to the oil and gas sector. El Palomar airport in the north of Buenos Aires is not taken into account because of a lack of data. From there, low-cost airlines offer flights to destinations in Argentina and Santiago de Chile. The number of flights is low.

their specialized suppliers contract local suppliers or foreign firms with a local presence so as to reduce cost and time of transport (Interview 10, 16). This decentralization has been reinforced by Argentina's legislation on local content, which refers to the provincial level, specifying which share of labour, products and services has to be sourced in the province that hosts the hydrocarbon resources that are to be explored or extracted.

In the downstream sector, industrial processing partly concentrates in Buenos Aires. The largest refinery of the country – with a capacity of 189,000 barrels a day – is located in La Plata, about 60 kilometres south-east of the city centre of Buenos Aires. The second largest is in Buenos Aires; the third-largest about 80 kilometres north-west. In Bahía Blanca – 600 kilometres from Buenos Aires – and in the provinces of Mendoza, Neuquén and Salta, there are other refineries. Bahía Blanca hosts a terminal for imports of liquefied natural gas. Another one is at the north edge of the metropolitan area of Buenos Aires (A Barrel Full 2014, 2015). A plant for liquefaction of natural gas, which would be connected to the Vaca Muerta field by pipeline and allow for corresponding exports, may soon be built in Bahía Blanca (La Nación 2019a). Figure 3 shows these infrastructures, indicating a considerable dispersal:

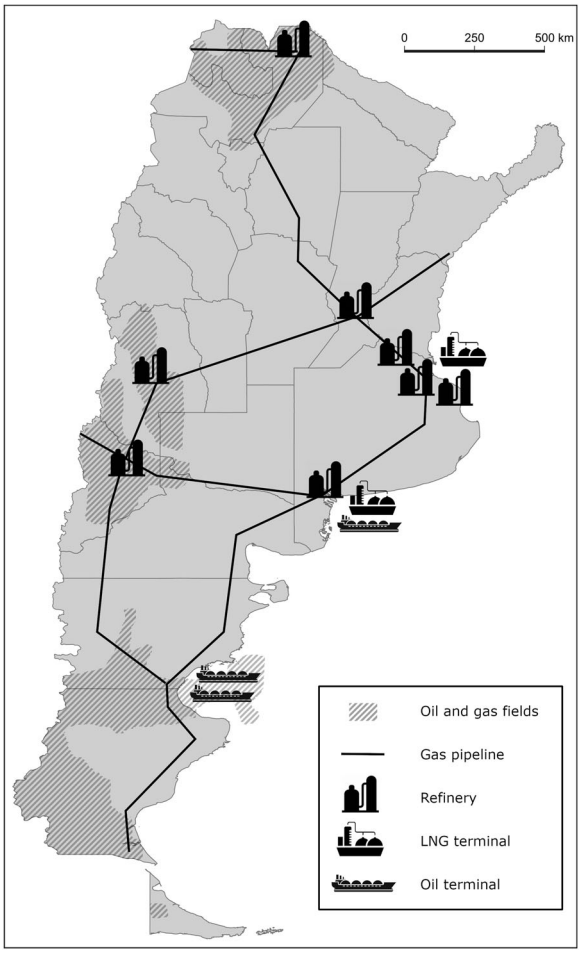

Figure 3. Argentina's down- and midstream infrastructures. Source: Author's own draft.

Corporate headquarters, together with public authorities and the government, and, to a lesser extent, also APS in finance and the law are the key reason for companies involved in oil and gas to concentrate their management and strategic decision-making for Argentina in Buenos Aires. Several interviewees began their answer to the question of Buenos Aires's location advantages by saying 'Dios está en todos lados, pero atiende en Buenos Aires' – God is everywhere, but his office is in Buenos Aires (Interview 8, 12, 18). In highly centralized Argentina, it is 'essential' for a large corporation to be in Buenos Aires, to have its headquarters or at least a significant representation in the city, because 'everything is controlled from here' (Interview 18). It was furthermore emphasized that personal interaction with business partners and government representatives matters. Teleconferences are suitable for discussing practical issues of a project, not for making strategic decisions that lead to the project in the first place (Interview 2, 3, 5, 6, 7, 16). Contracts with strategic partners and specialized suppliers are only finalized after several face-to-face meetings (Interview 4).

Proximity to YPF's headquarters – located in Puerto Madero, next to the historical city centre of Buenos Aires – is particularly important for all strategic partners and specialized service providers (Interview 5, 7). YPF, whose major shareholder has been the Argentinean state since 2012, is involved in every major upstream project, usually taking larger shares than the strategic partners. The close collaboration of oil field operators – Pampa Energía, Total Austral and others, in addition

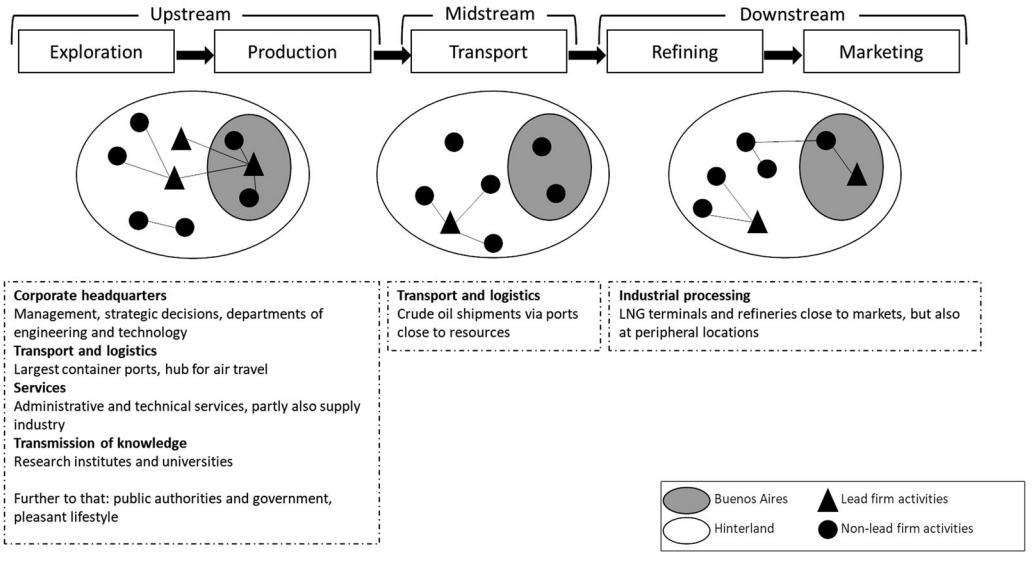

Figure 4. Spatial organization of Argentina's oil and gas sector. Source: Author's own draft. Note: The inter-firm relations shown in this figure are schematic and meant to stress the corresponding variety that marks the oil and gas sector. They should not be over-interpreted.

to YPF – with technical service providers such as Baker Hughes and Schlumberger is a key feature of the gateway role of Buenos Aires.

Knowledge transmission – the fifth gateway element – also plays a certain role, albeit a less significant one. In the Times Higher Education (2018) ranking, the University of La Plata and the University of San Martín, both located in the larger metropolitan area of Buenos Aires, are first and third among all Argentinean universities in terms of research intensity.[6] In the QS World University Rankings, four Argentinean universities are part of the top 30 for Latin America: the University of Buenos Aires (rank 9), the Torcuato di Tella University (21), the Austral University (24) and the University of La Plata (27) (Quacquarelli Symonds 2018). All are located in the larger metropolitan area of Buenos Aires. As a result, oil and gas companies can rely on a sufficiently skilled workforce there. There are also research institutes in the metropolitan region. They are commissioned by transnational corporations to conduct geological studies (Interview 17).

Moreover, Buenos Aires is an attractive city to live and work. In a ranking by the business consultancy Mercer (2018), which compares the quality of life in 231 cities worldwide, Buenos Aires is 93rd, being the second-best performer from South America. Interviewees emphasized that Buenos Aires is 'cosmopolitan' and offers a 'pleasant lifestyle' (Interview 5, 6). Skilled expats can be recruited easily. Cities and towns in the interior of Argentina, conversely, are unpopular with Argentineans and foreigners. Two interviewees highlighted the problems faced by the human resources departments of their firms to persuade employees to move to cities such as Mendoza or Neuquén (Interview 4, 8). Smaller cities that depend exclusively on the oil and gas sector – Comodoro Rivadavia, for instance – are even less attractive. The fact that skilled employees are reluctant to leave Buenos Aires should not be underestimated as a location advantage of the gateway city. It reduces the possibility that GPN segments of such as engineering studies and geological research relocate to peripheral locations.

Figure 4 summarizes the territoriality of oil and gas GPNs in Argentina, distinguishing between activities in the gateway city and hinterland:

Despite the centrality and importance of Buenos Aires in oil and gas GPNs, it must not be overlooked that the gateway city is itself in a position of dependency and subordination. Interviewees from oil majors – with the obvious exception of YPF – explained that they implement strategic

decisions made at corporate headquarters in Houston, Paris and Rio de Janeiro. In Buenos Aires, detailed plans are developed – for instance for the construction of petrochemical plants or the exploration of new deposits. Argentinean employees present these plans to their colleagues at the respective global headquarters. Such proposals compete with projects in other countries, proposed by the local staff there. If the parent company decides to pursue a project in Argentina, the implementation will lie in the hands of staff based in Buenos Aires (Interview 2, 4, 7, 12, 15, 17).

Conclusion

This article brought GPNs and world cities together via the gateway concept. I argued that GPN research insufficiently covers the territoriality of economic networks, particularly intermediaries such as gateway cities. The world city literature, meanwhile, says little about city-to-hinterland relations. The reason for this is that both literatures concentrate on other important features. Nonetheless, the territoriality of economic networks and city-to-hinterland relations must not be neglected. These issues can be addressed from the gateway perspective, which, thus, complements research on GPNs and world cities. The gateway perspective is, moreover, open to incorporating experiences from the Global South and overcomes the bias towards APS and corporate control that marks the world city literature. By shedding light on the concentration and dispersal of GPN-related activities, the gateway perspective also draws our attention to downsides of integration into the global economy – those that may result from agglomeration shadows.

Against this backdrop, I explained how Buenos Aires interlinks the Argentinean oil and gas sector globally. The concentration of corporate control (by lead firms, their customers, strategic partners and specialized suppliers), public authorities and the government as well as, to a lesser extent, APS – in other words, the density of key actors – is the decisive factor that turns Buenos Aires into a gateway city. Transport and logistics as well as the transmission of knowledge are also important, but some restrictions must be made. Industrial processing, meanwhile, is not a relevant feature of the gateway city. Oil and gas GPNs in Argentina are characterized by manifold processes of concentration in the gateway city and dispersal to peripheral locations, meaning that both agglomeration shadows of the hub and opportunities for development through integration into the global economy exist. The former relates to corporate control and knowledge transmission, whereas the latter can be found in industrial processing and service provision.

From a more general perspective, the article showed that the five gateway elements are just a starting point, a framework that pre-structures empirical research. The pleasant lifestyle of Buenos Aires boosts the city's gateway role, reinforcing the concentration of certain segments of oil and gas GPNs there. This soft location advantage is not part of the gateway concept advanced by Scholvin, Breul, and Revilla Diez (2019a) and Scholvin et al. (2019b). Future studies on gateway cities should, therefore, recognize that a city's relevance does not exclusively result from hard location advantages. As the analysis of Buenos Aires revealed, the territoriality of GPNs or, in other words, the interaction of world cities and their hinterlands is influenced by soft location advantages that make some places more competitive than others. Academic debates on consumer cities (Glaeser, Kolko, and Saiz 2001) and consumption-driven urban development (Markusen and Schrock 2009) are, hence, potentially insightful tie-ins for research on GPNs and world cities, in particularly when the latter are conceptualized as spatial intermediaries.

To conclude, it appears worthwhile to emphasize that the gateway concept further developed in this article is meant to complement studies that adhere to mainstream GPN and world city perspectives. Shifting attention to city-to-hinterland relations and being more open to distinct ways of global interlinking broadens our understanding of cities as spatial intermediaries. It reflects increasingly recognized efforts to 'valorize the plurality of the urban experience while acknowledging its global interconnectivity' (Acuto 2014, 1733) – efforts that implicitly relate to earlier contributions by leading GaWC scholars (Knox and Taylor 1995), although these do not define the mainstream of GaWC-inspired research or, perhaps, the perception thereof.

Notes

1. The related approach of global value chains is not addressed here because it offers fewer connections to the world city literature.
2. The defeat of the Macri government by the populist Frente de Todos in the elections of October 2019 marks a turning point for the country. The expectations related to foreign investment into oil and gas are, however, shared by the outgoing government and its successor.
3. I decided to exclude two interviews because they dealt with the political regulation of the oil and gas sector – a topic different from the one of this article.
4. The 20-foot equivalent unit (TEU) is a unit of cargo capacity used to describe the capacity of container ships and container terminals. It is based on the volume of a 20-foot-long container.
5. Argentina's other international airports are in Córdoba, Mendoza and Rosario. They offer direct flights to South America – especially to tourist destinations in Brazil – and Panama City.
6. The University of Córdoba, about 700 kilometres north-west of Buenos Aires, is ranked second.

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No potential conflict of interest was reported by the author.

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The Diversity of Gateways: Accra, Cape Town and Mauritius as Hinges in Oil and Gas GPNs

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Abstract
Research that stands in the tradition of the world city literature has made essential contributions to our understanding of 'gateways'. Being logistics and transport hubs, sites of industrial processing, places of corporate control and service provision as well as locations of knowledge generation, gateways are an intermediate step between the periphery and the core of the world economy. They integrate peripheral places into global production networks. Yet, the state of the art insufficiently captures the functional diversity of gateways. This article makes a corresponding contribution. The author analyses how Accra, Cape Town and Mauritius interlink the African oil and gas sector globally. It is shown that corporate control of Ghana's upstream sector concentrates in Accra, whereas logistics and upstream service provision happen in close proximity to oil and gas fields, in the town of Takoradi. Cape Town has established itself as a logistics and services gateway to sub-Saharan Africa. It also provides critical knowledge to overseas firms that seek to invest in the region. Mauritius pursues an ambitious strategy to become a logistics hub. It already serves as a gateway for financial and technical services. Against the backdrop of such diversity, the author furthermore calls the notion of gateways as sites of highly sophisticated service provision into question. His research ties up with policy recommendations made by the *State of African Cities 2018* report and recent debates on generalisation in Urban Studies.

Keywords Accra · Cape Town · Gateway · Mauritius · Oil and gas sector

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Introduction

The *State of African Cities 2018* report points out that some African cities have gained considerable relevance as 'gateways' that channel foreign investment into their respective hinterlands, thus allowing for economic development there (UN Habitat 2018). This finding relates to a key idea of how to conceptualise cities: they must not be seen 'as a bounded, punctuated economic site, but as sites within spatially stretched economic relations' (Amin and Thrift 2002: 67).

In this sense, several scholars argue that gateways integrate the periphery of the world economy into global production networks (GPNs).[1] In particular, research on world cities—rather than research on GPNs—has advanced our knowledge in this regard. Taylor et al. (2002c) label some world cities 'regional command centres'. Brown et al. (2010) suggest that world cities are vital nodes in GPNs, providing essential control and service functions. In empirical studies, Parnreiter (2010, 2015) as well as Parnreiter et al. (2013) therefore concentrate on world cities as places of GPN governance. Rossi et al. (2007) distinguish between 'decision cities' and 'service cities' that interlink the Brazilian economy globally. Martinus et al. (2015) and Sigler (2013) use the terms 'globalizing centers' and 'relational cities' for urban places that integrate their respective hinterlands into worldwide networks.

Developing an approach that goes beyond corporate control and corporate services, Scholvin et al. (2019) show how Singapore globally interlinks peripheral places of oil and gas extraction, for example in Indonesia and Vietnam. The city serves as a hub of logistics and transport, industrial processing, corporate control, service provision and knowledge generation. These functions turn Singapore into a gateway, meaning a vital node in GPNs. This is not to say that all flows that affect South-East Asia in the oil and gas sector are channelled through Singapore. Nonetheless, the three authors demonstrate that the city plays an essential role for a considerable number of transnational firms. Without the gateway, the corresponding economic networks would not be functional. Thus, Singapore is what Breul and Revilla Diez (2018) call an 'intermediate step to resource peripheries'.

These publications make important contributions to our understanding of gateways, but they also suffer from a tendency of homogenisation. Research based on qualitative methodologies refers to cases that are not representative of the totality of gateways. It nevertheless often aims at generalised conclusions. If quantitative methodologies are applied, the diversity of gateways can hardly be captured in all its depth. In order to advance the state of the art, I apply the gateway concept—as developed by Scholvin et al.—to three African cases. By uncovering the distinct roles of Accra, Cape Town and Mauritius, I show that the category of gateways is much broader than one may expect from the existing literature. Accra, Cape Town and Mauritius are gateways. They integrate peripheral places into oil and gas GPNs, but they fulfil this role in different ways. I hence bring diversity into research on gateways.

The diversity of gateways is not a surprise to readers with a background in Urban Studies. Still, it merits more attention in the debates to which the article makes a contribution—debates shaped by the Globalisation and World Cities (GaWC) research

[1] Being aware of important differences among global commodity chains, global value chains and GPNs, I use the term GPNs. The only reason for this is linguistic simplification.

network. Studying African cases and adapting an existing concept according to what can be learnt from Africa answer's Robinson's call for 'an alternative urban theory [that] reflects the experiences of a much wider range of cities', meaning 'alternative ways of imagining cities, their differences and their possible futures' (2002: 532, 545). In other words, the article contributes to overcoming what Robinson (2002, 2006) and others (Kanai et al. 2017; McFarlane 2010; Roy 2009) have criticised as the asymmetric ignorance in the literature on world cities, which appears to disregard the particularities of cities in the Global South.

Readers should also be aware that this article is not meant as a contribution to research on GPNs. Corresponding research offers links to the topic of the article—for example the observations by Coe et al. (2004) as well as Coe and Yeung (2015) on logistics services (they are essential for gateways and GPNs). Phelps points out that 'the value of a logistics and transport perspective within GPNs is that it draws attention to […] intermediate places' (2017: 30), meaning to gateways. Due to limited space, it is not possible to make use of these tie-ins. The article contributes to the gateway concept only and is based on the corresponding literature.

The remainder of the text is structured as follows: in the first section, I provide an overview of the state of the art. Afterwards, I elaborate on the case selection and methodology of my own research. The third section presents the findings on Accra, Cape Town and Mauritius. I conclude by pointing out the value added to the gateway concept by studying African cases. I also tie the article to debates about generalisation in Urban Studies.

State of the Art

Research on gateways is not limited to Economic Geography and Urban Studies. I first learnt about the concept when reading Cohen's contributions to Political Geography. For Cohen (1990, 1991), gateways are territories that hold the potential to connect larger geopolitical units by facilitating economic, political and social interaction—for example Hong Kong between continental East Asia and the maritime Asia–Pacific region. Remaining closer to the publications mentioned above, a gateway can be defined as 'an entrance into (and necessarily an exit out of) some area' (Burghardt 1971: 269). Relating dynamics shape urban places, as shown by Grant and Nijman (2002) with regard to the development of local, national and global central business districts in Accra and Mumbai. Gateways have also been assessed as nodes of flows of foreign investment and trade (Chubarov and Brooker 2013; Grant 2008), international migration (Price and Benton-Short 2008) and maritime transport (Lee and Ducruet 2009; Notteboom 2007). Sigler's (2013) aforementioned concept focusses on intermediary services, ranging from offshore banking to container shipping.

Research that stands in the tradition of the world city literature shaped by GaWC scholars—especially Beaverstock et al. (2000) as well as Taylor et al. (2002a, b)—deals with corporate control and corporate services. Taylor et al. (2002c) suggest that regional command centres such as São Paulo are chosen by corporate service providers (and presumably also by other transnational companies) as locations of regional headquarters, which link various national subsidiaries to the respective

global headquarters. Taking up this idea, Parnreiter et al. (2013) argue that firms from overseas use Johannesburg and Mexico City as gateways to wider hinterlands. Parnreiter (2010, 2015) shows how corporate service providers in Hamburg help their clients to become globally active, while corresponding firms in Mexico City interlink places all over the country worldwide. As said, Rossi et al. (2007) distinguish between decision cities (sites of corporate headquarters) and service cities (locations of corporate service providers) in Brazil. Martinus et al. (2015) analyse how so-called globalising centres connect their respective spheres of influence with the rest of the world through corporate decision-making.

