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Processes of Spatialization  
under the Global Condition

Markus Sattler,  
Marian Brainoo  
& Thilo Lang

**Innovative Companies  
in ordinary places –  
'peripheral' perspectives on  
the global knowledge economy  
beyond the global north**

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# Innovative Companies in ordinary places – ‘peripheral’ perspectives on the global knowledge economy beyond the global north

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## Table of content

<b>1</b>	<b>Introduction</b>	<b>4</b>
<b>2</b>	<b>The global knowledge economy as an imagination and policy concept</b>	<b>6</b>
2.1	The global economy as knowledge economy	6
2.2	Geopolitics of the global knowledge economy, power and access to knowledge	7
2.3	The GKE as a social-technical imaginary	9
<b>3</b>	<b>Understanding inequalities in the global economy: a peripheral perspective</b>	<b>11</b>
3.1	Global divisions of labour, core-periphery relations and colonial legacies	11
3.2	Knowledge, trans-national corporations and innovation networks	12
3.3	Trade, FDI and GPNs	13
3.4	World City Networks	13
3.5	Integration in the global economy: firm innovation in ordinary places beyond the Global North	16
<b>4</b>	<b>Diverse and postcolonial perspectives on the innovative firm in global economies</b>	<b>18</b>
4.1	Diverse Economies, value and solidarity-based entrepreneurship	18
4.2	Postcolonial and decolonial perspectives on innovation	20
4.3	Open questions	21
<b>5</b>	<b>Introducing Central Asia / South Caucasus and Sub-Sahara Africa</b>	<b>23</b>
5.1	Central Asia and the South Caucasus	23
5.2	Sub-Saharan Africa (SSA)	27
<b>6</b>	<b>Conclusions: Firms’ spatial ordering in multi-scalar institutional contexts</b>	<b>32</b>
6.1	Situated Knowledge and subaltern positions	32
6.2	Spatial ordering through firm activities	34
	<b>Acknowledgements</b>	<b>38</b>
	<b>References</b>	<b>38</b>

# 1 Introduction

In the context of the DFG Collaborative Research Centre “Processes of Spatialisation under the Global Condition”, the project “Innovative technology enterprises at unusual locations in Central Asia and Africa” analyses processes of spatialisation, spatial practices and networks of internationally successful, innovative and locally rooted enterprises. Our research is about the emergence and development of these companies in the context of dominant imaginations of the so-called global knowledge economy (GKE) and the inherent spatial order of ‘core’ and ‘peripheral’ regions at global scale (cf. Roberts 2009). Empirically, the project focusses on the spatial agency of innovative companies as economic actors in countries beyond the Global North and in regions outside of the large agglomerations which are often referred to as ‘hot spots’ of the global economy.

In our project, we aim to analyse the relevance and impact of imaginations of the global economy as discursively produced spatial orders and the strategies of firms to re-produce, re-invent or challenge those orders. We suggest that the power-geometries inscribed in to-date core-periphery relations at multiple scales are a crucial factor when it comes to innovation activities and the development of transnational enterprises in ‘peripheral’ locations beyond the Global North (cf. Vanolo 2010). By developing a conceptual framework that allows for more diverse readings of the globalised economy and acknowledging recent conceptual progress in the geographies of innovation literature, the project aims to employ a relational economic geography perspective based on viewpoints from the Global South and the Global East. Central to our project is a case-study based analysis of spatial aspects of innovation activities in locally rooted and internationally successful enterprises in ‘peripheral’ locations in Central Asia / South Caucasus and Sub-Saharan Africa.

Based on a long-standing critique, we contend that economic geography should be more open to such ordinary places beyond the well-researched ‘superstar cities’ and economically successful city-regions. In one important aspect, the notion of ‘ordinary cities’ can be seen as a response to the World City Network approach, although more recently, World City scholars have conversed with the Ordinary City approach to explore some common grounds (Derudder and Taylor, 2020). Inspired by the Diverse Economies approach, Robinson coined the term ‘ordinary cities’ due to her dissatisfaction with a clear-cut differentiation between cities ‘here’ and ‘there’ of World Cities vs. non-World Cities (Robinson, 2006). In their stead, Robinson labelled the whole universe of cities as ‘ordinary’ notwithstanding their function in the global division of labour. However, ‘ordinary cities’ are not meant to be a totalising meta-discourse of cities. Quite to the contrary, Robinson proposes ample space to discuss difference without proposing conceptually pre-established hierarchies. How difference is organised rather follows an empirical trajectory that allows non-World Cities to be incorporated into the analysis beyond being relegated to a *relational victim* of World Cities. It thus becomes possible to view economic actors within the so-called ‘periphery’ as co-producing the global economy and not only as the place where exploitation occurs. Yet, caveats of this approach must be taken into account as well: Whereas the ‘periphery’ label is fruitful to highlight the unevenness of economic development, it tends to subscribe to the same capitalist logic that it seeks to debunk. The ordinary city discourse, however, risks to lose sight of power relations that the core-periphery model visibilizes. Yet, we still contend that Robinson’s explicit critique of discourses of developmentalism and modernity is relevant for defining success anew, and to transcend a discourse that overtly relies on mechanisms of power and domination in the global economy. Although we want to retain Robinson’s basic tenets, we prefer to discuss ordinary *places*. This allows us a) to employ a broader non-city-centric angle on the economy and b) to even better highlight the intra-connectivity that is at the root of both the World and Ordinary City approaches. Massey’s influential intervention that ‘place’ has probably always been about connections to ‘elsewhere’ (Massey, 1994, p. 5) makes it thus a more suitable contender.