I concur with Sigler (2013) insofar as the diversity of world cities—or, for that matter, gateways—merits more attention. All gateways and world cities are critical to economic networks in one way or another, but most of them have little in common with London and New York, the supposed role models. Whereas this diversity is recognised by the publications summarised in the first paragraph of this section, GaWC-inspired research is unfortunately limited to corporate control and corporate services. The world city literature has become broader, now also covering global networks in the automotive sector, biotechnology, energy, pharmaceutics as well as technology hardware and equipment (Krätke 2014a, b; Martinus et al. 2015; Toly et al. 2012). Revealing the shape of these corporate networks is a worthwhile endeavour. However, the variety of functions fulfilled by cities in globally interlinking other places is not shown this way.

This conviction links my own research to Robinson's aforementioned critique of the world city literature. Whereas 'globalising features common to many cities around the world [now] encourage many writers to consider cities from different regions' (2006: 93), research on world cities—and, I would add, also academic debates on gateways—is still not sufficiently sensitive to the diversity of places in economic networks.

Partly fixing this shortcoming, Scholvin et al. (2019) develop an approach that goes beyond corporate control and corporate services. Against the backdrop of Singapore's role in the oil and gas sector, they show that gateways are (1) logistics and transport hubs, (2) sites of industrial processing, (3) places of corporate control and (4) service provision, and (5) locations where knowledge generation takes place. Service provision goes beyond accountancy, advertising, banking/finance and the law, which stand at the core of GaWC research. The reason for this is that the integration of peripheral sites into GPNs also depends on technical services—offshore engineering and the training of crews that work on oil rigs, for example. Such services are not available in many locations across the Global South, at least not at the level of sophistication required for offshore oil and gas extraction (Scholvin 2017).

A common feature of the publication on Singapore and other studies of gateways is a tendency of homogenisation. I miss a finer distinction of the numerous functions fulfilled by regional command centres and would argue that there is a tremendous variety (due to functional diversity) within the categories of globalising centres, decision cities and service cities. Still, cities as different as Hong Kong and Quito are labelled regional command centres, with no details being provided on their exact roles in economic networks (Taylor et al. 2002c). Martinus et al. (2015) characterise globalising centres by the number of companies they host and their betweenness centrality, which reveals the relevance of these places in the corresponding networks but says nothing about case-specific functions. Readers familiar with Brazil will

acknowledge that Brasília and Campinas play distinct roles in globally interlinking the country, even though they are found to be alike by Rossi et al. (2007).

Whereas quantitative studies can hardly go into case-specific details because of their methodological design, research on gateways that rests on qualitative methodologies has an unfortunate tendency to pay little attention to diversity. Sigler (2013) refers to Doha, Dubai and Panama City for illustration. These are rather particular and also similar cities. Parnreiter (2010, 2015) as well as Parnreiter et al. (2013) analyse a secondary world city in the Global North—Hamburg—and two world cities of relatively high relevance in the Global South: Johannesburg and Mexico City. Scholvin et al. (2019) apply their understanding of gateways to Singapore—the most sophisticated business hub in South-East Asia, maybe worldwide. Such a case selection heavily influences the findings and it appears that cities suitable for proving the real-world relevance of the respective concepts have been studied.

Case Selection and Methodology

There are numerous gateways that connect the oil and gas sector in Africa globally. Most importantly, governments mandate that oil field operators such as Shell and providers of sophisticated technical services—Baker Hughes, for instance—open national subsidiaries or form joint ventures with local partners. While the head offices of such enterprises tend to be in capital cities, towns in close proximity to oil and gas fields host operational bases. These places are—to some extent—gateways and there is little reason to expect their functions to vary from one hydrocarbon-rich country to another.

In order to demonstrate that there are many possible configurations of gateways, one ought to study cases that falsify the conviction that all gateways are essentially alike, deriving their relevance from corporate control and corporate services or, alternatively, being marked by all features that characterise Singapore. As Flyvbjerg (2006) explains, even single-case studies can contribute to generalisation: they do so by falsification. Further to that, the three cases I study are diverse—which justified their selection in the first place, rather than being a mere outcome of my research. Diverse cases do not necessarily mirror the distribution of the variation within the category of gateways, but they come close to covering the full variation. For this reason, diverse cases are particularly useful to building inroads into an underexplored topic (Seawright and Gerring 2008).

Before I carried out field research, I was aware of a certain gateway status of Accra, Cape Town and Mauritius. I suspected considerable variety in this regard. In a nutshell, Accra is the capital of a hydrocarbon-rich country, whereas Cape Town and Mauritius benefit from other location advantages that allow them to plug into oil and gas GPNs. Cape Town has a long history as a strategically located port (Hunt 2014). Gibb (2007) derives Cape Town's world cityness from its pro-active—and successful—strategy of attracting transnational businesses. Mauritius, meanwhile, has a dubious reputation as an offshore tax haven (Africa Report 2013; Financial Times 2017).

As a first step, I used desk studies to gather general information. The website 'A Barrel Full' comprises information on all active oil and gas fields worldwide, indicating the respective operators and main service providers. Information on the downstream

sector—for example on refineries, their capacities and owners—is available too.[2] This sort of information provides an overview regarding location patterns. Still, it does not explain them. During research trips to the three gateways in 2014, 2016 and 2017, I hence carried out narrative, open-ended interviews with representatives of business lobbies, public authorities and, most importantly, local and transnational enterprises. The objective of the interviews was to learn about location strategies, inter-firm relations, intra-firm division of labour and location advantages that Accra, Cape Town and Mauritius offer.

In the following pages, I refer to 22 interviews out of a total of 70. The interviews not referred to contain similar information but often revolved around topics that are not central to the article (challenges that Cape Townian firms face when investing in Africa, for instance). Contradictory information has not been omitted. The interviewees were identified via LinkedIn and by snowball sampling. The interviews were conducted with the help of a guideline of eight questions adapted before each interview, reflecting on the interviewee's area of expertise and the exact nature of his/her company or organisation. I recorded the interviews and later structured them along the five functions of gateways. All interviewees spoke as individuals, not as spokespersons of companies or organisations. I nevertheless provide information on the professional affiliation of each interviewee so as to better contextualise the corresponding statements.

This methodology involves two shortcomings. First, the interviewees largely referred to their own companies, obviously with the exception of those from business associations and public authorities. The corresponding information is company-specific and one has to be careful when making generalisations. Cape Town, for instance, is critical to the oil major Tullow. This does not necessarily mean that Cape Town is important for oil and gas GPNs in general or, even less, that it monopolises a certain gateway function and relating flows. Second, the interviewees had a positive attitude towards fossil fuels and efforts of Accra, Cape Town and Mauritius to plug into global networks. My findings should not, however, be misinterpreted as ignorance of environmental problems associated with fossil fuels or advocacy of a strive for world cityness, which tends to come along with serious socio-economic downsides.[3] These important topics are simply not part of my research interests.

It remains to be added that the following analysis concentrates on the present. Historical legacies are of course important for cities and, in many cases, also for the role that cities play in the global economy. However, they appear to be of low relevance for the specific topic studied here. The commercial exploitation of oil and gas is new to Ghana. It dates back to 2007, so does the related gateway role of Accra. The efforts of Mauritius to strategically position itself in this sector are also of recent nature. During my field research, I did not find any path-dependent factors, except for the fact that many Mauritians are fluent in English, French and Hindi, which is a considerable business advantage and results from the colonial past of the island state. Cape Town has

[2] The oil and gas industry is usually divided into three sectors: upstream includes searching for oil and gas fields, drilling wells and operating them. Midstream is about transport, storage and wholesale marketing. Downstream comprises refining crude oil and purifying raw natural gas as well as marketing and distribution of products derived from oil and gas.

[3] Robinson (2002) first pointed out that striving to be a world city reflects the interests of a small segment of the economy and population of cities, in particular in countries marked by high socio-economic disparities. For empirical examples, see Murray (2011) as well as Parnell and Robinson (2006), among many others.

been tied to South Africa's domestic oil and gas exploitation since the apartheid era—most importantly to offshore deposits and processing thereof in Mossel Bay. Still, what matters today is Cape Town's relationship with sub-Saharan Africa, meaning ties that were unthinkable before 1994.

Empirical Findings

Each of the following sub-sections begins with background information on the case studies. The subsequent analyses cover the five gateway functions proposed by Scholvin et al. (2019): logistics and transport, industrial processing, corporate control, service provision and knowledge generation. Instead of addressing the functions one by one and in the same order, the sub-sections have a case-specific outline, which reflects the fact that the cases are substantially different from one another. Table 1 brings the findings together, allowing for easier comparison.

Accra

In 2007, large-scale oil deposits were found off the coast of Ghana, arising interest among oil majors. The largest field—the Jubilee Field, operated by Tullow in cooperation with Anadarko, Kosmos and the Petroleum Commission of Ghana—is expected to contain reserves of 600 million barrels of oil equivalent (A Barrel Full 2014b). Commercial production began in 2010. The more recently discovered Cape Three Points field (operated by Eni in partnership with Vitol and the Petroleum Commission), as well as the Tweneboa, Enyenra and Ntomme fields (operated by Tullow, its Jubilee partners and Sabre), will further increase Ghana's production (A Barrel Full 2014a, 2019).

Table 1 Comparison of the findings on Accra, Cape Town and Mauritius

	Accra	Cape Town	Mauritius
Logistics and transport	Operational bases of the upstream sector in Takoradi	Regional supply hub due to connectivity; stop-over for oil rigs	Bunkering strategy (unclear prospects)
Industrial processing	Refinery in Tema (low relevance)	Refinery (unclear prospects)	–
Corporate control	All key players in Accra	Limited to the national scale	Relocation related to financial services
Service provision	Takoradi (see above)	Hub of technical service providers for sub-Saharan Africa	Engineering services and related consultancy; financial hub
Knowledge generation	–	Exploration studies by Tullow and consultancy by spin-offs	Seminars at the university (marginal relevance)
Main characteristics	Multiple gateways with different tasks	Logistics and services strategy	Emerging gateway

Source: author's own draft

There is also a downstream industry in the country. It concentrates in Tema, where the largest port is located, about 25 km from Accra. Tema hosts Ghana's only refinery. It was inaugurated in 1963 and now reaches a rather modest capacity of 43,000 barrels a day (A Barrel Full 2017a). The government plans to expand the refinery so as to reach an output of about 160,000 barrels a day. These plans are uncertain because the refinery was close to bankruptcy in recent years and now depends on public funding to remain operational (Business Day 2018; Engineering News 2016). Regardless of these challenges, fuel is sent to depots and petrol stations all over the country. Tema hence serves as a one-directional gateway for industrial processing, with crude oil being imported and then distributed to the hinterland.

More importantly, the recent oil findings have turned Accra into a key place of corporate control. Accra is not only Ghana's capital and commercial centre. It is also the country's most internationalised city, labelled a 'gateway' and 'globalizing city' by Grant (2011), who points out that the oil findings in the last decade gave a boost to this role of Accra, best shown by the expansion of new urban districts where transnational companies concentrate. Accra hosts the head offices of all foreign companies involved in the oil and gas sector. An interviewee from an upstream service provider explained that the country managers of all oil majors, the Petroleum Commission and other important public authorities are there. She added that the international airport is a location advantage too and pointed out that telecommunication systems in the city are functional—something that does not apply to all locations in Ghana.[4] Others agreed, stressing the proximity to lead firms, the government and Petroleum Commission.[5] Two summarised the relevance of the city, saying that 'everything is in Accra'.[6]

This locational pattern also applies to Ghanaian companies. A freight forwarder I interviewed in Takoradi, which hosts the operational bases of all upstream firms, said that the offices for administration and customer contact of his enterprise are in Accra.[7] Another local freight forwarder has the head office in Accra too—'within five kilometres of [the headquarters of] all major oil and gas firms'—and uses smaller offices at the international airport and in the port areas of Takoradi and Tema for day-to-day routine tasks.[8]

Corporate control exerted by the offices of foreign companies in Accra is very limited though. Interviewees explained that they must not sign new contracts without approval from abroad. Even for local tenders, support is provided by the respective corporate headquarters in the Global North. Only the day-to-day business is run independently by the offices in Accra.[9] An interviewee from an oil major explained that his work is guided by the standards of his company. The global headquarters matters for 'oversight', but all relevant business units are in Ghana so that 'the work is done here [and] we just report to the […] group'.[10] This statement sounds as if

[4] Interview with an upstream service provider, Accra, 3 October 2017.
[5] Interviews with an upstream company, Accra, 14 October 2017, with a service provider, Accra, 18 October 2017, and with an oil major, Accra, 20 October 2017.
[6] Interviews with an upstream service provider, Accra, 3 October 2017, and with an oil major, Accra, 12 October 2017.
[7] Interview with a service provider, Takoradi, 11 October 2017.
[8] Interview with a service provider, Accra, 6 October 2017.
[9] Interview with an upstream service provider, Accra, 3 October 2017.
[10] Interview with an oil major, Accra, 12 October 2017.

considerable responsibilities were transferred to Accra. Yet, colleagues of the interviewee to whom I spoke in Cape Town argued that the company 'opened such a huge office in Ghana because that's what the [Ghanaian] government demanded. The important work is not done there'.[11]

Coming to the gateway functions of logistics and service provision, while administrative offices are in Accra, the physical work is carried out in Takoradi.[12] Once a sleepy coastal town, Takoradi has become the operational hub of the upstream sector because it is the closest harbour to the offshore fields. A representative of a service provider explained that his firm receives equipment from overseas, stores it at the local port and dispatches it to the nearby oil and gas fields whenever needed. He added that the lead firm—Tullow—chose the location because of its proximity to the offshore resources.[13] Having a gateway or hub in close proximity to the site of operation is a practical necessity: 'We cannot send equipment back to the U[nited] K[ingdom] […] for servicing', another interviewee pointed out.[14]

A gateway function of knowledge generation does not apply to Accra or any other city in Ghana, reflecting the low integration of Ghanaian firms in the upstream sector, which is also characteristic of service provision (Ablo 2015, 2017; Ablo and Overå 2015).

Cape Town

As indicated by Accra, many sophisticated segments of oil and gas GPNs are not located in Africa's hydrocarbon-rich countries—in particular with regard to corporate control, but also in terms of knowledge generation and service provision. Cape Town hosts some of these GPN segments. Hence, the city serves as an intermediate step between resource peripheries and the core of the world economy. Service providers such as Halliburton and Schlumberger have rather large representations in Cape Town. They fly their staff out to places all over sub-Saharan Africa, an interviewee explained.[15]

What is more, rigs used off the Atlantic coast from Angola up to Mauretania are usually built in the Far East and hence pass by Cape Town when sent to the respective oil and gas fields. Many of these rigs are serviced in Cape Town, given the availability of engineering companies, whose skills are scarce elsewhere in sub-Saharan Africa, as a representative of an oil major stressed.[16] The Oil and Gas Directory—an online database set up by the South African Oil and Gas Alliance (SAOGA), which is a business lobby—reveals that Cape Town offers various services to the sector, ranging from air charter to offshore engineering to travel agencies that handle visa issues.[17] A representative of SAOGA argued that 'we see a viable future here in the services industry, to serve as a hub for the region'. He continued to explain that the development

[11] Interview with an oil major, Cape Town, 3 November 2017.
[12] Interviews with an oil major, Accra, 12 October 2017, and with two upstream service providers, Accra, 3 and 6 October 2017.
[13] Interview with an upstream service provider, Takoradi, 9 October 2017.
[14] Interview with an upstream service provider, Takoradi, 10 October 2017.
[15] Interview with an oil major, Cape Town, 11 August 2016.
[16] Interview with an upstream company, Cape Town, 11 August 2016.
[17] The complete list of service providers is available online at www.saoga.org.za/directory.

gap vis-à-vis the subcontinent, resulting in a lack of sophisticated services beyond South Africa's borders, 'is a major selling point that we are trying to make'.[18]

The concentration of service providers as a key feature of Cape Town's gateway role is likely to receive a boost from the development of Saldanha Bay, located 120 km north of the city. Saldanha Bay is a natural deep-sea harbour, first built for the export of metal ores and now an enclave of metal and port industries (Welman and Ferreira 2016). In 2013, the Saldanha Bay Industrial Development Zone (SBIDZ) was launched as a cluster of oil and gas services as well as marine repair.[19] Being in its initial stages, it constitutes a prospect for Cape Town and a cornerstone of the economic planning of the city and province, not a present-day reality.

In terms of logistics and transport, various shipping companies offer routes from Cape Town to numerous ports on the Atlantic—from Luanda (Angola) to Pointe Noire (Republic of the Congo) to Tema. There are fewer lines that connect Cape Town to harbours on the Indian Ocean: ports north of Beira (Mozambique) can only be reached with transshipment. With regard to flight connections, the situation of Cape Town is somewhat challenging because the city only links directly with Angola, Botswana, Ethiopia and Namibia but not with Mozambique or any of the hydrocarbon-rich countries in East and West Africa. Firms that want to send their staff to peripheral places may however charter small aircrafts, thus only being dependent on such services and the related infrastructure. On the global scale, there are no direct flights to Brazil, China and India—increasingly important players in the oil and gas sector (Scholvin 2017).

To a certain degree, Cape Town is also a hub of industrial processing. As such, it does not (yet) play a gateway role. A refinery in the suburb of Milnerton, formerly owned by Chevron and recently bought by Sinopec, reaches an output of 110,000 barrels a day (A Barrel Full 2017b). Cape Town used to be one of Chevron's three global supply hubs. The new owners have announced major investments, potentially leading to more exports of refined products to the neighbouring countries (Engineering News 2018).

Major oil and gas companies—Anadarko, Eni, Total and Tullow—have offices in Cape Town, but these are not regional headquarters. As an interviewee from one of these firms explained, Cape Town 'has a door function [for South Africa]'. Subsidiaries in African countries interact directly with offices in Houston (strategic decisions) and London (technical support).[20] This is different for Tullow—a British-Irish oil major with a focus on Africa. In order to expand into the continent, Tullow bought an exploration company called Energy Africa in 2004. Energy Africa happened to be from Cape Town. Most of its staff stayed there, carrying out exploration studies for the new owners.[21] A director of a spin-off from Tullow explained that his firm takes small equity in technically complicated exploration projects all over the continent, partnering with investors from overseas.[22] Without the expertise on the region available in Cape Town, it would be difficult for the investors to succeed. Hence, Cape Town

[18] Interview with SAOGA, Cape Town, 5 August 2016.
[19] This and further information is available online at www.saldanhaindustrial.co.za and www.sbidz.co.za.
[20] Interview with an oil major, Cape Town, 2 November 2017.
[21] Interview with an oil major, Cape Town, 3 November 2017.
[22] Interview with an upstream company, Cape Town, 2 November 2017.

may not matter as a gateway regarding corporate decision-making, but it does so for knowledge-intensive components of oil and gas GPNs.

Mauritius

Somewhat counterintuitively, the oil and gas sector is part of Mauritius's economic policy (Government Information Service 2016). The latest three-year strategic plan moreover points out that the island state can 'position itself as the gateway to Africa' (Republic of Mauritius 2016: 15). Mauritius benefits from a business environment that is unique in Africa, being the best performer from the continent in the World Bank's (2017) Ease of Doing Business rankings. The Index of Economic Freedom and the Global Competitiveness Report both confirm that Mauritius is attractive because it is a liberalised market economy with efficient and reliable institutions (Heritage Foundation 2017; World Economic Forum 2017).

In 2008, an oil jetty was inaugurated in the capital, Port Louis. It reaches a throughput capacity of about 4 million tonnes a year. Storage facilities of liquefied petroleum gas (LPG) were opened near the jetty in 2014. This LPG infrastructure is the largest in sub-Saharan Africa. Its owner, Petredec, along with the Mauritius Ports Authority (MPA 2011) expects it to turn the country into an LPG hub of the Indian Ocean and east coast of Africa. In order to bunker fuel oil, the Mer Rouge Oil Storage Terminal (MOST) was completed in 2017. An interviewee from the MPA pointed out that the rationale behind promoting Mauritius as a bunkering hub—obviously in addition to servicing the domestic market—is that 30,000 to 35,000 ships travel from Asia around the Cape of Good Hope to Europe and the Americas each year. Mauritius is located very close to this major sea route. It will attract a considerable number of vessels if it offers fuel at a competitive price and guarantees short waiting times.[23]

A different understanding of the bunkering strategy was advanced by interviewees from the State Trading Corporation. They argued that yet-to-be-enlarged storage tanks could be used for re-exporting petroleum products to the east coast of Africa and south-west Indian Ocean. Downstream companies investing in Mauritius for this purpose would benefit from partnerships with local firms that are 'very experienced in doing business in the region'.[24]

Being a bunkering hub—or, in other words, a gateway for logistics and transport—is not a reality yet. This strategy faces numerous challenges, ranging from competition by larger ports in South Africa and South-East Asia to the fact that Mauritius imports all petroleum products because there is no refinery on the island, which makes them expensive (Scholvin 2019). Services offer a clearer gateway perspective. An interviewee explained that a French engineering firm recently bought his company to gain better access to regional markets. What his company provides is expertise in doing business in Africa. The interviewee suggested that his employees were better prepared to work in that region: 'Europeans are out of their comfort zone [there]. That is not a problem for Mauritians. You know, we have no problem to eat street food, for example.'[25] An independent consultant said that he advises investors who are not familiar with the oil

[23] Interview with the MPA, Port Louis, 11 September 2017.
[24] Interview with the State Trading Corporation, Ebène, 13 September 2017.
[25] Interview with a service provider, Vacoas-Phoenix, 26 September 2017.

and gas sector, for example on how to build and run a refinery in Kenya. This involves travelling to the respective places, assessing local conditions and making suggestions on how to overcome challenges.[26]

Mauritius also serves as a financial gateway. In addition to the aforementioned highly favourable business environment, the island state has no foreign exchange controls and overseas companies enjoy the free repatriation of profits. The effective corporate tax rate is 3%. There are double-taxation-avoidance agreements in place with 17 African countries and investment protection and promotion ones with 8 countries from that continent.[27] As an interviewee from a holding company pointed out, even in cases where there is no such agreement, Mauritian entities can still reclaim withholding tax paid abroad. The same interviewee explained that the group that she works for has subsidiaries in Angola, Ghana and Mozambique. When the holding structure was set up in 2007, it did not have any employees. Today, it employs the interviewee and a secretary. Their duty is to transfer money from the subsidiaries to Mauritius so that it is freely available to the owners of the group and can be held in a stable currency, as Mauritius allows firms to have bank accounts in US dollars. In addition to these activities, the interviewee said that her company might soon hire a marketing executive for the office in Mauritius. Board meetings are frequently held in the country.[28]

Concerning knowledge generation, the University of Mauritius occasionally organises seminars on oil and gas exploration that are mostly attended by people from public authorities and Mauritian companies that provide services to the sector. The seminars are open to participants from the regional countries. Yet, the seminars do not generate knowledge. They make it available by bringing in lecturers from overseas, as a professor from the university explained. So far, the number of participants from the near abroad has remained low.[29]

Conclusion

The objective of this article was to bring diversity into the gateway concept—against the backdrop of academic debates that too often neglect the manifold functions of cities in the global economy. The article took Robinson's seminal critique of the world city literature as a starting point and advanced our knowledge accordingly. Applying the five gateway functions proposed by Scholvin et al. (2019), I analysed the roles of Accra, Cape Town and Mauritius as hubs in oil and gas GPNs.

Accra has become the corporate gateway to Ghana's oil and gas sector for oil majors and various service providers. They administrate their activities from the city, especially because of a density of key players. The case study also revealed that gateway functions can be divided among different places, with multiple gateways specialising in different tasks: Tema serves as a conduit for industrial processing in the downstream sector.

[26] Interview with an independent consultant, Ebène, 19 September 2017.
[27] A full list, including detailed information on these double-taxation-avoidance agreements, is available online at www.mra.mu/index.php/taxes-duties/double-taxation-agreements. For a complete list of the investment protection and promotion agreements, see www.investmauritius.com/downloads/ippa.aspx.
[28] Interview with an upstream service provider, Grand Baie, 18 September 2017.
[29] Interview at the University of Mauritius, Martindale, 14 September 2017.

Logistics and service provision to the upstream sector happen in Takoradi. As a side note, Takoradi exemplifies opportunities of peripheral locations to benefit from extractive industries (Robbins 2012), although the involvement of indigenous firms in the sector remains very low. Knowledge generation is not carried out in Ghana.

Cape Town is a gateway for logistics and services that engineering companies based in the city provide to the oil and gas sector all over sub-Saharan Africa. The city benefits from a favourable location—rigs pass by it on their way to oil and gas fields from Angola up to Mauretania—and its maritime connectivity, particularly along the Atlantic coast. In the case of Tullow and its spin-offs, Cape Town also serves as a knowledge gateway. The local refinery holds some potential as a gateway for industrial processing. Corporate control in Cape Town, meanwhile, is limited to the national scale.

Whereas Cape Town pursues a strategy to reinforce its role as an established logistics and services gateway, the focus of Mauritius is less clear because the island state appears to be an emerging gateway, whose role is less fixed than Accra's and Cape Town's. The prospects of the bunkering strategy are uncertain, but Mauritian service providers, especially engineering firms, support overseas companies that do business in Africa. Being a tax haven, Mauritius is also an attractive location for holding structures, which triggers the relocation of some functions of corporate control to the gateway. Knowledge generation plays a negligible role.

The article showed that places that serve as hinges or intermediate steps in GPNs are diverse. It appears that their only commonality is the fact that they interlink peripheral sites globally. While the gateway concept with its five functions proved useful for analysing Accra, Cape Town and Mauritius, the concept needs to be modified—not only because the five functions can be combined in various ways. Many of the abovementioned publications imply that gateways reach a rather high level of sophistication. This applies to geological studies in Cape Town and financial services in Mauritius. The respective roles of Accra and Takoradi, conversely, suggest that sophistication is not a necessary feature of gateways. Day-to-day corporate control and logistics may turn a place into a gateway. Against the backdrop of the manifold configurations of gateways, follow-up studies should uncover cooperative and competitive relationships among places that link peripheral sites globally as well as the reasons for the specific roles that individual gateways play in GPNs.

Taking a broader perspective, the article relates to debates on generalisation in Urban Studies. Acknowledging and appreciating diversity—as done here—does not mean that one has to reject generalised concepts. Scott and Storper point out that Urban Studies has unfortunately become 'susceptible to endemic and ever-widening discontinuity and disjuncture', rooted in an apparently increased propensity 'to treat every city as a special case and to insist on the futility and dangers of conceptual abstraction' (2015: 3, 11). In this regard, the present article should be read as an analysis of the variation of a general phenomenon: Accra, Cape Town and Mauritius are gateways, but they are so in different ways. The article hence 'aims at developing knowledge […] at a level between what is true of all cities and what is true of one city at a given point in time' (Nijman 2007: 1).

With regard to further follow-up studies, the rise of gateways largely results from decisions taken by transnational corporations. However, the analyses of Cape Town and Mauritius showed that local agency—strategies pursued by public authorities—

also matters. Being in line with the *State of African Cities 2018* report, the two cases imply that policies should concentrate on creating an investment-friendly business environment, facilitating specialisation in activities in which the respective places have a competitive advantage (UN Habitat 2018). Such policies may result in conflicts among local players though. For example, Mauritius's bunkering strategy reflects the interests of some firms in the country, but it is seen very critically by the important tourism industry because of the pollution a refinery would cause.[30]

Compliance with Ethical Standards

Conflict of Interest The author declares that he has no conflict of interest.

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An unexpected gateway: The particularities of Mauritius as a hub in oil and gas GPNs

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ABSTRACT
The periphery of the world economy is integrated into global production networks (GPNs) by 'gateways'. These are intermediary places from where transnational corporations organise their business activities in close cooperation with corporate service providers. Gateways may also serve as logistics nodes as well as sites of industrial processing and knowledge generation. While some claim that gateways are engines of growth, others argue that they prosper at the expense of peripheral places. The article applies these thoughts to Mauritius, oil and gas GPNs, and the gateway's impact upon sub-Saharan Africa. The analysis indicates that Mauritius holds a certain potential for logistics and corporate control. The island serves as a hub of service provision already today. Only its status as a tax haven has a negative effect on resource peripheries. Against the backdrop of these findings, the authors discuss whether gateways should be seen as drivers or obstacles of peripheral development.

KEYWORDS
Financial offshoring; gateway; global production network; Mauritius; oil and gas

1. Introduction

The contemporary world economy is marked by geographical fragmentation of production. Since the mid-1990s, three approaches have been advanced to analyse this phenomenon. Standing in the tradition of world-systems analysis, research on global commodity chains aims at uncovering how lead firms from the core dominate their suppliers from the periphery (Gereffi & Korzeniewicz, 1994). Analyses of global value chains focus on inter-firm coordination and the prospects of development through 'upgrading' (Humphrey & Schmitz, 2002; Gereffi et al., 2005). In publications on global production networks (GPNs), emphasis is put on the interplay of firms and regions (Coe et al., 2004; Coe & Yeung, 2015; Henderson et al., 2002). The three approaches pay rather little attention to intermediary places, meaning locations that connect others globally. Elsewhere, we (2019) argue that the integration of the periphery into the world economy depends on 'gateways'. Gateways integrate their respective hinterlands into GPNs, being logistics

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hubs, sites of industrial processing, locations of corporate headquarters and of firms that provide producer services, and/or places of knowledge generation.

We now apply the gateway concept to the island state of Mauritius, which – quite surprisingly – has assumed a considerable role in the oil and gas sector. We answer the question of how Mauritius interlinks sub-Saharan Africa globally. Hence, this article contributes to the gateway and GPN literatures by investigating an unexpected spatial intermediary. To avoid misunderstandings, we are not saying that Mauritius is the only gateway to sub-Saharan Africa – or the most important one. The firms that rely on Mauritius as an intermediary are important for the oil and gas sector, but they are not the sector's lead firms. We acknowledge that there are multiple gateways.[1] Further to that, the article is not meant as a holistic study of Mauritius. It addresses a particular sector to better understand the role of Mauritius therein, which leads us to an expansion of the gateway concept – that is, to better recognise the relevance of gateways for financial offshoring.

In addition to the prospects of Mauritius as a gateway, we investigate its impact upon places that it interlinks globally. Mauritius's role as a financial hub – being part of the gateway dimension of service provision – has negative consequences for some hydrocarbon-rich countries because profits are reduced there through tax evasion or outright transferred to Mauritius, illustrating what Parnreiter (2019) calls the 'geographical transfer of value'. It therefore appears that a more critical perspective on gateways, which tend to be seen quite optimistically as enablers of mutually beneficial globalisation, is necessary. Building corresponding inroads and discussing the how gateways influence peripheral development is another contribution of the article to more general academic debates.

The article is structured as follows: first, we present the concept of gateways and show how it contributes to research on GPNs. We elaborate on negative effects that gateways may have on the periphery. Second, a summary of our case selection and methodology is provided. Third, we shed light on the role of Mauritius in oil and gas GPNs, revealing how the island state interlinks peripheral places worldwide. It does so especially through service provision and also holds a certain potential for logistics and corporate control. We critically assess its role as a tax haven.

2. Conceptual framework

2.1. Global production networks and gateways

Providing critical insights on regional development, GPN analysis uncovers how value is created, enhanced and captured in networks that link specific places or regions at the subnational scale with extra-regional corporations. Much attention is paid to inter-firm organisation and the institutional context of such networks (Henderson et al., 2002; Coe & Yeung, 2015). The key idea is that regional development depends on how the region in consideration participates in GPNs – a process called 'strategic coupling'.

[1]This reflects a key conviction from GPN analysis: production networks are firm-specific, meaning that each firm has a network of its own whose particularities result from firm-specific strategies to improve the cost–capability ratio (Coe & Yeung, 2015). If networks are different from one firm to another, they are even more different from one sector to another. Our analysis of the oil and gas sector is potentially as insightful as a study of, for example, Mauritius's role in information and technology networks. The fact that we have chosen this particular sector merely results from our previous experience with oil and gas GPNs.

Most importantly, value must be captured locally so as to trigger further economic dynamics. As Coe & Yeung stress, foreign investment is not a sufficient condition for regional development, but 'value must be retained within firms, or the parts of firms, based in the territory under question' (2015:172).

The local arrangements relating to the creation, enhancement and capture of value are seen as an outcome of the interplay of regional assets – which range from labour and resources to organisational forms such as clusters – with regional institutions and extra-regional corporations. In the ideal case, regional assets are moulded by regional institutions so that they meet the needs of extra-regional corporations, providing relevant economies of scale or scope (Coe et al., 2004). Localisation economies occur and GPNs are held down, unleashing the economic potential of the region in consideration. The role of regional institutions in this process goes beyond the transformation of regional assets. It also comprises bargaining with extra-regional corporations, for example on re-investing profits locally.

The GPN approach – and research on commodity and value chains alike – has paid little attention to places that interlink others. Yet, readers familiar with peripheral sites in the Global South will agree that there are connectors and hinges that allow for integrating such locations into the world economy – most demonstratively through transport infrastructure but also in terms of corporate control. There is some research on intermediary places in GPNs. Scholvin (2017, 2019b) assesses the prospects of Cape Town, Durban and Johannesburg as hubs that interlink the oil and gas sector in sub-Saharan Africa globally. With regard to Singapore's role for this particular sector, Breul & Revilla Diez (2017, 2018) demonstrate that the integration of peripheral places into GPNs is not direct. Instead, an 'intermediate step' is taken. Similar findings have been made on the electronics industry in Malaysia (Van Grunsven & Hutchinson, 2016) and offshore services in the Philippines (Kleibert, 2016), among other cases.

Further developing these inroads to better understand what Phelps (2017) calls 'interplaces', we suggest conceptualising them as gateways. Research on gateways – or gateway cities – has become increasingly broad, covering maritime transport (Notteboom, 2007; Lee & Ducruet, 2009), international migration (Price & Benton-Short, 2008) as well as flows of foreign investment and trade (Grant 2008; Chubarov & Brooker, 2013). Various scales have been addressed in the gateway literature. For example, Cohen (1990, 1991) considers quasi states being gateways. Grant and Oteng-Ababio (2016) call sites of e-waste recycling 'urban gateways' in global networks. Regardless of their territorial extension, we follow Burghardt in defining gateways as 'an entrance into (and necessarily an exit out of) some area' (1971:269). Mainstream research on gateways relates to the world city literature (Friedmann 1986; Sassen 2001; Taylor et al., 2002; Derudder & Taylor, 2016). Yet while the world city literature is largely concerned with city–city interaction, research on gateways deals with city–hinterland ties. Rather than being a different real-world phenomenon, gateways hence constitute a distinct analytical perspective.

Being particularly close to the world city literature, Meyer et al. (2009), Parnreiter (2010), Parnreiter et al. (2013) as well as Rossi et al. (2007) analyse cities in the Global South as gateways with a focus on corporate service providers and, to a lesser extent, corporate headquarters. Other scholars suggest that the functions fulfilled by gateways go beyond corporate control and corporate services (Short et al., 2000; Sigler, 2013). As noted, we (2019) propose an understanding of gateways based on five dimensions. They

result from a survey of the literature on GPNs and world cities, and cover everything that is necessary for integrating peripheral places into the world economy. The dimensions are not necessarily additive, meaning that a particular gateway can be marked by any combination of them. Gateways are logistics hubs. In the Global South, they are also home to large-scale industries that are linked across national borders. Further to that, corporate control and various corporate services mark gateways. They generate knowledge – in the sense that global knowledge is adapted to local specificities there. Alternatively, gateways may be stepping stones for innovative local firms seeking to internationalise their business dealings.

2.2. The developmental impact of gateways

With a few exceptions, the aforementioned publications say little about the impact of gateways upon the development of the places they interlink globally. Some are marked by a certain optimistic notion in this regard. Organisations such as the World Bank argue that the integration into the world economy leads to positive outcomes for the periphery. Most prominently, the World Development Report from 2009 suggests that developing countries bind themselves to nearby 'leading areas', allowing for the free flow of capital, goods and people so as to benefit from impulses that leading areas supposedly generate (World Bank, 2009). In academia, this optimism is best exemplified by Morris et al.'s (2012) seminal publication on the commodities sector. They argue that developing countries will benefit from integration into GPNs if the right policies are in place (see also: Kaplinsky et al., 2011).

We take a more sceptical perspective, but we are not the first to do so. Parnreiter (2019) suggests that providers of corporate services, which are based in world cities that serve as gateways, organise the geographical transfer of value from the periphery to the core. Corporate service providers enforce property rights and grant access to finance. Labour relations are another means through which these firms increase the profits of their clients. Understood this way, the geographical transfer of value is about altering value capture in GPNs, rather than an actual transfer of money from one place to another. What we find particularly striking in this regard is that research on gateways has paid no attention to the downsides of financial offshoring. Of course, financial offshore as a general phenomenon has been studied intensively. Important contributions on the GPNs of finance and the role of cities in these networks have been made by Dörry (2014, 2015) and Van Meeteren & Bassens (2016), among others. Yet, research on gateways and financial flows – for example by Bassens et al. (2010), Cobbett (2014) and Warf & Vincent (2003) – appears to merely confirm the existence and relevance of this form of interlinking, but it does not analyse the relating effects on other places.

Besides the need to shed light on financial offshoring, we concur with criticism of world city research by post-colonial scholars and adherents of the GPN approach (Robinson, 2002; Coe et al., 2010) insofar as we contend that analysing only corporate service provision provides an incomplete and potentially misleading picture of intermediaries in GPNs. Assessing interlinking through gateways from a broader perspective, Breul et al. (2019) reason that Singapore limits the potential of strategic coupling in Indonesia and Vietnam because of different filtering mechanisms. As noted, regional institutions bargain with extra-regional corporations – and this applies to peripheral locations and

gateways. Both seek to tie down GPNs. With regard to sophisticated, high value-adding tasks, gateways outcompete peripheral locations. The existence of a gateway decreases the need to carry out certain activities in the periphery. Gateways also benefit from path dependencies, once a lead firm has invested in industrial processing or located corporate control there. The scepticism on gateways as engines of growth is boosted by the generally poor performance of peripheral locations that participate intensively in GPNs. Studies on commodity source regions such as the north of Chile and Pilbara in Western Australia, for instance, reveal that their coupling with extractive GPNs brings about few positive local outcomes, mostly in terms of generic services (MacKinnon, 2013; Arias et al., 2014).

In sum, the role of gateways in GPNs is highly contested and we seek to make a contribution to better understanding whether they are growth engines that work to the benefit of the places they interlink globally or, alternatively, filter gains and/or allow for the geographical transfer of value. We do so within the limits of an analysis focussed on the gateway itself and, as noted, a sector that is not, probably, representative of global and regional networks. While we are able to discuss what Mauritius's role means for some peripheral locations that have plugged into oil and gas GPNs, we cannot say how these sites are affected by investment that is not channelled through Mauritius. Nor do we claim that our analysis necessarily provides a general picture of Mauritius's relationship with sub-Saharan Africa.

3. Case selection and methodology

Mauritius is not the first place that comes to mind when one thinks about oil and gas. The island has no proven hydrocarbon reserves. All oil products are imported from India. Still, we did not accidently decide to study Mauritius's role in oil and gas GPNs. Our initial interest resulted from desk studies on foreign investment in the oil and gas sector across sub-Saharan Africa, which revealed that Mauritius had hitherto been involved in some corresponding projects. For example, the Indian firm Mangalore Refinery and Petrochemicals signed a memorandum of understanding with Mauritius's State Trading Corporation (STC) in 2014 on a yet-to-be-built petroleum terminal that will serve for re-exports to sub-Saharan Africa and islands in the Indian Ocean (World Maritime News, 2014). Desk studies of policy documents – the second step that we took – then showed that the oil and gas sector is part of Mauritius's strategic economic planning, which includes, as one pillar, the 'ocean economy' (Board of Investment, 2015; Government Information Service, 2016). With regard to a role as a hinge between the core and the periphery of the world economy, the Three-Year Strategic Plan points out that Mauritius aims to 'position itself as the gateway to Africa for Asian, European and Middle Eastern businesses' (Republic of Mauritius, 2016:15).

This preliminary research was published as a book chapter that provides an overview of the different ways in which Mauritius serves as a gateway, neglecting the question of how the island state influences development of places that it interlinks globally (Scholvin, 2019a). The empirical analysis further below is based on information obtained from policy papers, indexes that describe the business environment of Mauritius as well as publically available documents on two Mauritius-based holding structures involved in the oil and gas sector. The latter source of information closes the gap left by the just mentioned book chapter. Capturing the transfer of value across corporate networks is challenging due

to a lack of data. We found the Offshore Leaks database helpful to grasp the practices of corporations that shift value from other jurisdictions to Mauritius. However, this database only contains three entries related to Mauritius and the oil and gas sector, unfortunately without details on financial flows (International Consortium of Investigative Journalists, 2019).

Further to that, we conducted 16 narrative interviews in September 2017, which were also by Scholvin (2019a). The interviewees were identified via LinkedIn. Snowballing was applied subsequently. All interviewees spoke as individuals, not as representatives of a particular firm or public authority, although their corresponding affiliations are indicated here. The interviews were based on a guideline of 12 questions (on inter-firm organisation, relationships with other companies, location advantages and regional integration). We recorded the interviews, with four exceptions (notes were taken instead), and analysed them by structuring the information with the help of categories defined prior to the actual research trip itself.