In the framework of our project, we also want to highlight the logic of comparison that Robinson espouses (Robinson, 2011, 2015, 2016). It allows us to see Sub-Saharan Africa and South Caucasus /

Central Asia as imagined – and to a certain degree institutionalized – macroregions in which we conduct our research but not as a priori blocs that should function as the basis of difference. We might find commonalities and differences that crosscut these two macroregions. As a cautious remark, this does not mean that we try to make a claim on the ‘transregional entanglements’ between Sub-Saharan Africa and South Caucasus/Central Asia. While such entanglements would be theoretically and empirically interesting, we would rather see the promise of comparison in finding commonalities across regions – where we would usually assume difference – and identify differences inside a region – where we would usually see them as homogenous entities.

Departing from debates on the relation between innovation and space in economic geography, this working paper discusses potential conceptual, methodological, and normative starting points to overcome a static, Global North and urban view on actors and innovation. More specifically, we are interested in reconciling the predominant focus on knowledge creation in the Geographies of Innovation (GoI) with what Shearmur has called “the more urgent geographic question (...) around the distributional consequences, across territories and communities, of innovation” (2012: 17), thus highlighting the uneven nature in the production of space and the creation of economic opportunities.

This working paper is structured as follows. We start the discussion by delineating the notion of the GKE as a dominant representation of today’s global economy and as an ordering force for firm internationalisation (chapter 2). In chapter 3, we summarize global inequalities and un-equal power relations as being inherent to the current economic system, highlighting different opportunities for firm innovation and internationalisation in different world regions, particularly those beyond the Global North. We highlight both the historical legacy of colonialism, the economic role of value chains / World Cities and the political role of institutions in producing spatial inequalities. We also present more recent approaches conceptualising firm integration in the global economy that might shed more light on ‘peripherally’ located companies: peripheral innovation and born globals. In chapter 4, we explore alternative conceptualisations of ‘the economy’ from decolonial, post-colonial and diverse economy perspectives, challenging the hegemonial representation of the ‘global knowledge economy’. Chapter 5 more specifically elaborates on existing empirical work on innovation systems, innovation policy and innovative companies in the macro regions that our research deals with: Central Asia / South Caucasus and Sub-Saharan Africa. It further provides an overview of contested imaginaries of these regions in the context of competing regionalisms. In chapter 6, we shortly reflect on key methodological issues with reference to the debate on situated knowledge. Moreover, we synthesize the discussion based on an agency perspective of the firm beyond the Global North and beyond the ‘hot spots’ of the global economy. We further develop a multi-scalar approach to study the reciprocal relationship of firm development and globalisation through the notion of ‘spatial ordering’, based on our prior review and critique.

Rather than conceiving knowledge creation, power relations and distributional consequences as separated fields of inquiry, the working paper asks, how the nexus between these fields can be best united conceptually. How can this be achieved without relegating innovation to an entirely capitalist instrument to secure rents through patents or other kinds of entry barriers in the global knowledge economy (as the world-systems perspective that underpins Global Production Networks (GPN) and World Cities would posit)? Is innovation doomed to produce an urban-centred and inevitably capitalist global knowledge economy, and can ‘peripheries’ only be ‘integrated’ into such a defined spatial order? How can, and do actors in such locations order the economy and space themselves and what are thus the spatial configurations produced? To what extent must place-based belonging be taken into account to fully grasp the geographical stakes of knowledge creation and value distribution?

## 2 The global knowledge economy as an imagination and policy concept

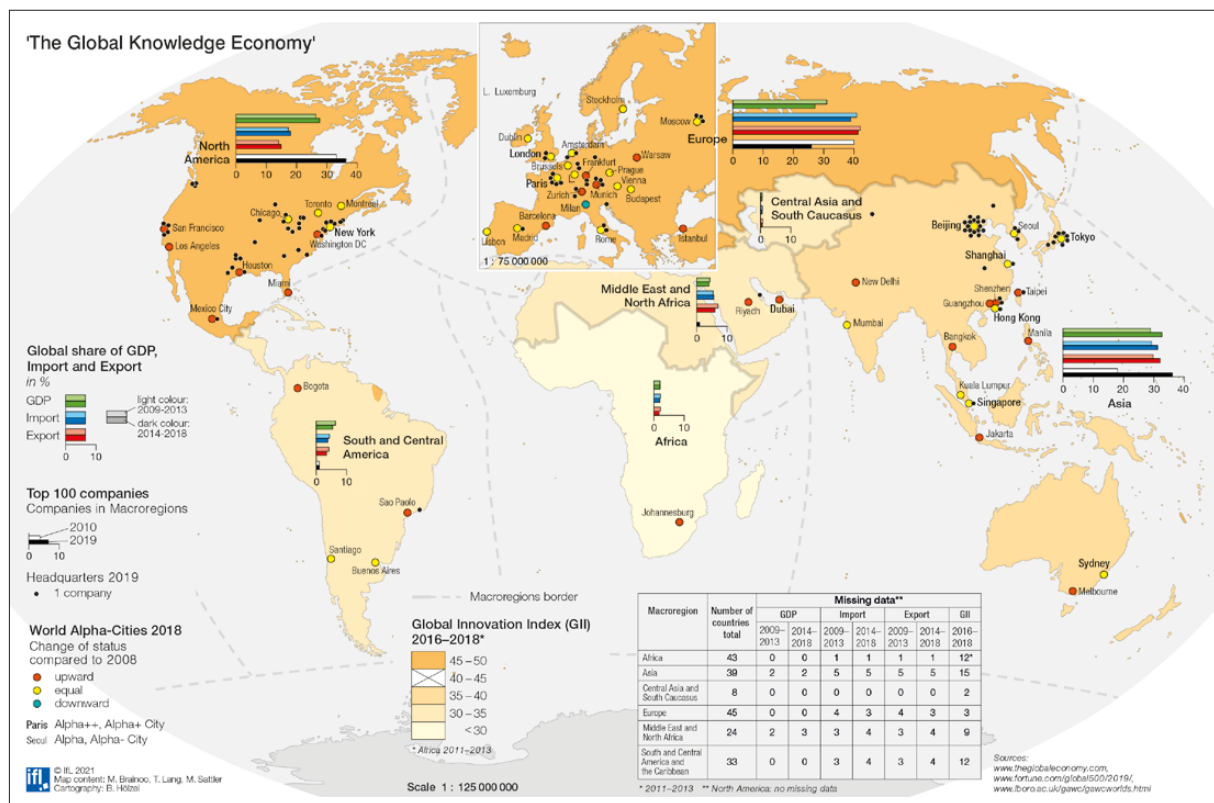
### 2.1 The global economy as knowledge economy