4. Empirical analysis

4.1. Bunkering, logistics and engineering services

The first advantage that Mauritius offers as a gateway is a population fluent in both English and French – languages that are obviously essential for doing business in sub-Saharan Africa. This location advantage was mentioned in several of our meetings. An interviewee said that 'we speak three or four languages; most of us: English, French and, some of us, Hindi'.[2] This is critical for the interviewee's company because it heavily relies on labour from India (more on this later).

The aforementioned Three-Year Strategic Plan states that the government will seek 'to expand the economic space for Mauritian firms through enhanced economic integration and cooperation [in sub-Saharan Africa]' (Republic of Mauritius, 2016:2). Mauritius is a member of the Common Market for Eastern and Southern Africa (COMESA), the Indian Ocean Rim Association (IORA) and the Southern African Development Community (SADC). In 2000, COMESA's free trade area was formed. IORA is not a free trade area, but its member states have made a commitment to facilitate greater intra-community investment and trade. SADC established a free trade area in 2008. On a bilateral level, Mauritius has signed double-taxation-avoidance agreements with 14 sub-Saharan African countries and investment protection and promotion ones with 8 countries from that subcontinent too.[3]

Mauritius moreover offers a business environment that is unique in sub-Saharan Africa. It is the best performer from the subcontinent in the Ease of Doing Business rankings, slightly ahead of Rwanda and clearly so of Kenya and South Africa (World Bank, 2017). The Global Competitiveness Report and the Index of Economic Freedom both confirm that Mauritius is a liberalised market economy with efficient and reliable institutions (Heritage Foundation, 2017; World Economic Forum, 2017). The hydrocarbon-

[2]Interview with an engineering and construction company, Port Louis, 21 September 2017.
[3]A full list, including detailed information on these double-taxation-avoidance agreements, is available online at: www.mra.mu/index.php/taxes-duties/double-taxation-agreements. For a complete list of the investment protection and promotion agreements, see: www.investmauritius.com/downloads/ippa.aspx.

rich countries of sub-Saharan Africa – countries such as Angola, Chad, Equatorial Guinea and Gabon – are among the worst performers worldwide in all of these ranking. In other words, the business environment, regional economic integration and multiple languages turn Mauritius into an advantageous location for overseas companies that do business in sub-Saharan Africa.

The island also possesses good infrastructure dedicated to oil and gas, which implies that there are certain prospects for serving as a logistics hub. In 2008, an oil jetty was inaugurated in Port Louis. It reaches a throughput capacity of about 4 million tonnes a year. Storage facilities for 15,000 tonnes of liquefied petroleum gas (LPG) were opened near the jetty in 2014. This LPG infrastructure is the largest in sub-Saharan Africa. Its owner, Petredec, along with the Mauritius Ports Authority (MPA, 2011) expect it to turn the country into an LPG hub in the Indian Ocean and for the east coast of Africa too. In order to bunker fuel oil, the Mer Rouge Oil Storage Terminal was completed in 2017. It reaches a capacity of 25,000 tonnes. The project derives from a joint venture between the STC and four international oil companies, namely Engen, Indian Oil, Total and Vivo Energy. An interviewee from the MPA pointed out that the rationale behind promoting Mauritius as a bunkering hub is that 30,000–35,000 ships travel from Asia around the Cape of Good Hope to Europe and the Americas each year. Mauritius is located close to this major sea route. It will attract a considerable number of vessels if it offers fuel at a competitive price and guarantees short waiting times.[4]

With regard to challenges, the interviewee from the MPA pointed out that Mauritius does not, currently, have a refinery. All petroleum products are imported from India, which makes them rather expensive. An interviewee from a major downstream firm explained that Singapore and the South African ports of Durban and Port Elizabeth – all three located on the aforementioned sea lane – are more competitive regarding pricing. Mauritius is able to compete with South African harbours because of advantages in terms of punctuality. Compared to Singapore, however, 'we are out' remarked this interviewee.[5] The small domestic market also constitutes a problem for maritime services and ship repairs. Presently, there is only one company in Mauritius that can handle waste material from larger ships. The two dry-docking shipyards in Port Louis – Chantier Naval de l'Océan Indien and Taylor Smith & Co – repair ships for the fishing industry. They would have to upgrade their capacities to be able to service the oil and gas sector.

Against this backdrop, logistics appears to offer uncertain prospects for Mauritius as a gateway. Providing services to sub-Saharan Africa is more promising. An interviewee from an engineering firm referred to cheap labour (regarding engineers, and in comparison to Europe), experience in oil and gas, and innovative technologies in order to explain the competitive advantages of his company. With regard to a gateway role, it is interesting that this interviewee stressed that a French enterprise recently bought his company to gain better access to the markets of the subcontinent. What his company provides is expertise in doing business in sub-Saharan Africa. He also suggested that his employees are

[4]Interview with the MPA, Port Louis, 11 September 2017.

[5]Interview with a major downstream company, Port Louis, 28 September 2017. The oil and gas industry is usually divided into three sectors: down-, mid- and upstream. The upstream sector includes searching for oil and gas fields, drilling wells and also operating these wells. The midstream sector involves the transport, storage and wholesale marketing of crude and purified/refined products. The downstream sector comprises refining crude oil and purifying raw natural gas, as well as the marketing and distribution of consumer products.

better prepared to work there: 'Europeans are out of their comfort zone [in sub-Saharan Africa]. That is not a problem for Mauritians'.[6] The interviewee added that Mauritians face fewer problems with work visas due to regional integration. Hence, regional connectivity – in terms of professional networks and the ability/willingness to travel across sub-Saharan Africa – is vital to Mauritius's gateway role.

Others explained that the design for engineering projects abroad is carried out in their company's facilities in Port Louis; so is pre-fabrication too. The materials for this are sourced globally. Mauritius's strength lies in being home to skilled engineers. While the project management team is, hence, always Mauritian, the company seeks to hire manual labour locally – for example in Tanzania – but often struggles to find sufficiently skilled people. The corresponding gaps are closed by labour brought in from India, proving the intermediary role of Mauritius in GPNs, as the interviewees themselves emphasised.[7] Mauritius's global connectivity thus reinforces its suitability as a spatial intermediary.

As the previous paragraphs indicate, Mauritius has undertaken considerable efforts to position itself as a hub in the oil and gas sector. It partly serves as a gateway already today. So far, our analysis does not lead to a clear picture with regard to effects on the periphery. The bunkering strategy, including related services, means competition for Singapore and South African ports. If successful, this strategy will allow Mauritius to benefit from economic dynamics across sub-Saharan Africa. The island state does not boost peripheral development by serving as a bunkering hub, however. If Mauritius built an oil refinery, changing trade patterns would be at the expense of India, although one may argue that industrial processing in Mauritius and ensuing exports to sub-Saharan Africa would limit the prospects of such development in countries like Kenya or Mozambique, reducing dynamics there to lower-value activities.

With regard to engineering services, Mauritius does not filter the gains from participation in GPNs or enable the geographical transfer of value. If there were no Mauritian engineering firms, transnational clients would probably hire companies from overseas or South Africa because of the lack of corresponding expertise in many sub-Saharan African countries. As a side note, this also explains Cape Town's present gateway role (Scholvin, 2017, 2019b). Mauritius does not compete with peripheral locations over GPN segments. The island state appears to specialise in sophisticated services, whereas some parts of the sub-Saharan African periphery do not possess sufficient regional assets to localise even basic oil and gas-related activities, as the example of Indian labour employed by a Mauritian firm for a project in Tanzania implies. Without further developing their own assets, these locations will remain unsuitable for strategic coupling, with the exception of mere resource provision.

4.2. Mauritius as a financial hub

The most interesting gateway function fulfilled by Mauritius is its role as a financial hub. More than three quarters of Mauritius's outward foreign direct investment goes to developing countries. Apparently, most of this money is previously transferred to Mauritius

[6]Interview with an engineering company, Vacoas-Phoenix, 26 September 2017.
[7]Interviews with an engineering and construction company, Moka and Port Louis, 14 and 21 September 2017.

from the Global North. A recent study commissioned by the Investment Facilitation Forum finds that Mauritius is the main source of foreign direct investment for a number of countries in the Indian Ocean and sub-Saharan Africa. The corresponding share for Rwanda reaches an impressive 90 per cent. For South Sudan and Uganda, it stands at 69 and 42 per cent respectively (Hers et al., 2018).

In addition to the aforementioned highly favourable business environment, Mauritius is attractive as a financial hub because of several regulatory advantages. It has no foreign exchange controls and overseas companies enjoy the free repatriation of profits. The effective corporate tax rate is 3 per cent and, as noted, there are double-taxation-avoidance agreements in place with various countries. As an interviewee from a holding company pointed out, even in cases where there is no such treaty, Mauritian entities can still reclaim withholding taxes paid abroad.[8] Double-taxation-avoidance agreements are intended to ease investment and trade by avoiding that the same activity is taxed twice. Still, they also enable transnational companies to restructure their operations for the sole purpose of decreasing tax obligations. Transnational companies can establish an intermediary unit in a country such as Mauritius in order to invest elsewhere, thereby exploiting the advantages of double-taxation-avoidance agreements.

Companies from various sectors, including oil and gas, are attracted by Mauritius's tax treaty network. Their relocation to the island is eased by numerous consultancies such as EY and KPMG, but it appears to us these consultancies follow their clients' demand. The consultancies do not make other businesses relocate to Mauritius. Tax treaties do. The interviewee from the just-mentioned holding company explained that the group she works for presently has subsidiaries in Angola, Ghana and Mozambique. When the holding structure was set up in 2007, it did not have any employees. Today, it employs the interviewee and a secretary. Their duty is to transfer profits from the subsidiaries to Mauritius so that it is freely available to the owners of the group and can be held in a stable currency, as Mauritius allows firms to have bank accounts in United States dollars. In other words, capital is sucked out of the periphery. The profits made in resource peripheries do not stay there, making it very unlikely that participation in corresponding GPNs will trigger economic dynamics beyond initial investments in material assets and, in some cases, the employment of local labour.

In addition to these activities, the interviewee said that her company was thinking about hiring a marketing executive for the office in Mauritius. A representative of an international consultancy explained that such an expansion of activities is a common next step for firms that have their holding structure in Mauritius. These firms start, at a certain point, to concentrate their contract management and procurement on the island, centralising these activities for all countries where they operate. Doing so enables the respective firms to benefit from the financial advantages of Mauritius and to avoid the risks associated with running a business in a number of unstable currencies.[9] Another interviewee from a different consultancy agreed, saying that many companies start with mere holding structures in Mauritius and eventually relocate more and more control functions to the island, especially board meetings.[10]

[8]Interview with an upstream service provider, Grand Baie, 18 September 2017.
[9]Interview with an international consultancy, Ebène, 19 September 2017.
[10]Interview with an international consultancy, Ebène, 12 September 2017.

We have reconstructed the spatio-organisational patterns of two companies that use Mauritius as a financial hub (Figure 1). These cases are not representative of the oil and gas sector as a whole, but they exemplify this critical role of Mauritius in GPNs. A firm called Southey provides technical services to the upstream sector that range from engineering and maintenance to offshore crew assignments and inspections. Originally a South African entity, Southey became part of a holding structure registered in Mauritius more than ten years ago. The holding bundles operations in Angola, Gabon, Ghana, Mozambique, the Republic of the Congo, Tanzania and Zambia. It also has investments in Oman (Southey Mauritius, 2019), although it appears that Southey does not have ongoing activities in all of these countries, presumably as a result of the decline of the oil price.

Having a holding structure in Mauritius enables Southey to reduce its tax obligations in the countries where it provides its services. To give an example, the subsidiary in the Republic of the Congo can reduce taxes on dividends from 15 to 5 per cent. Royalties and taxes on interests as well as the management fee drop from 20 to 0 per cent (International Consortium of Investigative Journalists, 2017). Hence, the creation of value physically occurs in resource peripheries, but the related tax obligations are reduced because of Mauritius serving as a gateway. In a study on 41 African countries, Beer and Loeprick (2018) find revenue losses of 15–25 per cent of corporate income tax for countries that have implemented double-taxation-avoidance agreements with Mauritius and other financial hubs.

Adding another example, Regis Holdings offers services that relate to equipment, logistics, procurement and recruitment to companies that explore and extract hydrocarbons. The head office of Regis is registered in Mauritius. It owns subsidiaries in Angola, Mozambique, South Africa and Uganda. For instance, Regis Uganda has been contracted by the China National Offshore Oil Corporation and Total for exploration in Lake Victoria. It is

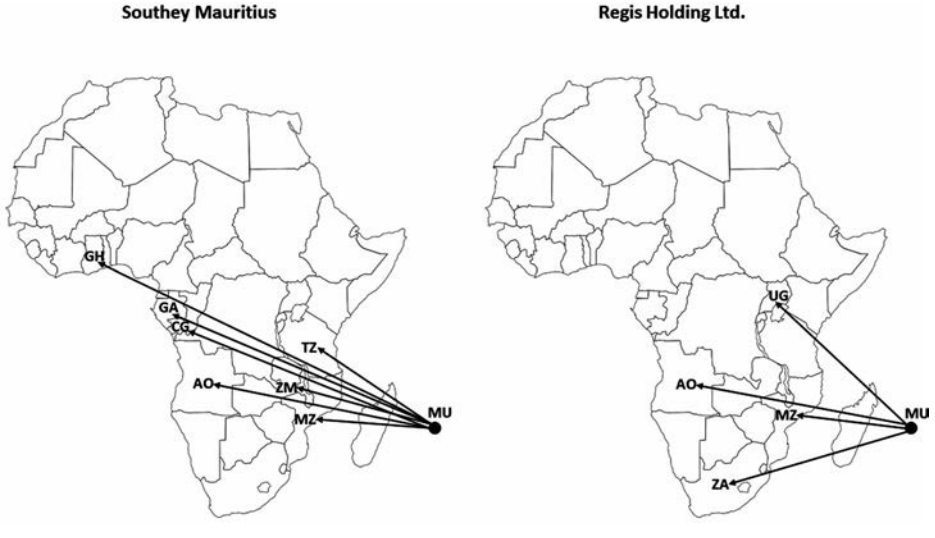

Figure 1. Sub-Saharan African ties of Regis Holdings and Southey.

Note: AO = Angola, CG = Congo, Rep., GA = Gabon, GH = Ghana, MU = Mauritius, MZ = Mozambique, TZ = Tanzania, UG = Uganda, ZA = South Africa, ZM = Zambia. Source: Authors' own compilation.

also involved in the construction of a pipeline from there to the coast of the Indian Ocean in neighbouring Tanzania (Regis Holdings, 2019). Due to ownership in Mauritius, the management fee, royalties as well as tax obligations for dividends and interests of Regis Uganda are reduced from 15 to 10 per cent (International Consortium of Investigative Journalists, 2017).

5. Conclusion

This article explained how Mauritius contributes to interlinking sub-Saharan Africa globally and also discussed its impact upon those places that it integrates into oil and gas GPNs. Mauritius's bunkering strategy demonstrates that the island state has undertaken efforts to position itself as a logistics gateway. Industrial processing is a related option. Yet, our research suggests that Mauritius's role as a gateway may rather be best based on flows of information. They comprise engineering expertise and benefit from the ease and experience of local firms in doing business in sub-Saharan Africa. The island is also attractive for holding structures. Having a holding company in Mauritius appears to be the first step towards relocating business services and some headquarter functions to the gateway. We did not elaborate on knowledge generation, which plays a negligible role for Mauritius and the oil and gas sector, as shown elsewhere (Scholvin, 2019a).

Mauritius's role in logistics and engineering services cannot be related to the aforementioned negative effects of gateways, but these activities do not appear to trigger peripheral dynamics either. With regard to financial flows, the negative impact is clear: the gateway allows some companies to withdraw profits from places of resource extraction. Double-taxation-avoidance agreements significantly reduce the tax income in resource peripheries. Firms that have their holding structure in Mauritius obviously invest in material assets located in resource peripheries and sometimes also contract local labour. Morris et al. (2012) rightly point out that there are opportunities for developing countries to generate linkages from such investment. Yet following Coe & Yeung (2015), realising these opportunities depends on value being re-invested locally and Mauritius – as a financial gateway – works against these dynamics.

We deem it best to add that any argument on filtering mechanisms and the geographical transfer of value avoids the question of whether and how the periphery would integrate into the world economy if there were no gateways. Is it realistic to expect sophisticated corporate services to be carried out in Chad or Equatorial Guinea? Would complex engineering be done by firms from parts of sub-Saharan Africa where it is, at present, impossible to find welders sufficiently qualified for the oil and gas sector? Our analysis suggests that gateways do not necessarily compete with peripheral locations over GPN segments. Mauritius concentrates on activities that are too sophisticated for the places of oil and gas extraction in sub-Saharan Africa.

Further to that, the rise of Mauritius as a gateway results at least partly from the unattractiveness of investing in the hydrocarbon-rich countries of sub-Saharan Africa. GPN analysis emphasises that regional development depends on how regional institutions mould regional assets so that they meet the needs of extra-regional corporations. Mauritius has been quite effective in this regard. If countries such as Angola and Gabon performed better, they would benefit from their resource endowment (and Mauritius's importance as a gateway would decline).

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Endogenous Obstacles to Development in Global Value Chains: Insights From the Oil and Gas Sector

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Abstract
The World Bank promotes integration into global value chains as the path towards development. By liberalising their respective national economies, African countries are expected to benefit from economic impulses, with more and more activities beyond resource extraction being relocated to peripheral locations and generating so-called linkages there. This analytical report focuses on the upstream oil and gas sector, showing that Africa's hydrocarbon-rich countries do not achieve economic progress merely because of being part of global value chains. The reason for this is endogenous obstacles to investment. Services – especially in engineering and logistics – are carried out by South African firms, which bring their own equipment and staff or work in South Africa. The emerging economy therefore benefits from linkages that exploration and extraction of oil and gas in developing countries generate.

Keywords
Development, extractive industry, global value chain, linkage

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Introduction

Following the latest World Development Report, Africa should pursue a liberal economic agenda in order to achieve what the authors of the report temptingly call "development in the age of global value chains." Integration into global value chains is promoted as the path towards growth and prosperity. It will "create better jobs, and reduce poverty" (World Bank, 2020a: 1). In the World Bank's thinking, developing countries benefit from tying themselves to nearby leading areas – that is, the relatively large markets of emerging economies such as South Africa. Unlike developing countries, emerging economies feature strong industrial and services sectors. This economic density allows for integrating regions of continental scale into the world economy. Density moreover generates impulses for development at peripheral locations, with more and more segments of value chains being relocated to developing countries. Readers of corresponding World Bank publications are left with the impression that for such processes to happen, developing countries only have to lower distance and division – meaning trade barriers (World Bank, 2009).

This liberal agenda has not, of course, been without criticism. Nonetheless, numerous African states have implemented policies of economic liberalisation so as to facilitate investment and trade. Most prominently, the G20's Compact with Africa (CwA) aims at promoting private investment across the continent. Although the CwA acknowledges that African countries have to increase their attractiveness to private investors by improving domestic business, financing, and macro-economic frameworks, little is said about the corresponding reforms.[1] In this analytical report, I show that mere integration into global value chains is not enough to trigger development. African countries suffer from numerous endogenous obstacles that hamper investment, diverting activities that generate more value than resource extraction to places that interlink the continent globally, especially to South Africa. My analysis focuses on the upstream oil and gas sector, which includes searching for resources, drilling wells, and operating these wells. Compared with processing and storing oil and gas, upstream activities are much more likely to happen in resource-abundant countries because of the apparent need for physical proximity. Proving the relating expectations on development wrong would be a clear falsification of hopes of growth and prosperity through integration into global value chains.

The empirical insights presented below rest on indexes that describe the respective business environments of African countries and fifteen interviews with key stakeholders. I conducted the interviews with the help of a guideline of eight questions, modified slightly before each interview, reflecting on the interviewee's area of expertise and the exact nature of his/her company. The interviews were recorded and later structured along topics such as inter-firm relations, intra-firm division of labour, location strategy, and, most importantly, obstacles to doing business in Africa.

The analytical report consists of two main sections. First, I discuss the widely used concept of linkages and the relating role of gateways – the latter being spatial intermediaries in global value chains, for example cities that interlink peripheral sites globally. They are the academic backdrop to the policy debates driven by the CwA and World Bank, and reveal causal mechanisms of development in global value chains as well as

obstacles to such processes. Second, I analyse challenges faced by South African firms involved in oil and gas projects all over the continent, showing how they adapt their business strategies and how this reduces the prospects of development in resource-rich countries.

Economic Development Through Linkages and the Impact of Gateways

While the World Development Reports do not go into details regarding causal mechanisms that explain why integration into global value chains triggers economic dynamics in developing countries, publications by the Policy Research in International Services and Manufacturing (PRISM) unit at the University of Cape Town shed light on this critical issue. They also call the scepticism on resource-based development that results from the vast resource curse literature into question, hence offering a far less pessimistic reading of a topic that is essential for many African countries.

The basic idea behind PRISM research is that increasing competition due to globalisation incentivises firms to outsource non-core activities to low-cost suppliers, usually located in countries that specialise in capabilities instead of wholly manufactured products (Kaplinsky and Morris, 2001; Sturgeon and Memedovic, 2010). Developing countries may, therefore, participate in global value chains without necessarily setting up entire industries. They focus on a narrow range of activities, broadening them at a later stage, once they have successfully plugged into the corresponding value chains (Kaplinsky and Morris, 2016). Extractive industries have adapted to this pattern, and particularly in Africa, it makes sense for lead firms from overseas to contract suppliers in close proximity to the site of operation because of challenges with customs clearance and in-country transport. The optimistic notion advanced by Morris et al. (2012) is that beyond direct effects on local development (growth opportunities for suppliers, job creation etc.), outsourcing to local suppliers or transnational ones with a local presence triggers linkages with the surrounding economy that reinforce themselves:

First, the exploration and extraction of resources require inputs. Extracted resources have to be processed. This creates opportunities for backward and forward production linkages. Related activities such as security, transport, as well as the production and maintenance of equipment – ranging from machinery to clothing for workers – also fall into this category. Second, horizontal linkages are about skills gained in one sector that allow companies to expand into another sector. Bidaurratzaga Aurre and Colom Jaén (2019) add externalities such as new roads built for extractive industries that can be used by everyone and thus reduce transport costs in general. Third, fiscal linkages comprise royalties and taxes on corporate and private income related to extractive industries. The income a state obtains this way can be used to facilitate development in non-extractive sectors or increase national wellbeing through social spending. Fourth, consumption linkages result from income earned in the extractive sector. They boost overall demand for products and services, most apparently through the rising purchasing power of the local labour force.

For all linkages, development is a matter of breadth – the proportion of local inputs – and depth, meaning how thick linkages are in terms of local value added (Morris et al., 2012). In consequence, PRISM researchers find the extent to which African countries benefit from resource extraction to be very different from one case to another. At the one end, South Africa has developed a technologically sophisticated sector for mining equipment and specialist services. The corresponding firms are capable of internationalising their business (Kaplan, 2012). Angola's oil industry exemplifies the other end, with backward production linkages being limited to labour and, to a lesser degree, generic services (Teka, 2012). Yet, even these basic linkages are vital to the Angolan economy. Case studies on gold mining in Ghana and oil extraction in Nigeria indicate that there are always opportunities for local businesses to integrate into global value chains and benefit this way (Adewuyi and Ademola Oyejide, 2012; Bloch and Owusu, 2012).

Whereas PRISM research deals with economic dynamics in developing countries that have plugged into global value chains, some recent articles analyse the impact of so-called gateways on peripheral development. Readers familiar with peripheral locations across Africa or, more broadly, across the entire Global South will agree that such sites do not integrate directly into the world economy. Intermediate steps are taken – most demonstratively for logistics and transport, but also in terms of industrial processing, corporate control, service provision, and knowledge transmission (Scholvin et al., 2019). Gateways can, hence, be defined as "an entrance into (and necessarily an exit out of) some area" (Burghardt, 1971: 269). They connect, for example, resource-abundant countries to global markets.

Especially in parts of the world marked by economic and political instability, gateways are highly attractive locations for transnational companies because they form islands of stability in seas of unrest (Nijman, 2007). This is not to say that the entire African continent is a sea of unrest or that South Africa does not face important problems of its own. Nonetheless, in particular Cape Town, with its density of skilled engineering firms, and Johannesburg, which is for various reasons the city from where Africa does business, offer locations advantages not available elsewhere on the continent (Scholvin, 2020).

Gateways play a critical role in how developing countries benefit from integrating into global markets. They have been conceptualised as drivers of economic growth – or, using the terminology of the World Bank, leading areas – that transmit impulses to their wider hinterlands. A case study on Cape Town by Scholvin (2017) shows that this city plays such a positive role in spite of certain limitations, which are further investigated in this analytical report. Yet, other scholars – especially Breul and Revilla Diez (2019) as well as Breul et al. (2019) – argue that gateways may also concentrate economic activities to the detriment of subordinate places. The prospects of developing countries are, therefore, reduced to resource extraction and generic services such as catering, security, and transport of personnel. Many of the linkages that PRISM scholars expect to materialise in the periphery rather occur in gateways. Several studies on resource-rich regions as diverse as Antofagasta in Chile and Pilbara in Australia share this negative assessment of how resource peripheries perform in global value chains (Arias et al., 2014; MacKinnon, 2013).[2]

While the just-mentioned research is focused on exogenous factors such as economies of scale in gateways, sector-specific entry barriers, and the power wielded by transnational corporations, the following section reveals that endogenous conditions also hamper the extent to which oil and gas-abundant countries benefit from being plugged into global value chains. Challenges to doing business in Africa reinforce the concentration of economic activities in gateways, particularly in South Africa, whereas resource peripheries stagnate.

Challenges to Investment in Resource-Rich Countries and Strategies of South African Firms

The list of African countries that possess oil and gas is long. It begins with established producers that are among the world's most important hydrocarbon exporters: Algeria, Angola, Libya, and Nigeria. Others – Chad, Equatorial Guinea, Gabon, and South Sudan, for example – possess reserves of smaller quantities. In Ghana, Ivory Coast, Mozambique, Tanzania, Uganda, and other countries, recent discoveries have attracted international investors. They have just begun with extraction or are still evaluating the corresponding commercial viability. Further countries hold prospects of making large-scale findings, most importantly Namibia.

Fewer than a dozen firms worldwide – Baker Hughes, Halliburton, Schlumberger, and the like – perform the most sophisticated tasks that oil field operators such as Chevron, ExxonMobil, and Shell outsource, but these service providers subcontract smaller companies for engineering, logistics, and other activities that range from somewhat sophisticated (e.g. toxic waste disposal and welding) to generic (e.g. catering and transport of personnel). Following the concepts of gateways and leading areas, South African firms can be expected to venture into regional countries, engage with local partners and suppliers, and relocate more and more activities to peripheral locations.

In the following pages, I begin with very basic obstacles to investing, hiring labour, and purchasing inputs in Africa's hydrocarbon-rich countries. I then elaborate on public safety and challenges that result from legal/regulatory systems. The last paragraphs deal with problems that occur once a branch operation has been established. I furthermore explain how the various difficulties lead to firm strategies that work against consumption, fiscal, horizontal, and production linkages.

Interviews with South African firms involved in service provision to the oil and gas sector revealed numerous obstacles to doing business with and – even more so – operating in other parts of Africa. The owners of a Cape Townian company that provides basic equipment and services to the offshore sector – painting of boats and ropes used on rigs, for instance – said that they were very interested in the Angolan and Mozambican markets, but they abandoned the idea of investing there because of corruption, language barriers, and difficulties in finding a trustworthy local partner.[3] Language barriers were also mentioned with regard to Francophone countries.[4]

An interviewee argued that in some countries, especially in Mozambique, "there are no skill-sets."[5] His firm cannot, therefore, contract local labour, although doing so would be

much cheaper than sending South Africans, who must be paid at an expat rate. Another Cape Townian firm flies its staff into other Africa countries to work there on a "regular in-and-out basis," for example going to a rig once a month during a year.[6] Generalising from these interviews, consumption linkages at peripheral locations do not occur as expected by PRISM scholars because there are few to no local employees. These positive effects concentrate in South Africa.

Further difficulties relate to public services and production inputs. A firm that runs a workshop in Takoradi, Ghana, had to bring its own power generators – obviously at an enormous cost – because "you can't rely on local electricity. You have to be 100 per cent self-sufficient."[7] For all markets except Ghana and Namibia, this firm carries out prefabrication in South Africa and then sends everything to wherever it is needed, along with staff who handle final assembly on site. A large maritime service provider would like to buy as many inputs as possible in Angola, Ghana, and Tanzania, but, in their experience, these countries lack a sufficiently developed industrial base, which is why the firm obtains most inputs in South Africa and has them delivered to its workshops abroad.[8] Against this backdrop, it appears doubtful that oil and gas-rich countries benefit from production linkages.

When travelling to some African countries, there are problems with public safety. The risk of being kidnapped on the way from the airport to the hotel or workshop is a serious issue in Nigeria.[9] An interviewee, who has been to the West African country on short-term missions, explained that "I will land in Lagos. There will be somebody [that is, a personal protection detail] there to collect me. I will be taken to a hotel and looked after until I go offshore […] Try and do that yourself is a nightmare." He went on saying that "I would never drive around in Nigeria [on my own]. If there is a problem, you [will] get into so deep shit." As a consequence, few firms are interested in working in countries like Nigeria because "it's so difficult, it's not attractive," not even from a business point of view. The interviewee's firm now works in South Africa only. Customers must pick up the equipment they purchase or have international freight forwarders deliver these goods. Payment must be made before any shipment leaves South Africa, which is "sensible when doing business with Nigeria," as the interviewee stressed.[10]

The list of obstacles goes on. Referring to Ghana, which is one of best performers in terms of a functional legal system on the continent, an interviewee explained that "there is an official system and then there is also a bit of unofficial that you have to do […] What they tell you from a legal perspective and what happens on the ground is sometimes slightly different."[11] This apparently creates uncertainty among potential foreign investors. As Figure 1 shows, the regulatory systems of sub-Saharan Africa's main hydrocarbon exporters are of poor quality. Equatorial Guinea and the Republic of the Congo are among the worst performers worldwide. Even Ghana does not perform overly well, although the World Bank (2018) rates its government effectiveness much better than that of the other countries from Figure 1. Among the countries that may soon export oil and gas in large quantities, Ivory Coast, Namibia, and Uganda reach values similar to those of Ghana. Mozambique and Tanzania perform worse.

Some regulations even work against foreign investment. "It's very difficult to get your money out of Angola, " the owner of an engineering firm pointed out.[12] They do not

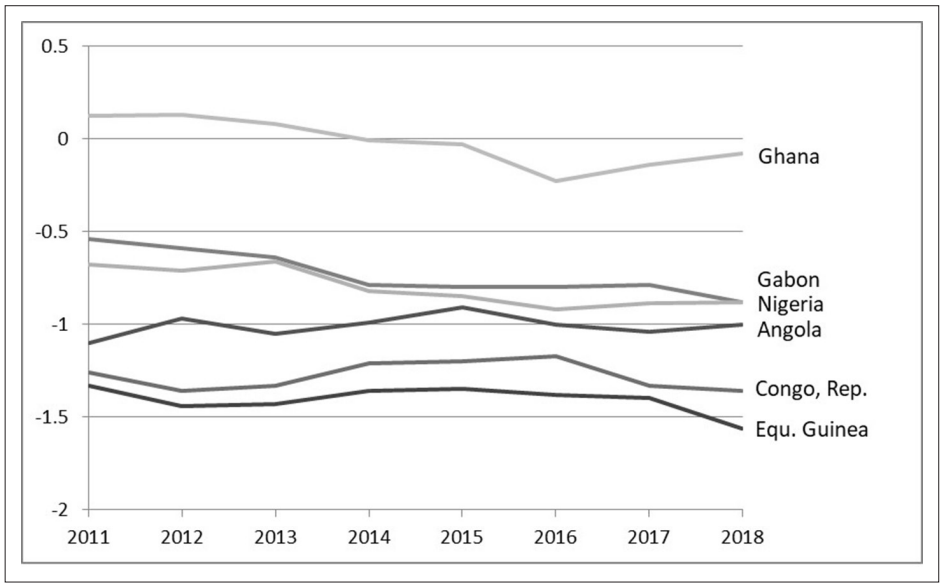

Figure 1. Regulatory Quality of Hydrocarbon Exporters. *Source*. World Bank (2018). *Note*. The World Bank rates regulatory quality on a scale from −2.5 (worst) to 2.5 (best).

operate in that country for this reason. Clients that extract oil in Angola use their respective European business units to pay for engineering work – refitting of boats, for example – that is done in South Africa. A further challenge to investment in Angola is that tremendous up-front transfers into Angolan bank accounts are mandatory in order to register a business there. An interviewee explained that the owners of his firm do not want to put money into Angola, knowing that they may not be able to get it out again. He added that up-front transfers and registration are not a guarantee for obtaining contracts (or being able to carry out the corresponding work).[13] Doing work for the Angolan market in South Africa and being paid into a South African bank account apparently means that fiscal linkages occur in the leading area, not in the resource-rich country.

The Doing Business rankings by the World Bank (2020b) confirm how difficult it is to run a firm in Africa's oil and gas-rich countries. With the exceptions of Ghana, Ivory Coast, Namibia, and, in some respects, Niger, Tanzania, and Uganda, the continent's resource-abundant countries are also the worst performers on these rankings (and Africa performs worst by global comparison). In particular, enforcing contracts in Angola, starting a business and paying taxes in Chad, the Republic of the Congo, and Equatorial Guinea, registering property and trading across borders in Nigeria and South Sudan, and protecting minority investors in the latter country could hardly be more difficult.

South African companies that operate permanently or temporarily across the continent face further challenges. To begin with, goods are often stolen at customs. Bribes are necessary "to keep the right people happy" and make customs clearance proceed.[14] "The

problem with dealing with [other countries in] Africa […] is that a lot of them [meaning, public employees] expect underhand dealings […] It's like 'We'll get this pump in quicker, but it's gonna cost you extra, '" a businessman from Durban explained.[15] An engineer who travels frequently from Cape Town to other African countries added that "it's impossible to get your stuff there on time."[16] While it appears that the amounts of money used by South African service providers to bribe people are rather low,[17] corruption at borders causes serious delays, which drives up the costs of doing business.[18] This is particularly problematic in the oil and gas sector, where prices may change tremendously from one day to another, meaning that every day lost at a border stop may decrease revenues significantly.

Once in the country, corruption goes on. An interviewee spoke of "facilitation fees" that government officials in Nigeria demand for each transmission, obviously without providing any sort of receipt.[19] Another interviewee, whose company repairs rigs and ships, has made similar experiences: "Everything you have to pay backhands […] So even if you are there, the risk that you are not going to execute the project on time is huge. Then you rather say [to the client], 'No, we can't do it there. Bring your rig down to South Africa'."[20] Given that operators are aware of these reliability issues, they prefer to have their vessels maintained in South Africa. In addition to the aforementioned drag on consumption, fiscal, and production linkages, such a concentration of business activities in the leading area also works against horizontal linkages in oil and gas-rich countries such as the expansion and rehabilitation of harbours and shipyards.

The Corruption Perceptions Index by Transparency International (2019) confirms that most African countries that possess oil and gas resources suffer from outstandingly high levels of corruption. Reaching values as low as twelve (South Sudan) and sixteen (Equatorial Guinea) on a scale from zero to one hundred, where higher values indicate less corruption, they are among the worst performers worldwide. Angola and Nigeria – by far the largest markets for the upstream sector – both reach a value of twenty-six. Ghana (forty-one) and Namibia (fifty-two) are the only ones that perform relatively well by African standards.

If a South African firm decides to invest in other African countries, it will need a local partner to start a joint venture, which is mandatory by legislation on local content. Yet, there are few local businesspeople and companies that have the managerial and technical expertise necessary to make a contribution to joint ventures in the oil and gas sector. Interviewees argued that "to find a partner that can actually add value, not just having contacts, […] it's difficult , "[21] pointing out that "one is being forced […] to hold hands with a local company, even though they can't really help you to do the job."[22] A consultant explained that local partners often merely serve the purpose of bribing the right people.[23] Hence, money flows into obscure channels that are unlikely to trigger development.

Conclusion

Being part of global value chains undoubtedly offers considerable opportunities, but this analytical report showed that various endogenous obstacles need to be addressed before African countries can fully benefit from external impulses that the leading area generates, triggering linkages at peripheral sites. Although the oil and gas sector is not, certainly, representative of all value chains that matter to Africa, the obstacles identified above are not sector-specific. Language barriers, the lack of inputs and skilled labour, as well as unreliable public services, and, in some countries, issues with public safety make it difficult – perhaps impossible – to operate in many resource-abundant countries. Legislation that is poorly implemented or sometimes hostile to foreign investment as well as corruption further complicate the situation.

Given such an unfavourable business environment, activities beyond the mere extraction of oil and gas largely happen in South Africa – the gateway, which interlinks the continent globally. South African service providers try to do as much work as possible in their home country, instead of setting up branches abroad. They work rather temporarily than permanently in oil and gas-rich countries, bringing in South African equipment and staff. As a consequence, the linkages that PRISM scholars expect largely concentrate in South Africa, not in Angola, Gabon, Nigeria or any other hydrocarbon-exporting nation – obviously with the exception of the royalties and taxes that Chevron, Shell, and the like pay. This finding ties the analytical report to the resource curse literature, as institutional weaknesses or, in other words, governance problems that stand at the core of this literature (Robinson et al., 2006; Ross, 2012) account for some – but not for all – of the endogenous challenges identified above.

Author's Note

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Notes

1. For more information on the CwA, see: www.compactwithafrica.org.
2. As a side note, these publications are representative of a branch in Economic Geography that is more sceptical with regard to resource-based development than PRISM studies.
3. Interview with a maritime service provider, Cape Town, 26 February 2014.

4. Interview with a maritime service provider, Cape Town, 1 August 2016, and with an engineering firm, Cape Town, 10 August 2016.
5. Interview with a maritime service provider, Durban, 11 July 2016.
6. Interview with a specialised service provider, Cape Town, 11 August 2016.
7. Interview with an engineering firm, Cape Town, 2 August 2016.
8. Interview with a maritime service provider, Durban, 11 July 2016.
9. Interview with an engineering firm, Cape Town, 5 August 2016.
10. Interview with an engineering firm, Cape Town, 10 August 2016.
11. Interview with an engineering firm, Cape Town, 2 August 2016.
12. Interview with an engineering firm, Cape Town, 10 August 2016.
13. Interview with a maritime service provider, Cape Town, 11 August 2016.
14. Interview with an engineering firm, Cape Town, 10 August 2016.
15. Interview with an engineering firm, Durban, 15 July 2016.
16. Interview with an engineering firm, Cape Town, 5 August 2016.
17. An interviewee explained that "a hundred dollars or a bottle of whisky can fix it" (Engineering firm, Cape Town, 5 March 2014).
18. Interview with a freight forwarder, Cape Town, 28 February 2014.
19. Interview with a logistics service provider, Mossel Bay, 27 July 2016.
20. Interview with a maritime service provider, Cape Town, 11 August 2016.
21. Interview with an engineering firm, Cape Town, 2 August 2016.
22. Interview with an engineering firm, Cape Town, 2 August 2016.
23. Interview with a consultant, Port Elizabeth, 19 July 2016.

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Endogene Hindernisse für Entwicklung in globalen Wertschöpfungsketten: Erkenntnisse aus dem Öl- und Gassektor

Zusammenfassung
Die Weltbank preist die Einbindung in globale Wertschöpfungsketten als den Weg zu Entwicklung an. Es wird erwartet, dass afrikanische Länder durch die Liberalisierung ihrer Volkswirtschaften von wirtschaftlichen Impulsen profitieren. Immer mehr Aktivitäten, die über die Rohstoffgewinnung hinausgehen, könnten in der Folge an periphere Orte verlagert werden und dort sogenannte *Linkages* erzeugen. Diese Analyse zeigt anhand des *Upstream* Öl- und Gassektors, dass Afrikas ressourcenreiche Länder nicht allein schon deshalb wirtschaftlichen Fortschritt erreichen, weil sie in globale Wertschöpfungsketten eingebunden sind. Ursächlich dafür sind endogene Investitionshemmnisse. Dienstleistungen – insbesondere im Ingenieurwesen und der Logistik – werden von südafrikanischen Firmen erbracht, die ihre eigene Ausrüstung und ihr eigenes Personal mitbringen oder in Südafrika arbeiten. Die aufstrebende Wirtschaftsmacht profitiert daher von *Linkages*, die durch die Exploration und Förderung von Öl und Gas in Entwicklungsländern entstehen.