In order to be successful, firms, cities and regions aim to integrate into the global economy. Information and knowledge are increasingly seen as the key drivers of development. Consequently, the dominant imagination of the global economy is that of a knowledge economy, and many countries have initiated measures to support the knowledge-dimension of economic development (OECD, 2005). Nevertheless, there is no commonly agreed definition of the global knowledge economy.

The concept of the knowledge economy has been mainly promoted by global governance organisations such as the Organisation for Economic Co-operation and Development (OECD, 2005), the European Bank for Reconstruction and Development (EBRD, 2019b) and the World Bank, to be utilised as a policy tool for economic development. In order to better operationalize the knowledge economy, the World Bank introduced 'knowledge pillars' that serve as a bench marking tool to 'aid' countries in 'transition' on their way to a knowledge economy. Consequently, many countries direct their economic policies towards the knowledge dimension supporting incentive and institutional regime, education and skilled population, information infrastructure, and innovation systems (Chen and Dalman, 2005). These four pillars are considered essential for the sustained creation, adaptation, adoption, and use of knowledge in domestic economic production. These pillars are also the basis for the Global Knowledge Index (GKI), a flagship product of the partnership between United Nations Development Programme (UNDP) and the Mohammed Bin Rashid Al Maktoum Knowledge Foundation, which is frequently used to assess the transformation of economies in the developing world (see Global Knowledge Index, 2020).

The root of the concept of the knowledge economy is taken from social and economic theories ranging from Machlup's (1962) information theory to Bell's (1973) post-industrialism theories (Švarc and Dabić, 2015) based on a series of transformations. By the turn of the 1960s, the Fordist production system in the Northern world was increasingly replaced due to the deindustrialisation in North America and Europe. Manufacturing, according to Carlaw et al. (2006), was moved to cheaper production locations in Southern Europe (e. g. Spain), Central and South America (e. g. Mexico), and Asia (including the Asian 'tiger' economies). This led to the formation of a global division of labor, with service economies becoming more prevalent in the Northern world with importance shifting to information and knowledge. A review of Powell and Snellman (2004) and Schiliro (2012) indicated that during this period, there was a rise in the number of new science-based industries and the development of the information and communication service sectors supporting social and economic change. Knowledge became a more dominant topic of debate, also in the regional development literature. The increase in the knowledge-based industries and productivity at the macroeconomic and financial market developments in the 1990s resulted in debates on which industries are knowledge-based (Powell and Snellman, 2004). Hence, more theoretical and policy discourses on the knowledge economy with influence from the OECD emerged (Moisio, 2018). Moisio (2018) indicated that the knowledge-based economy could be abstract yet concrete, a thing and a process, structured by practices and structuring practices, imagined and material, theorised and experienced. During the past decades, knowledge has increasingly been recognised as the central resource for economic development and to create competitive advantage (Unger, 2019), with global economies building on the open flow of knowledge and information, notwithstanding the uneven economic and political power relations between developed and developing countries (Moahi, 2007). This makes us reflect on the knowledge economy as a new order of production and division of labour that 'challenged' older orders of production. This imagination also presumes that it shall function as a role model which can be reproduced elsewhere (also beyond the Global North), more or less identically, maybe with some 'local' touch to it (cf. Chakrabarty, 2000).

## 2.2 Geopolitics of the global knowledge economy, power and access to knowledge



Roberts (2009) challenged the widespread use of the term 'global knowledge economy', stressing the knowledge dimension of the to-date global economy. Highlighting the current understanding of economic globalisation as the sum of the interdependence between countries "through cross-border mobility of goods, services, capital, and people fostered by technological change, multinational corporations (MNCs), and liberalising policies of nation-states and international regulatory institutions" (p.288), Roberts stresses the association with a mainstream neo-liberal perspective putting the advanced economies at core, while affecting – rather peripheral – developing countries through the spread and impact of knowledge-based activities. While this definition is a fluid representation of the global economy, in a state of constant change and not fixed as a too structuralist perspective would suggest, it leaves two aspects aside: issues of power and alternative imaginations of the global economy beyond the mainstream reading.