Schlüsselwörter
Entwicklung, globale Wertschöpfungskette, Linkage, Rohstoffindustrie

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Limits of linkage-based development: an assessment of the oil and gas sector in North Patagonia, Argentina

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ABSTRACT

The research note assesses the prospects of development through extractive industries in north Patagonia (Argentina), a region that holds considerably large unconventional oil and gas deposits. The author applies the linkage approach from the literature on global value chains, paying particular attention to backward and forward production linkages because they may trigger a structural transformation of the regional economy. He finds that north Patagonian firms have managed to plug into the upstream sector. There are efforts to facilitate an unconventional hydrocarbon cluster and even hopes of local firms venturing into markets abroad, which would enable them to become specialized suppliers. However, their present role is largely limited to the provision of generic products and services, and it appears unlikely that this will change due to financial and other constraints. Even though north Patagonia benefits from linkages, the disillusioning findings lead the author to call for a less optimistic understanding of linkage-based development in global value chains: resource peripheries may be stuck at a level of generic, low value-added activities.

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Global value chain; linkage; oil and gas; regional development; Vaca Muerta

1. Introduction

Argentina is South America's largest natural gas producer and a significant producer of oil too. In recent years, unconventional resources that are part of the Vaca Muerta formation in north Patagonia – one of the largest such deposits worldwide – have arisen the interest of oil majors. Mostly due to Vaca Muerta, Argentina holds the world's fourth-largest shale oil and second-largest shale gas resources (Energy Information Administration, 2017). Mauricio Macri, whose presidency ended in 2019, suggested that the exploitation of these hydrocarbons would "revolutionize" employment in the entire country (Perfil, 2017). Jorge Sapag – a former governor of the province of Neuquén, which is home to Vaca Muerta – has called them "the key to Argentina's development" (Nación, 2019). Against the backdrop of these high expectations, this research note answers the following question: What are the prospects of development through extractive industries in north Patagonia?

Argentina is different from other hydrocarbon-rich countries in South America, most importantly Bolivia and Venezuela, because it remains a net importer of oil and gas (Energy Information Administration, 2017). Natural gas is exported in summer, when the domestic demand drops for a few months, but the prospects of resource-based development are not tied to exports. Further to that, readers should note that my analysis deals with an economic question, which has been studied from different angles and for other resource peripheries in South America – for instance by Hinojosa et al. (2015), who analyse territorial dynamics in Bolivia's Tarija province, and by Scholvin et al. (2020) with regard to hydrocarbon production networks in Brazil. Other certainly relevant topics – in particular political struggles relating to natural resources (e.g., Andreucci, 2017; Irarrázaval, 2020) – are not covered here.

I now first elaborate on the conceptual and methodological background of this study. Next, I analyse non-transformative linkages and structural features of the oil and gas sector. The following section goes into details on production linkages. Against the backdrop of disillusioning findings, the conclusion calls the automatism of development through participation in global value chains (GVCs) into question.

2. Conceptual and methodological background

The research note stands in the tradition of a particular branch of GVC analysis. The literature on GVCs has become tremendously broad and diverse. It

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ranges from the latest World Development Report, which encourages all countries to liberalize and participate in global networks (World Bank, 2020), to critical research that conceptualizes GVCs as a means of producing/reproducing uneven development (esp. Werner, 2016, 2019; see also: *Environment and Planning A*, vol. 45, no. 11). I apply an approach drafted by scholars from the Policy Research in International Services and Manufacturing (PRISM) unit at the University of Cape Town. PRISM research has been designed with a focus on extractive industries. I also think that it merits more scholarly recognition and constructive engagement, as it bridges the gap between purely academic contributions and policy-oriented GVC analyses.

PRISM research is based on the observation that economic activities have "dispersed to an ever expanding network of peripheral and core nations alike. […] In today's global factory, the production of a single commodity often spans many countries, with each nation performing tasks in which it has a cost advantage" (Gereffi et al., 1994, p. 1). Relatedly, increasing competition due to globalization incentivizes large firms to outsource non-core activities to low-cost suppliers, usually located in countries that specialize in capabilities instead of wholly manufactured products (Kaplinsky & Morris, 2001; Morris & Farooki, 2019). Developing countries and emerging economies may, hence, participate in the global economy without necessarily setting up entire industries. They focus on a narrow range of activities, broadening them at a later stage, once they have successfully plugged into the corresponding value chains (Kaplinsky & Morris, 2016).

The optimistic notion advanced by Morris et al. (2012) is that in extractive industries, outsourcing to local suppliers or transnational ones with a local presence triggers linkages with the surrounding economy. First, there are consumption linkages because income within GVCs boosts overall demand for products and services, most apparently through the rising purchasing power of the local labour force. Second, fiscal linkages result from taxes on corporate and private income. In extractive industries, royalties are decisive. They can be used to facilitate development in other sectors or to increase local wellbeing through social spending. Third, horizontal linkages are about skills gained in sector A that allow companies to expand into sector B. Following Bidaurratzaga Aurre and Colom Jaén (2019), they also include externalities such as new roads built for extractive industries that can be used by everyone. Fourth, production linkages are about backward and forward linkages: the exploration and extraction of oil and gas requires various services, ranging from the construction of access roads to drilling and well termination. Extracted resources have to be processed.

I contend that whereas consumption and fiscal linkages have a mere monetary effect on the territory under consideration, production linkages may lead to a structural transformation of the regional economy. If successful, firms will upgrade from the provision of generic products and services to more complex, higher value-added activities. In the ideal case, clusters dedicated to specific GVCs will emerge (Arias et al., 2014), enabling local companies to expand into new markets. Horizontal linkages have a transformative potential when they affect firms but not when occurring as externalities, at least not directly.

My assessment of linkage-based development in north Patagonia is based on academic literature and data made available by Argentinean public authorities. Basic information on the hydrocarbon sector has been retrieved from the Energy Information Administration and the website "A Barrel Full". During field trips to Buenos Aires and north Patagonia, I carried out narrative, open-ended interviews with representatives of business organizations, public authorities and, most importantly, local and non-local enterprises. I identified the interviewees via LinkedIn and by snowball sampling, and then used a guideline of eight questions, adapted slightly before each interview. The interviews were recorded and later structured with regard to linkages and related obstacles.[1] Although research that refers to qualitative data cannot be as robust as quantitative studies, my analysis achieves a decent reliability because the just mentioned sources are not only used in a complementary way. Most of my conclusions rest on more than one observation, meaning that I make use of data triangulation.

3. Non-transformative linkages and structural features

The most obvious impact of the oil and gas sector on north Patagonia is royalties paid by oil field operators for the right to explore and extract resources – fiscal linkages, in other words. In the province of Neuquén, such royalties rose from ARS 4.2 billion in 2015 to ARS 13.8 billion four years later. This is a considerable share of the province's total income of ARS 82.5 billion in 2019. According to the budget for 2020, drafted before the Covid-19 crisis, hydrocarbon royalties are expected to increase to ARS 25.6 billion, more than all taxes earned by the province (Ministerio de Economía de Neuquén, 2020). The economy of neighbouring Río Negro, which also hosts sections of Vaca Muerta, is more diversified, with fruticulture and tourism being important. Prior to Covid-19, oil and gas royalties were projected to reach

ARS 9 billion in 2020. This is certainly a relevant share of Río Negro's total income of ARS 109 billion, also because only 38 per cent of that income is generated in the province, whereas 62 per cent are contributions from the national level (Ministerio de Economía de Río Negro, 2020).

In terms of consumption linkages, it may suffice to point out that the average salary for oil and gas-related jobs in Neuquén was ARS 82,000 to 86,000 in 2017 and ARS 44,000 to 76,000 in Río Negro. No other private sector in Neuquén achieved such high wages. Only long-distance bus and lorry drivers earned more in Río Negro. In both provinces, an average oil and gas employee earned four times as much as an average farm worker and twice as much as an average employee in financial services – a bank clerk, for example (Observatorio de Empleo y Dinámica Empresarial, n.d.). This has strong implications for local consumption in relatively large urban agglomerations such as the city of Neuquén and towns closer to the oil and gas fields, for example Añelo and Rincón de los Sauces. Fly-in/fly-out practices, with workers spending most of their free time outside of resource peripheries (Aroca & Atienza, 2008; MacKinnon, 2013), do not apply to Argentina. Legislation on local content mandates a high share of labour from the corresponding provinces and domestic flights remain expensive because of price regulation.

Horizontal linkages result from transport infrastructure that has been expanded to meet the demands of the upstream sector. Most importantly, an existing 570-kilometre railway line from the port of Bahía Blanca to Cipolletti – adjacent to Neuquén – is to be rehabilitated. The tracks will be extended by another 85 kilometres to reach the core zone of Vaca Muerta. In addition to goods needed for the oil and gas sector, the railway line is meant as a means of transport for agricultural products from Río Negro and potentially also ore mined in the province of Mendoza (Instituto Argentino del Petróleo y del Gas, n.d.), thus increasing the competitiveness of other sectors too. The rehabilitation of rail and road corridors does not lead to a structural transformation of the regional economy though. With regard to the level of firms, horizontal linkages – firms acquiring new skills in the hydrocarbon sector and then venturing into another sector – do not occur, at least not according to my knowledge.

The oil and gas sector does offer opportunities for companies based in north Patagonia, as explained in the next section. Figure 1 shows that the sector is marked by a relatively simple input–output structure. Upstream activities include searching for deposits, drilling wells and operating these wells. Midstream is about transport, storage and wholesale marketing of crude and purified/refined products. Downstream comprises refining crude oil and purifying raw natural gas, and marketing and distribution of consumer products. In addition to these core tasks, there are numerous production inputs and services linked to the upstream sector. They include, for instance, transport of equipment and personnel as well as provision of pipes, tubes and other metal products. Catering is also part of the wider value chain.

The sector's input–output structure provides a first hint on obstacles to regional development. Value is largely captured by transnational enterprises – lead firms, strategic partners and specialized suppliers. As Bridge (2008) explains, the sharp divide between these globally active players and local contractors is characteristic of the upstream sector worldwide. The former are almost omnipotent in terms of GVC governance. In north Patagonia, Apache, Madalena Energy, Total, YPF and a few others operate the various blocs (A Barrel Full, 2016). A handful of foreign firms such as Baker Hughes, Halliburton, Schlumberger and Wintershall provide services of outstanding sophistication.[2] There are strategic partners and specialized suppliers of Argentinean origin – Pan American Energy and Tecpetrol, for example. YPF is of course an Argentinean firm and the most important one in the sector. Yet, none of these

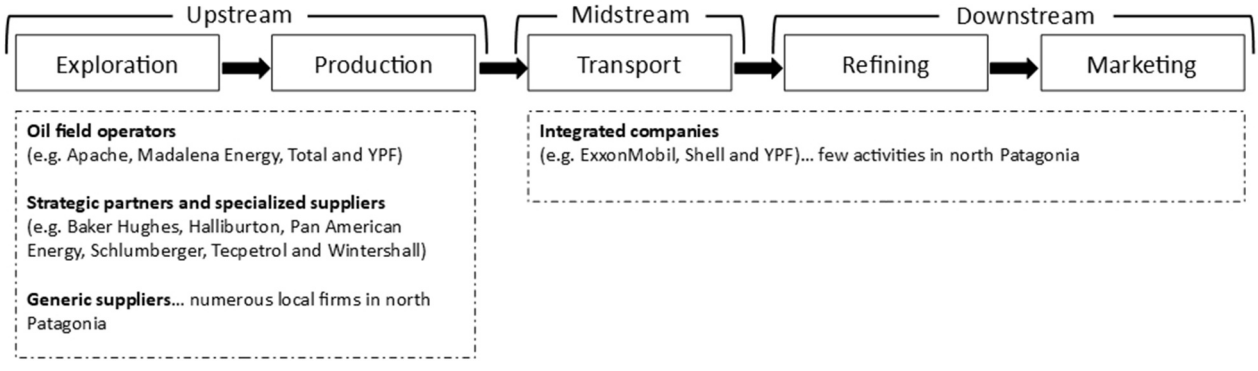

Figure 1. Input–output structure of the hydrocarbon sector. Source: Author's own draft.

companies is from north Patagonia. High value-added activities are carried out in Buenos Aires (Scholvin, 2019a).

In down- and midstream, integrated oil companies such as ExxonMobil, Shell and of course YPF play the dominant role. Their activities are even more concentrated beyond the resource periphery. The only refinery in north Patagonia – located in Plaza Huincul – reaches a relatively low output of 25,000 barrels a day, whereas larger ones and petrochemical industries are in the city and province of Buenos Aires, which is Argentina's economic heartland (Barrel Full, 2014; see also: Scholvin, 2019b).

4. Production linkages and obstacles to an economic transformation

The just mentioned oil field operators contract suppliers close to where exploration and extraction take place – either local firms or foreign ones with a local branch – so as to save costs and time of transport.[3] Since legislation on local content refers to the provincial level in Argentina, it makes a certain decentralization legally binding,[4] thus reinforcing the economic rationale. A euphemistic government study concludes that only due to Vaca Muerta, the gross domestic product of Neuquén may increase by 39 or even 90 per cent by 2030. Communication, finance, real estate and other corporate services are expected to benefit from the hydrocarbon boom; so is local maintenance/production of engines, pumps and vehicles (Romero et al., 2018). Administration and transport centres as well as industrial and logistics parks have been established (Landriscini et al., 2017). The Technology Centre Alejandría in Plottier – a city at the edge of the provincial capital – serves the purpose of fostering the cooperation of local small and medium-sized enterprises (SMEs) with extra-regional firms so as to develop a cluster dedicated to unconventional natural gas (Landriscini & Carignano, 2013).

Representatives of a local chamber of commerce argued that this involvement in GVCs is vital to SMEs because it will eventually enable them to expand into markets abroad.[5] The first step in that direction is the provision of maintenance services for equipment brought in by foreign firms, which allows local ones to get familiar with new technology.[6] An employee of an organization that supports SMEs explained that "we have to make it possible that local firms provide world-class services. [We have to] benefit from the development of unconventional resources in Neuquén, coming to know [and] brining in [new] technology […] to export it later. […] When unconventional projects begin in [other South American countries], we will be able to export the [related] services".[7]

Unfortunately, this vision is far from the present reality. Firms from north Patagonia have plugged into oil and gas GVCs as providers of production inputs and services of low sophistication.[8] They engage in electromechanics, road construction, soil movement and transport of liquid cargo, among similar tasks (Landriscini & Carignano, 2015). According to an interviewee, there are about 500 such firms in Neuquén, mostly in the capital of the province but also in smaller towns. Only very few provide services specific to the hydrocarbon sector such as well termination. Most demonstratively, there are no local enterprises that carry out drilling.[9] The few local backward linkages mentioned in my interviews are limited to maintenance of generic mechanical equipment and the purchase and repair of bakkies and small lorries.[10] Hence, production linkages are not overly broad or deep. Interviewees from the provincial government also pointed out that "there is not much value added [by local firms]. Everything that's capital-intensive – highly [capital-intensive] – that's all companies from outside of the province".[11]

Argentina's exceptionally high interest rate, which fluctuated between 44 per cent in February 2019 and 77 per cent six months later, reinforces the problems that local firms face: they can hardly invest in new technology, which would enable them to venture into more sophisticated activities.[12] An engineer who works for an oil field operator stressed that "the technology that they need or [rather] the money to buy this technology, […] that's something that the companies from the province [of Neuquén] don't have".[13]

Further to that, Kozulj and Lugones (2007) find that companies from north Patagonia are second- and third-tier suppliers, usually subcontracted by extra-regional first-tier suppliers. Oil field operators and first-tier suppliers pass the task of lowering costs to local firms. An interviewee explained that local companies "have to improve their efficiency […]. Today, they offer a service at 40 [US] dollars. In half a year, they have to do it for [USD] 20 and in a year, for [USD] 10".[14] Several local firms that I visited have direct contracts with oil field operators, but their situation is not much better than that of second- and third-tier suppliers. For example, the owner of a firm that specializes in transport of liquid cargo complained that their main client, YPF, suddenly "began to impose […] to unilaterally change contracts".[15] The interviewee's company eventually filed a law case against YPF, whose outcome is at best uncertain.

Other challenges that local suppliers face are typical for SMEs. In some cases, large extra-regional competitors have absorbed successful local firms or headhunted their

Table 1. Hydrocarbon linkages in north Patagonia.

Linkage	Findings	Quantification
Consumption	Exceptionally high salaries in the hydrocarbon sector boost private consumption	Neuquén, 2017: ARS 82,000 to 86,000; Río Negro, 2017: ARS 44,000 to 76,000
Fiscal	Royalties as a key contribution to the provincial budgets	Neuquén, 2019: 16.7% of state income; Río Negro, 2020: 8.3% of state income
Horizontal	Rail and road corridors; no horizontal linkages at the firm level	655-kilometre railway line from Bahía Blanca to Vaca Muerta, in addition to new/rehabilitated roads
Production	Largely limited to generic products and services; local firms hardly able to venture into more sophisticated activities	500 generic service providers in Neuquén

Source: Author's own draft.

employees.[16] Many SMEs fail to obtain contracts because pre-bidding assessment ascribes high relevance to their annual turnover, which is used as an indicator of what a specific firm can realistically achieve. If the turnover is considered too low, that firm will not be allowed to bid.[17] Non-local service providers have idle equipment and staff that they can deploy in case of demand, shifting such assets from one country to another. Local firms obviously depend on a single market. This is particularly problematic because there is uncertainty about the timing and volume of future investment, not at least as a result of economic and political instability in Argentina.[18]

5. Conclusion

This research note assessed the prospects of development through extractive industries in north Patagonia. The hydrocarbon sector generates considerable consumption, fiscal and horizontal linkages of a non-transformative nature. Firms from Neuquén and Río Negro have managed to plug into the upstream sector, but their role is limited to the provision of largely generic products and services. This means that production linkages, which hold the potential to trigger a structural transformation, remain limited in breath and depth. In particular the vision of local firms internationalizing their business activities – which would enable them to rise from generic to specialized suppliers – appears unrealistic. Table 1 summarizes the findings along the four types of linkages.

Given these disillusioning findings, it appears that the PRISM approach is too optimistic. Indeed, a key message of PRISM studies on extractive industries in Africa is that there will always be some sort of linkages, even in the Angolan and Nigerian oil industries or in gold mining in Ghana (Morris et al., 2012; *Resources Policy*, vol. 37, no. 4). Following the aforementioned concept of initial thinning and subsequent thickening of GVC-related activities (Kaplinsky & Morris, 2016), every sort of linkage may serve as a starting point for peripheral development, as also suggested by the title of the seminal book by Morris and his co-authors, which – probably unintendedly – suggests an automatism: *One Thing Leads to Another*.

My research, conversely, indicates that narrow and thin linkages do not necessarily become broader and deeper. Resource peripheries may be stuck at a level of generic, low value-added tasks. Obstacles of development in GVCs thus have to be better recognized, for example along the lines of research on clusters and enclaves (Atienza et al., 2016; Phelps et al., 2015) or with regard to filtering mechanisms by so called gateway cities (Breul & Revilla Diez, 2019; Scholvin, 2020).

Notes

1. During my field trip to Neuquén and Río Negro, a local consultant with in-depth knowledge of the hydrocarbon sector supported me. I conducted the interviews, but later discussions with the consultant proved helpful to avoid misunderstandings and – to a lesser degree – reflect on personal biases that I may hold towards the research topic.
2. Interview with an oil field operator, Buenos Aires, 17 May 2017.Most interviewees did not speak as official representatives of their company or organization. I nevertheless provide the corresponding information for better contextualization.
3. Interviews with specialized service providers, Buenos Aires, 9 and 17 May 2017, and with an oil field operator, Neuquén, 28 November 2017.
4. In practice, there are case-specific negotiations between lead firms and the respective provincial governments, as an interviewee explained (Neuquén, 27 November 2017). The provincial governments appear to be rather flexible, using legislation on local content mainly as "a platform for dialogue" (Interview with an organization that supports SMEs, Neuquén, 30 November 2017.).
5. Interview with a chamber of commerce, Neuquén, 23 November 2017.
6. Interviews with the provincial government, Neuquén, 27 November 2017, and with an organization that supports SMEs, Neuquén, 30 November 2017.
7. Interview with an organization that supports SMEs, Neuquén, 30 November 2017.
8. Interview with an oil field operator, Buenos Aires, 17 May 2017.
9. Interview with an organization that supports SMEs, Neuquén, 30 November 2017.
10. Interviews with generic service providers, Allen and Neuquén, 28 and 30 November 2017.

11. Interview with the provincial government, Neuquén, 27 November 2017.
12. Interview with the provincial government, Neuquén, 27 November 2017.
13. Interview with an oil field operator, Neuquén, 22 November 2017.
14. Interview with a specialized service provider, Buenos Aires, 9 May 2017.
15. Interview with a generic service provider, Neuquén, 30 November 2017.
16. Interview with a chamber of commerce, Neuquén, 23 November 2017.
17. Interview with an oil field operator, Neuquén, 28 November 2017.
18. Interview with a local engineering firm, Neuquén, 29 November 2017.