Moisio (2018) conceptualises the current geopolitics of the knowledge economy, stressing that geopolitics are based on "the production of territories of wealth, power and belonging as well as to related social practices which are premised on ideas about how to best facilitate such production through mastering of space and population" (pp. 153–154). In this perspective, the knowledge economy can be seen as the result of specific political forces that engage in "innovations, high value, selective urban spaces and highly skilled global entrepreneurs" to build a "new economy" (p. 154). Reading with Moisio geopolitically, we can identify how the global knowledge economy functions not only as a category of analysis, but as a category of practice (Brubaker, 2012) in which actors perform the knowledge economy. Seen in this light, an analysis of the GKE shifts from 'what is it?' and includes questions of 'who says it and what are the effects?' Thus, conceptualizing the GKE becomes an act of everyday geopolitics that can be analysed critically as Toal suggests by reading Foucault and Said (cf. Toal, 1996). And indeed, we ponder the possibilities what we can gain when perceiving the GKE not only as a way of conceptualizing the global economy – as Roberts suggest – but as an "imaginative geography" (Helbrecht, Pohl, Genz,

and Dobruskin, 2021; Said, 1978, pp. 49–73) which produces not only inclusions but also exclusions, which normalizes some forms of knowledge while denying others.

According to this hegemonic imagination, weak institutional frameworks in many developing countries hinder individuals and firms from realising economic opportunities (Alhassan and Kilishi 2019). Considering the uneven development globally, this perspective alludes that some countries have issues to integrate into the global economy due to their insufficient institutional frameworks to support firms engaging in knowledge-based activities. Yet, frictions to such an imagination of flows (without borders) and networks (without hierarchies) are apparent. Do these imaginations account for the rigid regimes of knowledge protection that may lead to barriers to knowledge flows globally? We may cite intellectual property rights (IPR) as an example that might hinder the transfer and diffusion of knowledge due to knowledge commodification (Pagano, 2014; Rikap, 2021). Most patents filings come from industrialised countries (WIPO, 2020), and might give firms a monopoly of some specific knowledge (more likely innovation and technology) for a certain period (Wallerstein, 2006, pp. 24–26). Firms and enterprises in developing countries surely face challenges when drawing on knowledge codified in this way.

Another contention for proponents of the GKE is education. The Institute for Higher Education in Latin America and Caribbean (IESALC), a flagship of the United Nations Educational Scientific and Cultural Organisation UNESCO) notes an increasing access to higher education globally, yet populations in poorer countries continue to ‘lag behind’ with 10% access to education in comparison to the 77% chance of those in higher income countries (UNESCO/IESALC, 2020). Hence, developing countries face restrictions in participating in knowledge education either as consumers of knowledge products or services, or as knowledge workers (Roberts, 2009). One of the main promises by the knowledge economy proponents is that it might reduce such geographical inequalities, not least as the internet can possibly reduce the number of intermediaries, diminish the position of powerful retailers, and grant access to an almost indefinite realm of codified knowledge. Moreover, this promise relies not only on relatively immobile forms of capital (such as machinery) and labor power, but on theoretically quickly moveable, codifiable, knowledge-intensive intangible capital such as occurring in R&D, branding or the introduction of new organization processes. Precisely therefore, knowledge-based intangible capital is thought of disruptive and dynamic to core-periphery relations. Scalability is one of the primary characteristics, meaning that intangible capital can be upscaled unlimitedly in a short time frame (Haskel and Westlake, 2018). Yet, an increasing number of scholars resist the overtly strong emphasis on knowledge and education as a means to achieve development.

Evidently, there are problems behind the promise of knowledge mobility. A closer examination reveals that knowledge – instead of diffusing globally and “enlightening the lives of people everywhere” (World Bank 1999, 16), seems to come with its own caveats. It seems that proponents of the knowledge economy ‘police’ who and what exactly can easily travel the world and where to. ‘Brain drain’ is easily compatible with envisioning the GKE: high-skilled labor is allowed to “easily travel” to high-income countries without any adequate compensation for sending countries and communities, in which these ‘educated subjects’ were often socialized, all while this imagination can be entirely silent on the issue of low-skilled ‘migrants’ whom Northern countries can continue to strictly police. Moreover, patented knowledge itself cannot travel without expensive licenses. The policing of patent protection – if it occurs in the Global South – cannot be enforced without expensive lawyers. Long standing discussions about ‘tacit’ and ‘codified’ knowledge (Gertler, 2003), moreover, suggest that the increasing codification of knowledge does not automatically mean transforming that knowledge into operational capacity as this requires both capital but also non-codified knowledge as embodied in the labor force.