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Prospects and pitfalls of Namibia's oil and gas sector

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ABSTRACT

Namibia is an oil and gas frontier state. Expectations of a coming boom with ensuing positive effects for the entire economy are high. The author assesses the prospects of the Namibian oil and gas sector, drawing on the concept of 'linkages'. Because the corresponding literature neglects political challenges, the author complements the linkage concept with the resource curse approach so as to elaborate on important pitfalls, advancing the state of the art in terms of theories. The empirical analysis is based on a survey of Namibian newspapers, a database and reports on elite capture related to oil and gas as well as 14 interviews with domestic and foreign companies, consultants and public authorities. It is shown that important economic benefits result from the oil and gas sector. They will further increase if large-scale extraction begins. Whereas many political downsides of resource booms do not apply to Namibia, the elite appear to have turned the licensing system for exploration into a means of self-enrichment. This implies that tremendous amounts of money that should have been available to the state – and thus to the Namibian society as a whole – have ended in private pockets.

1. Introduction

'Just one decent offshore success could transform the oil game for Namibia and 2.2 million Namibians, many surviving on low incomes'. Duncan Clarke, Africa: Crude Continent, *p. 341*.

A recent report by the Financial Times (2019) suggests that among oil majors, interest in Namibia has risen once again. Indeed, several foreign companies were carrying out seismic studies and drilling in that year. The Africa Report (2018) argues that 'the time is right for Namibian oil exploration'. Shell and Tullow are the best-known firms that have invested in the country. This apparently triggers hopes for development and Tom Alweendo, the minister of mines and energy, has stressed the relevance of royalties at a time of economic slowdown (Namibian, 2019). A contribution to the newspaper Patriot (2019) puts offshore oil and gas into the larger context of the ocean economy, which Namibia 'should harness […] to promote growth'.

I assess to which extent Namibia may benefit from the oil and gas sector, using the approach of global value chains (GVCs) and the concept of 'linkages', which was originally developed by Albert Hirschman and has been revitalised by scholars from the Policy Research in International Services and Manufacturing (PRISM) research unit at the University of Cape Town. Taking up Hirschman's conviction that 'development is essentially the record of how one thing leads to another' (1981: 75), PRISM scholars concentrate on linkages that result from extractive industries and are beneficial to resource-abundant countries in various ways, ranging from the integration of domestic companies into GVCs to increasing private consumption to higher tax income (Morris et al., 2012). Significant insights have been gained by applying the linkage concept, including in a special issue of this journal (vol. 37, no. 4).

However, resource abundance is hardly ever a success story for developing countries and further below, I argue that the linkage concept suffers from a tendency to neglect related political downsides. This blind spot is particularly striking because the corresponding state of research is broad and deep, with the contributions by Auty (1993), Karl (1997) and Ross (2012) just being the best-known publications. Therefore, in the assessment of the prospects and pitfalls of Namibia's oil and gas sector, I complement the linkage concept with the resource curse literature, especially the intriguing idea that resource curse effects may already occur when a resource boom is still a mere possibility.

To gather empirical information, I screened Namibian newspapers and, more importantly, carried out 14 narrative, open-ended interviews with local and transnational enterprises involved in the oil and gas sector, consultants and public authorities. The objective of the interviews was to learn about business opportunities, location strategies and inter-firm relations, particularly with regard to the chances of local suppliers to plug into GVCs. The interviewees were identified via

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LinkedIn and by snowball sampling. The interviews were conducted with the help of a guideline of eight questions, adapted slightly before each interview, reflecting on the interviewee's area of expertise and the nature of his/her company or organisation. The interviews were recorded and later structured along the just mentioned research interests. I furthermore refer to reports by the Institute for Public Policy Research (IPPR), based in Namibia, and Mail and Guardian on elite capture related to oil and gas, and shed light on the exploration licensing process with the help of a database compiled by the IPPR.

The article consists of two main sections. I first present the conceptual framework, showing how insights from the resource curse literature complement an assessment of linkages. The next section contains the empirical findings. In the conclusion, I summarise these findings and briefly comment on how oil and gas may fit into a wider development strategy for Namibia.

2. Conceptual framework

2.1. Global value chains and linkages

Research on GVCs goes back to an edited volume – *Commodity Chains and Global Capitalism* – published in 1994. Its starting point is the observation that economic activities have 'dispersed to an ever expanding network of peripheral and core nations alike. […] In today's global factory, the production of a single commodity often spans many countries, with each nation performing tasks in which it has a cost advantage' (Gereffi et al., 1994: 1). These transnational networks – clustered around single products – are value chains, represented as linear and sequential alignments of nodes from resource extraction to processing to final consumption.

Gereffi (1994) suggests three analytical dimensions for research on GVCs: the input–output structure describes what comes in and out of the chain at each node; a chain's territoriality is about the location of the individual nodes; governance deals with power wielded by lead firms, most importantly controlling who enters the chain under which conditions. In another publication, Gereffi (1995) adds the institutional context – covering laws as well as regulation by private and public organisations – as a fourth dimension.

Beyond describing how the global economy is organised, GVC research seeks to uncover the prospects of development in value chains. Corresponding proxies are governance and upgrading. Governance is divided into five types that describe how much power a lead firm wields vis-à-vis its suppliers (Gereffi et al., 2005). Upgrading captures how firms improve their production processes and products, how they obtain additional functions within a GVC and how they move from chain A to chain B, thus diversifying their business activities at an inter-chain level (Humphrey and Schmitz, 2000).

The concept of linkages is a third development proxy. It goes beyond the more narrow GVC-oriented dynamics covered by governance and upgrading, shedding light on how a particular chain affects the surrounding economy. Increasing competition due to globalisation incentivises firms to outsource non-core activities to low-cost suppliers, usually located in countries that specialise in capabilities instead of wholly manufactured products (Kaplinsky and Morris, 2001). Extractive industries have adapted to this pattern and in particular in sub-Saharan Africa, it makes sense to contract suppliers in close proximity to the site of operation – as far as possible – because of challenges with customs clearance and in-country transport. Further to that, no two resource deposits are identical, meaning that local knowledge is a considerable competitive advantage.

The optimistic notion advanced by Morris et al. (2012) against this backdrop is that beyond the apparent direct effects on local development (contracting of local labour and suppliers), outsourcing to local companies or transnational ones with a local presence triggers linkages that reinforce themselves:

- The probably most obvious type of linkages occurs in production. The exploration and extraction of resources requires various inputs. Extracted resources have to be processed. Related activities such as security, transport and the maintenance of equipment also fall into this category. All these activities are likely to benefit from process and product upgrading, once integrated into GVCs. Functional upgrading may also happen.
- Horizontal linkages are about skills that a firm gains in sector A and that enable it to expand into sector B – in other words, inter-chain upgrading. Following Bidaurratzaga et al. (2019), I add externalities such as new roads built for extractive industries that can be used by everyone and thus reduce transport costs in general.
- Consumption linkages result from income earned in the extractive sector. It boosts overall demand for products and services, most apparently through the rising purchasing power of the local labour force.
- Fiscal linkages comprise taxes on corporate and private income as well as royalties that lead firms pay. The money a state obtains this way can be used to facilitate development in other sectors or increase national wellbeing through social spending.

For all linkages, development is a matter of breadth – the proportion of local inputs – and depth, meaning how thick linkages are in terms of local value added.[2]

2.2. Political downsides of resource abundance

While GVC analysis and in particular the concept of linkages are helpful to assess the economic impact of extractive industries on resource-rich countries, corresponding research pays little attention to political conditions. Morris et al. (2012) elaborate on policies, stressing their decisive role with regard to making the most of a country's resource endowment, but for them policies appear to be about sound administrative decisions taken by governments to facilitate linkages. Corruption and self-enrichment are not addressed (see also: Kaplinsky et al., 2011a, b).

The resource curse literature that focusses on political issues has become vast since the beginning of this century, now comprising hundreds of articles and books (for an overview, see: Gochberg and Menaldo, 2016). As Ross (2015) summarises, the state of the art suggests that in particular oil abundance makes authoritarian regimes more durable. It increases certain types of corruption and triggers violent conflict in low and middle-income countries, especially if resources are located in the territory of marginalised groups. Ross (2012) presents statistical data on corresponding correlations and further elaborates on related causal mechanisms.

Not all these risks apply to Namibia. Oil and gas is mainly searched on the sea and the coastal strip is sparsely populated, with large areas being completely uninhabited. Namibia is, moreover, a multi-party democracy with robust protection of civil liberties (Freedom House, 2018). The Global Peace Index, which covers political stability, violent demonstrations and access to light arms, among numerous other variables, indicates that Namibia is one of the few mostly peaceful African countries, reaching a global ranking similar to Greece and Serbia (Vision of Humanity, 2020). In the 2019 general election, opposition parties made considerable gains. It therefore makes sense to leave authoritarian rule and violent conflict aside, concentrating on corruption and institutional decay instead.

Institutions are decisive in mediating the impact of resource

[2] The relevance of these criteria is demonstrated, for instance, by a comparison of the broad and thick linkages of South Africa's mining industry (Kaplan, 2012; Walker and Jourdan, 2003), on the one side, and oil extraction in Angola, on the other. The latter is linked to the local economy merely through the provision of semi-skilled labour (Teka, 2012).

abundance. Robinson et al. (2006) argue that weak institutions allow resource booms to dissipate through excessive public employment and patronage, whereas institutions that foster accountable and competent governance turn resource abundance into a blessing, as demonstrated by Botswana (Pegg, 2010) and Norway (Engen et al., 2012; Røed Larsen, 2006), among a few other cases of successful resource-based development.[3] This argument can be turned around: resource-rich countries are less likely to create and/or maintain institutions conducive to development. Resource booms tend to lead to institutional decay in countries that have relatively functional institutions. In countries where such institutions do not exist, their creation becomes more difficult.

The reason for this is that resource abundance confers wealth onto the political elite. Resource wealth allows politicians to avoid accountability, pacify dissent and resist modernisation (Isham et al., 2005). It induces them to expand the public sector, bribing voters by offering well-paid but unproductive jobs, inefficient subsidies and tax handouts (Robinson et al., 2006). Patronage to pay off political supporters prevails over encouraging the creation of wealth by improving the quality of societal institutions (Auty, 2007). In this spirit, Sala-i-Martin and Subramanian (2003) find that corruption as well as granting of import licenses and other privileges to cronies – rather than Dutch disease effects – have ruined the Nigerian economy.

A common feature of the publications referred to in the previous paragraphs is that they deal with countries that already extract and export resources, usually in large quantities. As Ross (2015) summarises, typical ways to operationalise resource endowment – and thus define resource-rich countries – include the quantity of production and its value, the rents that production generates (either in total or, more narrowly, in terms of government revenues) and the share or value of resource exports. With regard to oil and gas, none these indicators applies to Namibia because the resource boom has not materialised yet. However, it appears that even mere expectations can lead to resource curse effects. Auty points out that the neglect of non-resource sectors – a key feature of the Dutch disease – results 'in part from over-optimistic expectations for both mineral prices and [resource-based industry] output' (1993: 20). Karl and Gary assert that 'oil booms raise expectations', incentivising 'governments [to] dramatically increase public spending based on unrealistic revenue projections' (2004: 36).

Resource curse effects as a result of an expected bonanza – instead of a real one – have been observed in countries with weak institutions. In an article on Madagascar and São Tomé e Príncipe, Frynas, Wood and Hinks find that 'expectations of future resource booms […] assume material forms, given that foreign investors are willing to pay handsomely for exploration rights even without any tangible proof that resources are commercially viable' (2017: 243). In São Tomé e Príncipe, such bonuses were paid by oil majors like Chevron and Sinopec in the first decade of this century, reaching up to 43 per cent of the country's annual gross domestic product. Already before the first exploration licenses were signed, government spending had increased considerably – apparently in anticipation of a resource boom that never materialised. The island state also suffered from corruption and self-enrichment, resulting from 'the lure of quick and easy money' (Brigaldino, 2005: 186). Rent-seeking behaviour increased, for example through foreign scholarships paid by the government, which were meant to facilitate future political power (Vicente, 2010).

It makes sense that countries that are already institutionally weak are hit hard by expected resource booms. Namibia's institutions, conversely, perform quite well by African standards. As noted above, Namibia is a functional multi-party democracy. Civil liberties are protected. It is the fourth-best performer among 54 states from the continent on the Ibrahim Index of African Governance, reaching particularly high values in the categories of security and rule of the law, and participation, rights and inclusion (Ibrahim Foundation, 2018). On the World Banks's (2018) Worldwide Governance Indicators, Ghana and Namibia are the only African countries with hydrocarbon resources that perform relatively well.

Nonetheless, it appears worthwhile to complement the GVC analysis with an assessment of corruption and institutional decay. Some other downsides of expected and de facto resource booms – resistance to modernisation, for instance – are not addressed here because they are difficult to operationalise. I also do not elaborate on features beyond politics such as prostitution, real estate speculation and environmental risks associated with the oil and gas sector.

3. Empirical analysis

3.1. Input–output structure and territoriality

The oil and gas sector consists of down-, mid- and upstream activities. Upstream includes searching for oil and gas fields, drilling wells and operating these wells. Midstream is about transport, storage and wholesale marketing of crude and purified/refined products. Downstream comprises refining crude oil and purifying raw natural gas, and marketing and distribution of consumer products. Until today, no oil and gas findings have been made in Namibia, with the exception of the Kudu field.[4] Thus, upstream activities are limited to searching for resources. There are obviously petrol stations in the country but beyond that, Namibia lacks a down- and midstream sector. Fig. 1 shows the sector's input–output structure and territoriality.

Since having a representation in Namibia is legally mandatory for companies that hold exploration licenses and service providers that operate there for more than 90 days, several important firms involved in the upstream sector have (or had) offices in Windhoek, the capital – Schlumberger and Transocean, for example. Oil majors such as BP and Repsol were there and left because drilling did not lead to commercially viable findings. As noted, Shell and Tullow are the best-known companies presently active in Namibia.

Besides legal obligations, having an office in Windhoek is important at least for those that pursue a long-term strategy. It enables them to network with the state-owned oil company Namcor, the state-owned electricity provider Nampower and various ministries, as the country director of an oil major explained. Being in Windhoek allows him to 'make the country conducive to doing business'. Further to that, he pointed out that 'the [potential] investments are so large […]. You really need to understand how decisions are made here, how transparent it is. Are there any corruption issues? And that is why having someone on the ground […] helps a lot'.[5] At an early stage of exploration, upstream firms tend to have very small in-country representations, though. When I met the interviewee, he shared a spacious but largely empty office with a financial analyst and an office manager – the only other employees of his firm in Namibia.

Another feature characteristic of the territoriality of oil and gas GVCs derives from the fact that early stage exploration is about seismic surveys and the analysis of geological data. Oil field operators, which are

[3] In addition to institutions, learning and innovation are critical for turning resource abundance into a blessing (Kurtz and Brooks, 2011; Stijns, 2005). Maloney (2007) stresses that low innovative and learning capacities – combined with inward-locking industrialisation policies – hampered resource-based development in Latin America throughout the twentieth century. Finland, Sweden and the United States, conversely, managed to move from resource extraction to related manufacturing. They hence industrialised not despite but because of their resource endowment (Blomström and Kokko, 2007; Wright and Czelusta, 2007). In the conclusion of this article, I argue that the oil and gas sector – with its high entry barriers – cannot induce such dynamics in Namibia.

[4] The Kudu field – located in south Namibia, 170 km off the coast – contains 1.4 trillion cubic feet of proven reserves (A Barrel Full, 2015), which is too little to justify investments by oil majors that would market the output globally.

[5] Interview with an upstream lead firm, Windhoek, 18 August 2016.

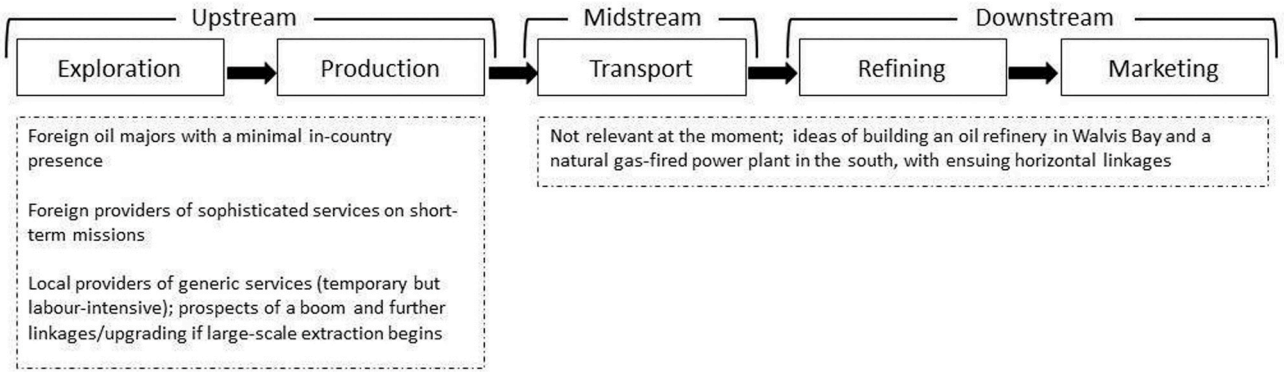

Fig. 1. Input–output structure and territoriality of Namibia's oil and gas sector. Source: Author's own draft.

the lead firms and fully control the respective value chains, rely on their experienced international teams to study such data. These experts work remotely, usually from Europe or North America. The operators contract transnational enterprises to carry out the related surveys. The latter also work with their own crews and equipment. As the just mentioned interviewee explained, there is not sufficient local expertise, but Namibians are brought in for generic side services such as accommodation, catering and transport. Such production linkages are of limited and temporal nature because 'Namibia is not booming. It's frontier activity'. At the time of the interview, a vessel for seismic surveys came in 'from time to time', staying for two or three months.[6]

Interviewees in Lüderitz – a small port in south Namibia – confirmed that whereas offshore surveys have always been carried out by foreign companies that bring their own crews, equipment and ships, local firms get involved through services such as cleaning, waste disposal and the like. These services are labour-intensive, meaning that they are of considerable relevance to the town.[7] They generate important consumption linkages. Yet even for hardly sophisticated tasks, there are constraints. For instance, during seismic surveys, support vessels are needed to chase away fishing boats and transport supplies such as fresh water. The support vessels are not Namibian but come from South Africa because the domestic market cannot provide. Namibian companies store chemicals and pipes in Lüderitz and Walvis Bay. They also take expats from the international airport in Windhoek to these harbours. Still, already transporting pipes to offshore locations is impossible with the ships available in the country, as an interviewee from another firm that owns exploration licenses explained.[8]

In exceptional cases, Namibian firms manage to contribute to exploration as more than suppliers of generic services, which requires having specialised employees as well as sophisticated equipment and vehicles. The director of such a firm suggested that 'we can rival most [foreign upstream service providers]. We are not Baker Hughes […], but the people we have are quite well-trained and well-experienced'. He added that 'there are […] no real competitors [for us]', with the exception of foreign ones that have established a presence in Namibia.[9]

At the current state of development, even opportunities for individuals are severely limited. 'You can't just say "Let's come up with a large UNAM programme" and have 30 technical staff [each year] because what are they going to do … in Namibia?', an interviewee pointed out.[10] UNAM – the University of Namibia – does have a programme dedicated to the oil and gas sector. It was introduced shortly before the decline of the oil price in late 2014. Its output has remained low, with three students of the first cohort graduating in 2017.[11]

In addition to that, Namibia has established a so called Petrofund, which is financed by all companies that acquire exploration licenses. The fund awards scholarships to Namibian citizens who study abroad or at UNAM, specialising in oil and gas. It sponsored three students in 2015 and five in the following year. Its main objective is to ensure that 'Namcor is fully capacitated' in terms of skilled staff, but a leading executive of the fund acknowledged that it is challenging to find employment for all alumni because the sector has not become as dynamic as expected.[12] Nevertheless, the Petrofund is a good example of fiscal linkages: extractive industries generate additional tax income and the state uses this money in a sensible way, preparing public institutions for a potential boom.