We want to stress here that if we look at the GKE based on these frameworks, there is geographical unevenness of distribution, and the integration of firms and enterprises in developing countries should be an issue of concern. Roberts (2009, p. 288) rightly pointed out that “we cannot ignore the knowledge economy is very much associated with high levels of development, yet underdevelopment, and



the poverty that accompanies it, remains a dominant feature of the global economy". The advanced economies of the Global North might fit the description of the knowledge economy or knowledge societies, but to what extent is this imagination both accurate and desirable for the places that this narrative places outside history? In this regard, we are sceptical of a narrative that reduces discussions of success in the global knowledge economy to the 'right' national or institutional framework and the production of educated subjects, without considering issues of global governance and existing inequalities. Such a narrative fails to discuss that some 'knowledge-based' Northern companies appropriate knowledge bases in the Global South and subsequently turn these into 'intellectual property' without adequate monetary and other forms of redistribution (Castree, 2001, pp. 1522–1524 for an example in the pharma industry). Moreover, the Science & Technology understanding of knowledge in the knowledge economy (Godin, 2006; Smith, 2002) faces possible restrictions as companies in poorer countries typically have more difficulties to draw on funding sources (lack of venture capital, high interest rates) and benefit from expensive basic research activities. Finally, once locally rooted knowledge-based companies emerge as promising, they might be simply acquired by Western Transnational Corporations (TNCs) (Rikap and Lundvall, 2020, p. 12).

Those referring to the term 'global knowledge economy' mobilise competing spatial imaginations: some stress the flattening of all barriers as an optimistic policy outlook, others consider the GKE mainly as a geopolitical tool that corresponds with legitimizing existing and new inequalities. In both cases, the GKE is founded on a reading of history as Western history in which the Global South appears as the extension (offshoring and/or outsourcing) of production facilities at best, but presenting 'developing countries' as 'lagging behind'. The mobilisation of the GKE as an imagination linked to particular development tools avoids to address more structural features of uneven development but is conversely especially effective in emphasising the 'wrong' institutional frameworks and lack of education in the Global South as the main impediments to development. With its massive emphasis on Science and Technology, the GKE can be understood as a hegemonial project diffusing from various sites of power (EBRD, OECD, UNDP, World Bank) and only partly as a sound analytical category. Discussions thus fail to see the geopolitical dimension of the knowledge economy that Moisio emphasizes.

We conceptualise the GKE as both a category of analysis by scholars but more importantly, as a category of practice that is imagined, circulated, institutionalised, and enacted by various actors, especially in policy circles. Accordingly, the question arises whose knowledge is valuable and which economy is envisioned? Does the powerful GKE imagination by policy circles help to reproduce a temporary 'spatial fix' to capitalism as Harvey (2001) suggests – one that discursively upholds the idea of knowledge and prosperity available to everyone while its internal contradictions lead to the next crisis? What could be alternative imaginations of the global economy – alternative imaginations that produce a space for possibilities for companies beyond productivity growth and beyond the equation of knowledge as science and technology?

### 2.3 The GKE as a social-technical imaginary

Socio-technical imaginaries are essential elements to the governing of innovation (Konrad and Böhle, 2019). It is a concept proposed by Jasanoff and Kim (2009), and it seeks to link ideas to „imagined forms of social life and social order that center on the development and fulfilment of innovative scientific and/or technological projects“ (p. 120). Jasanoff (2015) explained that „our sense of how we ought to organise and govern ourselves profoundly influences what we make of nature, society and the 'real world'“ (p. 3).

Understanding Jasanoff and Kim (2009), socio-technical imaginations are not devoid of political elements. This reflects the competing geopolitical imaginations in the knowledge-based economy Moisio (2018) refers to in his book ‚geopolitics of the knowledge-based economy‘. The concept of travel imaginaries reflects that innovation is influenced by imagined best practices that will yield a

perceived outcome for the future and such best practices are grafted into existing institutional and social structures (Jasanoff et al., 2007).

Prominent among such 'travelling imaginaries' is the Silicon Valley model. This ideal model has captured the imagination of the public and of the public policy community around the world (Audretsch, 2021). Moisio argues that the Silicon Valley worldview is hegemonic and constantly expanding while providing desirable but hardly attainable imaginaries and visions for other world regions to become innovative (e.g. smart / start-up cities). Thus, these constitutive imaginaries form new geographies of winners and losers, which divides the world into active and passive places. Audretsch (2021) argued that the Silicon Valley model only addresses uneven distribution of income but seems less relevant when looking at disparities in the spatial dimension.

These travelling imaginaries can also be in the form of recommended policy designs presented to Global South countries by global political and economic organisations such as the UN, the World Bank and the IMF. These may be STI policies often recommended in developmental projects. Some of these policies seem to be neoliberal and more Western in their approaches. The AU's understanding of innovation is based on Oslo's manual. There is so much emphasis on 'newness' in the adopted definition, and not much consideration is given to the benefits of innovation. We can say that within the heart of these policy designs is the hegemonic definition of innovation and no 'domestic' adaptation. For example, South Africa shows a wide range of competing policy instruments, often originating from the Global North and implemented upon the region, thus lacking locally generated impetuses and being less effective (Ouma-Mugabe, Chan, Marais 2021). These findings are promoted by similar reports for Ghana, Kenya, and Tanzania.

In our discussion, we have made connections between innovation, the global economy and some forms of governance. Like any capitalist economy, the global knowledge economy needs a form of state intervention or support to function well (see Wallerstein, 2004). Innovation policies are meant to address market failures, facilitate public production of knowledge, subsidise R&D by private firms, and „strengthen the IPR regime“ (Edler and Fragerberg, 2017, p. 7). Changes in the distribution of innovation activities globally result from particular key patterns of techno-economic change and ways of affecting global governance institutions. Innovation protections in a country and delay of innovation diffusion may be part of this diplomacy (Leijten, 2019). Asymmetries in power thus might leave some countries 'behind' in the innovation process.

Understanding the global knowledge economy both, as a hegemonial imagination of the world economy with a capacity for spatial ordering, and as a globalisation project of nation states, global governance organisations and multi-national companies, leads us to the question, how this spatial order shapes economic practices through a number of spatial formats constituting this very order.

### 3 Understanding inequalities in the global economy: a peripheral perspective

Drawing on long-standing discussions on core-periphery relations in the world economy, this chapter seeks to delineate their continual importance. Various concepts are introduced that seek to explain the spatial order of the GKE and the resulting uneven development from a spatial perspective: the core-periphery model (3.1), TNCs and Global Innovation Networks (3.2), Global Value Chains (GVC) / Production Networks (GPN) (3.3) and World City Networks (3.4). In section 3.5, we explore conceptualizations that might open possibilities for alternative understandings of how companies emerge and operate in the global economy from a 'non-core' perspective. Integration into GVCs and GPNs appears to be not particularly attractive when compared to models of organic growth and independent innovation and internationalization. So, what are conceptual starting points to understand the emergence of technology firms in the 'periphery'?

#### 3.1 Global divisions of labour, core-periphery relations and colonial legacies

Conceptualising core-periphery relations can be associated with the dependency theory and world-systems analysis of Frank (1967, 1978), Prebisch (1950) and Wallerstein (1974, 1979) (Westwood et al., 2014). World-systems analysis examines the evolution of the capitalist world economy, looking at the world as the biggest unit of analysis based on a global division of labour rather than individual states (Wallerstein, 2004). The globe is divided into three spheres in the world system analysis: the 'core', the 'periphery' and the 'semi-periphery'. Research into Global Value Chains stemmed from Global Commodity Chains (GCC) in world system analysis of Hopkins and Wallerstein (1986). The commodity chain is a "network of labor and production processes whose end result is a finished commodity" (Hopkins and Wallerstein, 1986, p.159). The GCC / GVCs reflect the organisation of global value creation and capture and how the "government structure" affects the gains of distribution across chain participants and the determinants of the movement of chain actors (Lee, 2010, p.3).

In a capitalist world there is according to Wallerstein a division of labor that divides production into 'core'-like products and 'periphery-like' products (Wallerstein, 2004). There is a geographical consequence of the 'core'-like relationships because quasi-monopolies depend on the patronage of strong states (Wallerstein, 2004). According to Wallerstein 'core'-like production processes are controlled by quasi monopolies because profitability is related to the degree of monopolisation. Quasi monopolies are enforced by strong states, e.g. through the patenting system. While 'peripheral' products are competitive, they find themselves in a weak position when there is an exchange within the markets and the quasi-monopolised products are in a strong position. This leads to a "constant flow of surplus value from the producers of peripheral value to the producers of core-like products" (p. 60). Intellectual property rights (IPR) can be used to give firms a measure of control and protection to their product / production process to create more value for their products.

We can see the expression of core-periphery relations through historical colonialism, trade regimes and (international) politics. Important to note is the interdependency of the 'core' and the 'periphery'. Neither would be the former's wealth explainable without the latter's exploitation, nor would be the latter's 'underdevelopment' intelligible without the domination by the 'core', which challenges the prevailing catch-up development discourse analytically and normatively.

Collyer et al. (2019) regard global inequalities in the knowledge economy not as a fixed structure but as dynamic – brought into existence in the history of empire and colonialism. In their view, colonizers exploited the colonized states' resources to develop their home states, and placed institutions that impacted the colonized states. Particularly, extractive institutions practised by some coloniz-

ers are linked to poverty (Acemoglu and Robinson, 2017). To date, the effects of colonisation are expressed in many ways. Nkrumah (1965) regards neo-colonialism as the last phase of imperialism where there is interference by powerful global countries not only within the economic fields of developing countries but in the political, religious, ideological and cultural spheres. It is used in recent times to refer to the geo-relations of transnational corporations (TNCs) with subsidiaries in developing economies (Boussebaa et al., 2012; Boussebaa, 2020) and the structural adjustment programs of influential institutions such as the International Monetary Fund (IMF) (Ziai, 2020).

### 3.2 Knowledge, trans-national corporations and innovation networks

Innovation is usually understood as an important driver to economic development in economic growth theory, and it has been a long-standing subject of interest and debate for economists. Through innovation, in this understanding, the economy is affected in multiple ways: global competitiveness, financial systems, quality of life, infrastructure development, employment, and trade openness, leading to high economic growth, with high growth also potentially leading to more innovation (Maradana et al., 2017). Solow (1965) established a long relationship between economic growth and innovation (Pece et al., 2015; Maradana et al., 2017; Alheet and Hamdan, 2020; Eggink, 2013). In the neoclassical growth models, accumulating knowledge and technological progress are considered the only way to achieve technological progress. Here, innovation is seen as the process of creating new products, a new process in production, new organisation, or market. It is said to involve the acquisition of new knowledge including its dissemination as well as application (Catalone et al. 2002).