3.2. *Upskilling and linkages*

Besides professionals trained at an academic level, the oil and gas sector requires personnel with technical skills, for example welders. Across several interviews, the consent was that scarcity of people in Namibia with such skills will become a challenge in case major deposits are found.[13] At the same time, this is an opportunity. For foreign investors, it makes sense to train local employees and also local suppliers, which implies production linkages in the form of process and product upgrading, perhaps also leading to functional upgrading and even horizontal linkages/inter-chain upgrading. 'There is absolutely no interest for any company […] to fly in expats and have lots and lots of expenses', an interviewee said. He however admitted that small exploration companies, which seek to find resources and then sell the corresponding licenses, have a short-term perspective and do not, therefore, engage in skills transfer.[14]

Despite the early stage of exploration, foreign companies already train local staff. Another interviewee pointed out that 'when we were drilling, [there were] some young guys who [had] been working in the fishing industry. [It] is less rigorous […] than the oil industry. We sent […] about 15 to Cape Town for training. We paid for them'.[15] Training of Namibians at a much larger scale depends on the country moving from exploration to extraction. 'We don't have well-skilled or trained – for example – petroleum engineers. So when you get to the discovery, you need those people. […] That's where you bring in [expats] and also give some training to [locals]', a third interviewee explained.[16] Later,

[6] Interview with an upstream lead firm, Windhoek, 18 August 2016.
[7] Interview with a freight forwarder, Lüderitz, 31 August 2016.
[8] Interview with an upstream lead firm, Windhoek, 16 August 2016.
[9] Interview with an upstream service provider, Walvis Bay, 22 August 2016.
[10] Interview with an upstream lead firm, Windhoek, 18 August 2016.
[11] Interview with a professor at UNAM, Windhoek, 15 August 2016.
[12] Interview with the Petrofund, Windhoek, 17 August 2016.
[13] Interviews with two upstream lead firms, Windhoek, 16 and 18 August 2016, with an upstream service provider, Walvis Bay, 22 August 2016, and with a maritime service provider, Walvis Bay, 24 August 2016.
[14] Interview with an upstream lead firm, Windhoek, 18 August 2016.
[15] Interview with an upstream lead firm, Windhoek, 16 August 2016.
[16] Interview with an upstream lead firm, Windhoek, 17 August 2016.

local employees will only be supervised by expats. This means that consumption linkages may increase considerably in the near future. The same applies to horizontal linkages, with skilled Namibians boosting the competitiveness of sectors other than oil and gas.

Hydrocarbon-rich countries often mandate that foreign enterprises contract and upskill local labour, which is a controversial topic among policy makers and researchers. Namibia's National Energy Policy stresses the need for job creation, enterprise and skills development, including transfer of technology, and indigenous ownership in the oil and gas sector (Ministry of Mines and Energy, 2017). However, the country does not, currently, have corresponding legislation on local content. Exploration licenses are negotiated on a case-to-case basis and the resulting agreements between the state and foreign oil field operators include obligations on employment and training programmes as well as the use of indigenous products and services. Namibian-owned companies usually obtain a 5-per cent interest in the licenses, in addition to a 10-per cent interest held by Namcor (Titus, 2019).[17]

Two issues appear noteworthy in this regard. First and already hinting at political downsides of resource abundance, it is difficult to see how efforts to increase Namibian ownership would necessarily contribute to development in the country (unless one assumes that Namibian owners re-invest all revenues domestically). Second, many transnational companies seek to hire and train local staff because doing so is much cheaper than working with expatriate labour. State interference is not needed for all domains where one can realistically expect indigenous skills sets. Forcing foreign investors to train Namibians for highly specialised tasks, meanwhile, may be counterproductive because such professionals lack employment opportunities in the country, as noted above.

Business opportunities are not limited to domestic activities. In particular the harbour of Walvis Bay has benefitted from servicing Angola and West Africa, with rigs and ships being repaired there. A leading executive of the Walvis Bay Corridor Group, which promotes foreign investment, noted that Namibia offers a 'good working environment for the business community'.[18] Another interviewee argued that 'in Angola, there is a lot of business [for us] because [the clients] come here. [Namibia] is more safe […] and also more stable'.[19] Others considered a much larger market for maritime services, saying that there are no competitive ports up to Las Palmas on the Canary Islands.[20]

Further to maritime engineering, Walvis Bay handles goods destined for Angola. Angola's ports are notoriously congested and unreliable, whereas Walvis Bay performs exceptionally well in this regard. An interviewee complained about delays of up to six months in Luanda – Angola's largest port – and the loss of goods there. He added that 'Namibia is Africa for beginners. It's easy here. It's like Europe … almost'.[21] On the World Bank's (2015) Logistics Performance Index, Namibia ranks 79th globally, clearly ahead of Angola (139th), Cameroon (148th), Equatorial Guinea (156th), Gabon (143rd), Ghana (88th), Nigeria (90th) and the Republic of the Congo (125th), meaning the countries further north that matter to the oil and gas sector.

Maritime engineering and logistics are production linkages that interestingly result from the sector booming elsewhere. In Namibia, these business activities also generate horizontal linkages: the expansion of the port facilities in Walvis Bay and the rehabilitation of transport corridors to the neighbouring countries (Windhoek Observer, 2019). They come along with consumption and fiscal linkages: the income of people working at the port of Walvis Bay and the taxes paid by companies there.

Even though Namibia does not have a significant downstream sector at present, some related opportunities have been discussed. A power station might be built in the south, using natural gas from the Kudu field and generating considerable horizontal linkages by providing electricity to the country. At least according to an interviewee from the Ministry of Mines and Energy, there are also prospects for tying future oil extraction to processing. Until today, several firms remain interested in setting up a refinery in Namibia and they also consider importing crude oil. They have not provided any feasibility studies to the ministry, though (New Era, 2019b). The interviewee furthermore mentioned framework agreements with the government of Nigeria – signed in order to build a privately financed refinery in Walvis Bay that would be supplied with Nigerian oil at prices below market levels (see also: Windhoek Observer, 2014). However, there is no public information available on these agreements and the interviewee added that 'nothing has materialised'.[22]

3.3. Public institutions and self-enrichment

In spite of what the resource curse literature suggests, the expected oil and gas bonanza has not led to excessive public spending in Namibia. The World Bank (2019) praises the government for a fiscal consolidation process that started in 2016. In its latest economic outlook for Namibia, the African Development Bank (2020) points out that the fiscal deficit narrowed from a peak of 9 per cent of the gross domestic product in 2016 to 5.4 per cent in 2018. Before the Covid-19 crisis, Namibia's budget deficit was projected to average around 5 per cent of the gross domestic product in the course of the coming years. Public employment, meanwhile, has reached unsustainable levels, with the public wage bill absorbing half of the state's revenues – about 70 per cent if state-owned enterprises are included (Namibian, 2018). Yet, unlike in a country where future resource income is expected to compensate for such expenses, the Namibian government has at least announced to reduce the public wage bill (Namibia Daily News, 2019; New Era, 2019a).

In their assessment of whether Namibia's institutions are prepared to turn large-scale resource findings into a success story for the country, Polus, Kopinski and Ticholiz conclude that 'there is no […] evidence that might indicate that […] with the discovery of oil, things might turn ugly. On the contrary, if oil production ultimately gets underway, Namibia might be better off, as it will start with a relatively good institutional set-up that has been forged over the course of decades' (2015: 39). As noted above, Namibia has more functional and more stable institutions than most African countries. Critical mechanisms to benefit from the oil and gas sector – the Petrofund and the dedicated programme at UNAM – have been implemented.

Still, I disagree with the conclusion that Polus, Kopinski and Ticholiz draw. Namibia suffers, to a certain extent, from institutional decay and self-enrichment. In 2004, when there was initial speculation about finding major oil and gas deposits, the government decided to award exploration licenses on a first-come, first-served basis. What apparently happened is that a handful of politicians, their family members and close friends obtained such licenses. The Mail and Guardian (2014) reports of a 'get-rich-quick scenario', with licences being acquired by well-placed Namibians for a fee of NAD 30,000 – equivalent of USD 2,000 at that time. The licenses were then sold on to foreign companies for millions.

An overview of principal beneficiaries is impressive. To begin with, there is Heindrich Ndume, son-in-law of former president Hifikepunye

[17] There was a controversial debate about the New Equitable Economic Empowerment Framework four years ago. The framework would have mandated 50-per cent management control and 25-per cent ownership by non-white Namibians for new businesses. Eventually, it was not applied to the oil and gas sector. According to two interviewees from upstream lead firms (Windhoek, 16 August 2016), it would have led to the immediate withdrawal of their companies from Namibia.

[18] Interview with the Walvis Bay Corridor Group, 17 August 2016.

[19] Interview with a maritime service provider, Walvis Bay, 24 August 2016.

[20] Interviews with three maritime service providers, Walvis Bay, 22 and 24 August 2016.

[21] Interview with a maritime service provider, Walvis Bay, 23 August 2016.

[22] Interview with the Ministry of Mines and Energy, Windhoek, 17 August 2016.

Pohamba. Ndume was one of the first Namibians to obtain exploration licenses. He later sold his own firm to a British investor for USD 47 million. Knowledge Katti – a personal friend of Hage Geingob, who is Namibia's current president – started a business with an exploration license in 2006. Shortly afterwards, Katti brought Pendukeni Iivula-Ithana, minister of home affairs at that time, into another company that he owned. That company obtained three licenses. Katti sold his first company to a Canadian investor in 2008 for a cash payment of USD 1.5 million. The other firm was purchased by a Brazilian investor in 2011 for USD 781 million. The gains for Katti and his partners are estimated to amount to USD 90 million. Another beneficiary is Helmut Angula. He was deputy minister of energy, headed the National Planning Commission and now serves as a non-executive board member of the license holder Eco Oil & Gas. To add two more examples, Dantagob Gurirab – son of former prime minister Theo-Ben Gurirab – had a licence. So did Frans Mushimba, son of a brother-in-law of former president Sam Nujoma (Mail and Guardian, 2014).

This tremendous self-enrichment has been possible because of a lack of regulation, allowing for secretive deals between locals and foreign investors. A report by the IPPR criticises that licences are allocated by a small group of officials under a non-statutory committee headed by a petroleum commissioner, who has massive influence over these decisions. Further to that, the Namibian law is imprecise on conflicts of interest by public employees (and even more so on how to avoid them). State officials – politicians and public employees – are not required to declare their assets. Hence, it is possible for them to receive a licence and sell it in a multi-million deal without the fact ever being made public (Hopwood, 2013). A consultant hence argued that licenses have been granted in a process that is not transparent at all.[23] A different interviewee claimed that these deals make a very small number of Namibians rich, with the broader society not benefitting in any way.[24] In all fairness, it must be said that the government recognises these problems and there has, for several years now, been a debate on how to stop the practice of self-enrichment through quick re-selling of exploration licenses (Namibian, 2014, 2015).

The IPPR report also raises concerns about foreign investors being forced to form joint ventures with Namibians, which is justified as a means of black economic empowerment. The report states that oil and gas activities 'are dominated by well-established foreign companies partnering with locals who [–] in most cases if not all the time [–] lack the necessary expertise and capital but are seen to have political connections or influence' (Hopwood, 2013: 21).

A database compiled by the IPPR – reproduced and slightly expanded in Annexe 1 and 2 – is revealing in this regard. It contains information on all exploration licenses. Among the license holders, there are only two well-known oil majors, namely Shell and Tullow. Independent producers – Enigma Oil & Gas, Maurel & Prom and Serica Energy, for example – as well as exploration companies such as Impact Oil & Gas, Murphy Oil and Rhino Resources have obtained licenses too. All these firms have a track record in hydrocarbon exploration. However, most licenses are held by businesses that neither have a website nor, in many cases, a postal address that can be found online. If one includes minority shareholders, this group becomes even larger.

The lack of such information does not necessarily mean that these are briefcase firms, founded for the sole purpose of self-enrichment by politically connected Namibians, but it raises such concerns. It is practically impossible for a start-up to acquire the expertise and financial capacities needed to carry out exploration, even less offshore. Already basic reconnaissance is a demanding task. This makes it reasonable to conclude that the vast majority of the current license holders and minority shareholders will either benefit passively or earn much more by re-selling.

In particular the case of Grisham Assets, an obscure firm registered on the Virgin Islands with no track record whatsoever, is interesting. Grisham Assets has already re-sold some of its assets to a foreign exploration company, apparently without having made any findings on its own. Adding another example, there is a minor shareholder called Premier Oil & Gas. The only information available on this firm derives from the Facebook and LinkedIn sites of its chief executive officer, who claims to hold this position in half a dozen enterprises.

4. Conclusion

The objective of this article was to assess the prospects and pitfalls of Namibia's oil and gas sector. For this purpose, I referred to the GVC approach, in particular the concept of linkages, and complemented it with the resource curse literature. Because Namibia is at an early stage of oil and gas exploration, oil majors and providers of sophisticated upstream services have a minimal in-country presence. There are almost no local firms that could carry out services such as seismic surveys. The domestic market cannot even provide for somewhat specialised tasks – for instance those done by supply ships.

Namibian firms have, however, managed to plug into oil and gas GVCs as providers of generic services and these are labour-intensive, suggesting considerable consumption linkages. Given that foreign lead firms are interested in upskilling their employees and local suppliers, there are also production linkages that may involve process, product and perhaps even functional upgrading. All corresponding effects are nascent at present, but they will receive a major boost if large-scale extraction begins. The same applies to horizontal linkages – both in terms of inter-chain upgrading and with regard to externalities such as electricity for the entire country and transport corridors to neighbouring countries. What is more, the government has taken some sensible steps to prepare public institutions for an oil and gas bonanza. The Petrofund plays an outstanding role in this regard, being complemented by a programme at UNAM that is dedicated to hydrocarbons.

Many of the political downsides of resource abundance identified in the corresponding literature do not apply to Namibia. There is no excessive spending by the state. Public employment and the related wage bill raise concerns, but the government has announced that it will fix this issue. Namibia is a multi-party democracy with guaranteed civil liberties and it performs well on indexes of governance. However, the licensing process, which began in 2004, has revealed institutional shortcomings. Self-enrichment by politically connected Namibians appears to be far spread, depriving the state and the wider society of important fiscal linkages.

These findings are also telling from a theoretical perspective. The article showed that institutions are critical to mediate the impact of resource booms. Namibia does not perform as bad as one might fear and this can be related to its relatively robust institutions. Still, the causal relationship of institutions and resource abundance does not go in one direction only. On the contrary, expectations of an oil and gas bonanza have put Namibia's institutions under considerable pressure, partly causing their decay, with self-enrichment being a significant and yet-to-be-solved problem. Table 1 summarises these findings.

Regardless of the fact that many of the opportunities that the oil and gas sector holds for Namibia are future prospects that depend on large-scale extraction, there is another issue that merits attention. At present, Namibian firms manage to provide only the most generic services one can imagine: cleaning, basic transport, non-toxic waste disposal and the like. Some may succeed in upgrading their business activities and the role of Walvis Bay as a logistics and maritime repair hub shows that this is possible. However, the oil and gas sector is extremely intensive in capital and technology. Entry barriers to more sophisticated and hence more lucrative segments of the corresponding GVCs could hardly be higher. Hydrocarbons will not, therefore, allow Namibia to have its own lead firms and sophisticated service providers. Namibian firms will not become comparable to Chevron or Halliburton. In terms of GVC

[23] Interview with a consultant, Windhoek, 15 August 2016.
[24] Interview with a consultant, Windhoek, 15 August 2016.

Table 1
Namibia's oil and gas sector from the GVC perspective.

Dimension	Findings
Input–output structure	Opportunities for generic services in the upstream sector; considerable increase expected in case of large-scale extraction; vague downstream prospects
Territoriality	Oil majors and providers of sophisticated services with minimal in-country presence; labour-intensive services in Lüderitz and Walvis Bay
Governance	Full control by lead firms/oil majors
Institutional context	Local content obligations on a case-to-case basis; sensible use of taxes and royalties to prepare public institutions; self-enrichment by the political elite
Production linkages	Upskilling of local suppliers leads to process and product upgrading, potentially also to functional upgrading
Horizontal linkages	Kudu project (electricity), refineries and Walvis Bay Corridor (transport); possibility of inter-chain upgrading due to upskilling
Fiscal linkages	Petrofund (see: institutional context); increased tax income; self-enrichment by the political elite
Consumption linkages	Increased purchasing power because of labour-intensive services, including logistics and maritime services provided for Angola

Source: Author's own draft.

governance, they will remain mostly powerless.

This does not mean that one should abandon hydrocarbons, but it is worthwhile to think about using the impulses that oil and gas extraction generates to push other sectors, preferably those with lower entry barriers. Doing so is certainly challenging because it means overcoming some economic and political hurdles associated with the resource curse. Yet, if Namibia manages to use oil and gas windfalls to diversify the economy, it will avoid the fate of other hydrocarbon-rich countries in Africa.

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CRediT authorship contribution statement

Sören Scholvin: I hereby declare that I am the sole author of this paper. I have been responsible for all issues usually listed under CRediT statements, as far as they apply in this case.

Annexe 1. Holders of exploration licenses

Company	Description
ACREP Energy	Postal address of Angolan parent company known; no information on Namibian branch
Alumni Exploration	Postal address in Namibia known; no further information
Amis Energy	No information
Cowan Petoleo & Gas	Postal address of Brazilian parent company known; no information on Namibian branch; re-sold licenses to Murphy Oil (see below) and to OMV Exploration & Production (an Austrian independent producer)
CSG Energy	Postal address in Namibia known; no further information
Eco Oil & Gas	Exploration company with assets in Guyana and Namibia; postal address in Namibia known; website available; re-sold licenses to Azinam (a Namibian independent producer)
Enigma Oil & Gas	Independent producer acquired by Chariot Oil & Gas (an independent producer from the UK); postal address in Namibia known; website available
Frontier Resources	Registered in the UK and apparently dissolved in 2017
Gazania Investment	Namibian; no further information
Global Oil & Gas Explorers	Namibian; no further information
Grisham Assets	Registered on the Virgin Islands; no further information; re-sold licenses to Impact Oil & Gas (see below)
Hydrocarb	Postal address in Namibia known; largely empty website that does not provide contact information except for an email address
Impact Oil & Gas	Exploration company with assets in Namibia and South Africa; postal address of British parent company known; website available
Jupiter Petroleum	Postbox in Namibia known; apparently acquired by Global Petroleum (an Australian exploration company)
Kayuko Universal	Registered on the Virgin Islands; no further information
Lekoil	Independent producer with assets in Namibia and Nigeria; postal address of Nigerian parent company known; website available
Leopard Investments	Namibian; no further information
Maurel & Prom	Independent producer with assets worldwide; postal address of French parent company known; website available
Methacarb Investments	Namibian; no further information
Murphy Oil	Exploration company with assets worldwide; postal address of parent company in the US known; website available
Nabirm Energy	Indigenous exploration company; postal address in Namibia known; website available
Namcor	Namibia's state-owned oil company
Oranto Petroleum	Exploration company with assets in Africa; postal address of Nigerian parent company known; website available
Reconnaissance Energy	Independent producer with assets in Botswana and Namibia; postal address in Namibia known; website available
Regalis Petroleum	Registered on the Virgin Islands; no further information
Rhino Resources	Exploration company with assets in Africa; postal address in Namibia known; website available
Serica Energy	Independent producer with assets worldwide; postal address of parent company in the UK known; website available
Shell	Oil major; postal address in Namibia known; website available
Tse Oil & Gas	Imprecise postal address in Namibia known; no further information
Tullow	Oil major; postal address of parent company in the UK known; website available
Unimag Trading	Swiss; no further information
Westbridge Energy	No information
Windfire Petroleum	Canadian; no further information

Source: Information available online at: https://namibia.transparentoil.org

Annexe 2. Holders of minor assets in exploration licenses

Company	Description
Astronomy Oil & Gas	No information
Bronze Investments	Australian; no further information
Camelot Investment	Namibian; postal address in Namibia known; no further information
Energulf	Exploration company; largely empty website that does not provide contact information except for an email address
Gravity Mining & Investments	No information
Hallie Investments	Namibian; postal address in Namibia known; no further information
Ignitus Oil & Gas	Namibian; no further information
Indigenous Energy	No information
Korres Investment	No information
Kunene Regional Development Trust	No information
Livingstone Mining Resources	Namibian; postal address in Namibia known; no further information
Luganda Trading	No information
Luxury Investment	Namibian; postal address in Namibia known; no further information
MBIA Energy	No information
Ozondje Petroleum	Namibian; postal address in Namibia known; no further information
Pancontinental	Exploration company with assets in Australia and Namibia; postal address of Australian parent company known; website available
Paragon Oil & Gas	Namibian; website does not have a valid security certificate; no further information
Premier Oil & Gas	Namibian; Facebook and LinkedIn site of the CEO available (who claims to be the CEO of half a dozen firms)
Quiver Oil & Gas	Namibian; empty Facebook site available; no further information
Riviera Mina	Registered on the Bahamas; no further information
Twakumua Mining & Exploration	Namibian; no further information

Note: Some of the companies listed in annexe 1 are also holders of minor assets in licenses held by others.
Source: Information available online at: https://namibia.transparentoil.org

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