TNCs or multinational corporations (MNCs) engage in innovation activities at a global scale through a wealth of partners and complex interactions in global innovation networks (GINs, see Barnard and Chaminade, 2011). Barnard and Chaminade (2011) analysed GINs using firm level survey data collected from five European countries as well as Brazil, China and South Africa. Their results shed light on the geographical dimensions of GINs. Based on a taxonomy of firms the study indicates that GINs are not only based on MNCs but also include firms located in developing and emerging countries. It also highlights some of the disparities of the GIN: most of the global networkers are firms located in developing countries or middle-income countries according to the study, yet they are not very innovative. The most innovative firms in the sample investigated are located in Europe who interacts at a regional or local / domestic level but not globally. Therefore, knowledge is kept in the region.

According to Liu et al. (2013) the knowledge base dominating the industry in which a firm is operating has significant influence on the geography and structure of their GIN. They explain that firms operating in industries engaged in analytical knowledge organise their innovation on global scale, while those in industries dominated by synthetic knowledge regionalise their GINs. They went further, stating that there might not be any overlap with GINs and GPNs in analytical knowledge-based industries because GINs are driven by R&D and production departments may not be part of the important connections in the GIN. In synthetic knowledge-based industries there are some overlaps with GPNs because the GINs are organised around production departments, clients and suppliers (p. 1470). We do not make a generalisation of these results, but we find it interesting how the knowledge base might have influence in GPNs and GINs. What would it mean for firms in developing countries? How do they integrate into this structure? Despite increasing mobilities and technological progress facilitating access to knowledge, high value-adding economic activities and wealth are still concentrated in certain geographies (Rodriguez-Pose / Crescenzi, 2008).

### 3.3 Trade, FDI and GPNs

To examine the interconnectedness of the globe, we look at trade and Foreign Direct Investment (FDI) based on some analysis by the World Bank and WTO presented in Dicken (2015). In the period from 1960 to 2007, trade has grown faster than output and more countries are connected through it. However, there are huge variations between countries at “such trade integration” (Dicken, 2015, p. 48). Most of the trade is concentrated intra-regionally in Europe, North America and Asia, and interregional trade is more likely between them (see Dicken, 2015, p. 47). According to the results of the analysis, it further signified that the increase in FDI has risen faster than trade. What connects the growth trends in FDI and trade is the increase in TNCs. These have grown exponentially in the past three decades. TNCs account for two-thirds of the world’s exports of goods and services and a significant share in intra-firm trade (not based on external market prices but the internal decisions of these firms). The rise of TNCs has resulted furthermore in structural imbalances within the global economy. To better understand the relevance of TNCs for global inequalities, GCC / GVC and GPN approaches offer some critical perspectives. These concepts are suited to address the unequal exchange dynamics that underpin economic activity more generally.

Let us examine some of the inequalities and geographical concentrations of GPN / GVCs looking at the global production of the iPad and iPhone for a more relative understanding. A study by Kraemer et al. (2011) showed the value captured of the iPad and iPhone production across the globe. Apple (US) captures 58.5% of the value as 2010, EU firms capture 1.1%, Taiwan and Japanese firms capture 0.5%. While Non-Apple US captures 2.4%, South Korea receives 4.7%. Now looking at the cost of input in terms of labour, Chinese labour cost 1.8%, and the cost of non-Chinese labour is 3.5% in the value chain. Most of these firms and enterprises that are suppliers and producers do not deal directly with Apple but with Foxconn, a powerful giant Taiwanese supplier (Philips, 2017) through its offshore plant in China in which components from non-Chinese forms are assembled. We can understand that there is an asymmetry in the market power, and more often, the lead firms capture a more significant share in the total value and make most of the strategic decisions. Such lead firms are usually located in advanced economies such as Apple in the US. Most of the highly intensive knowledge generation and sophisticated research and development (R&D) is organized in such geographies. However, a repeat study in 2019 shows that manufacturing costs by Chinese firms rose from 3.5% to 25.4% for newer generation iPhones (Xing, 2019). Yet, gross trade figures overestimated US-China trade deficit by a factor of three (Coe, 2021, p. 18), showing the potency to account for value-added activities in the context of offshoring and outsourcing activities of lead firms.

Consequently, from a development perspective it seems most productive to create locally rooted TNCs, as they capture most of the value and control GPNs through organic coupling. In the current global division of labour, however, this cannot ‘work’ for all world regions. Hence most regions are forced into following forms of strategic and functional coupling at the lower end of value generation instead (see e. g. Dicken 2015).

### 3.4 World City Networks

#### GPNs, GVCs and World Cities

The emergence and implementation of GVCs / GPNs cannot be fully understood without the application of highly specialised advanced producer services, organised in World City Networks (WCN). This literature is based on the – contested (Coe, Dicken, Hess, and Yeung, 2010) – world-systems roots (Brown et al., 2010), thus building on a large literature on world (Friedmann, 1986; Taylor, 2004) and global (Sassen, 1991) cities. The global economy is structured mainly by and through a network of so-called World Cities. World Cities are relationally defined by the number and function of advanced

producer service firms (APS) that form global networks of their affiliates, e. g. in accountancy, banking, advertising, management, insurance, law (Taylor, 2004, pp. 82–87). Without these APS, producers would be less able to internationalize their businesses. As such, APS are indispensable for lead firms to apply for trademarks and patents or to utilize low-labor cost destinations for their supply chains. In this sense, the ‘core’ exploits the ‘periphery’ through the WCN (through which all value must be channelled) and thus complicates any discussion on spatial justice relying on a rigid, national or even regional perspective (to which some GVCs / GPNs succumbed). Therefore, we can witness a continual process of ‘peripheralisation’ and ‘core’-ization that defies any Global North vs. South logic. By concisely summing up the state of the art on global and world cities, Parnreiter thus posits that

*“the very idea of a world/global city as introduced by Friedmann and Sassen only makes sense if these cities are seen in a relational perspective, tied to each other, but also to all the globalized ‘ordinary cities’ (Robinson, 2006) whose work has to be articulated with the world market. There is, thus, no contradiction between Sassen’s (2016: 103) ‘analytic tactic... to focus on the extreme ends’ such as the financial sector in New York, and Robinson’s (2002: 547) assertion that export processing zones in poor countries constitute ‘quite the other end of the command and control continuum of global city functions’. It is precisely such a relational approach to center-periphery interactions in GVCs and in urban networks that justifies the selection of PSs (producer services; remark by the authors) in global cities as key analytical lenses” (Parnreiter, 2019, p. 86).*

In this logic, APS co-shape globalisation because they try to channel as much value to their (TNC) clients, as that is what they get paid for by ‘lead firms’, whose location is of secondary interest. World Cities are not only relationally imagined (Taylor, 2004; see Chapter 1) but also hierarchically ranked (GaWC, 2020). In our case study regions, we can identify a significant increase in World Cities, though not on the “alpha”-level (safe Johannesburg) but in more subordinate rankings. Thus, all capital cities in Central Asia and the South Caucasus are included with the former ‘capital’ of Kazakhstan, Almaty, leading the ranking as a beta-city. As for Sub-Sahara Africa, Kampale, Lagos, Nairobi and Changsha are all beta world cities, with further cities in gamma (like Dakar) or sufficiency rankings (like Kigali) (GaWC, 2020).

### **Rethinking WCN from ‘peripheral’ locations**

Through focusing on the ‘core’, the concept of World Cities tells us a lot about the periphery’. Peripheries cannot exist without the ‘core’, and the WCN seems to suit particularly powerful companies in the world’s ‘core’ economies. But can ‘peripheral’ companies also become something akin to – to come back to the GVC / GPN literature – a ‘lead firm’ themselves? Can ‘peripheral’ companies themselves employ APS firms for their own advantage? Are APS firms in Central Asia / South Caucasus and Sub-Sahara Africa mainly serving foreign TNCs or are their clients also to be found within locally rooted companies or do they refer them to the respective branches where they intend to internationalise? To what extent can this then be applied to producers that are not ‘lead firms’ and are there other possibilities of internationalization beyond APS, to begin with? Are there *alternative* networks of knowledge and value circulation, possibly not directed primarily at making profits alone, at seeking new low labour destinations? While we do not primarily aim at contesting the claim that (hierarchical networks of) APS are preferably located in hierarchical (networks of) World Cities (which precisely is their definition), we are interested in illuminating if they are indeed close to the ‘producers’ (this can include service firms as well), how ‘APS-producer’ relations can be conceptualized beyond physical proximity, and whether other networks with ‘internationalization facilitators’ beyond APS exist. WCN asks us to pay attention to whether and how APS are indispensable for the internationalisation strategies of ‘peripheral’ companies – and thus possibilities of functional ‘core’-ization. It thus might also

shed light on the intra-national periphery-core relations that are insufficiently addressed so far (Eder, 2019) by the focus on “global pipelines” (Bathelt, Malmberg, and Maskell, 2004; Fitjar and Huber, 2015). This perspective asks us to not only examine the product / organisational innovation as a condition for firm internationalisation (the usual vantage point of the geographies of innovation: ‘peripheral’ or not) but to the interaction between companies and APS. The view on the ‘periphery’ makes it thus possible to complicate the narrative of functional upgrading, i.e. shifting to more income-generating activities (Humphrey and Schmitz, 2002, p. 1020) using the services of APS to generate more value (thus solidifying the capitalist global knowledge economy as a process of re-configuring core-periphery relations) or *alternative networks* that a) boost internationalization operating on the same logic (increasing ‘rent’) or b) follow altogether different objectives. In this regard, it is a contribution to Shearmur’s warning that the geographies of innovation must go beyond geographies of knowledge creation and head towards a geography of the distributional consequences of innovation (Shearmur, 2012, 17).

But also beyond the – albeit narrow confines of – World and Global Cities, the (large) agglomeration dominates in the imaginary of (uneven) economic development and innovation, due to various forms of so-called agglomeration economies that consists of localization and urbanization economies (shared labour pool, infrastructure, suppliers, but also local demand for products, local buzz and associated knowledge-spill overs, attractiveness for high-skilled labour) which allow firms to ‘internalise’ the benefits thereof. Building on the insights of the city as “privileged sites for economic growth” (Scott and Storper, 2003, p. 582), Scott and Storper argue that

*“the theory that we shall seek to elaborate (sic!) here puts considerable emphasis on the role of the region as a source of critical developmental assets in the form of increasing returns effects and positive externalities. In addition, we aver that because agglomeration is a principal source of these productivity-enhancing outcomes, urbanization is less to be regarded as a problem to be reversed than as an essential condition of durable development” (Scott and Storper, 2003, p. 583).*

This assertion then produces a policy dilemma as agglomeration-centred growth strategies sit uneasily with the aim to reduce inter-regional disparities (Scott and Storper, 2003, p. 588) because not all agglomerations can be part of the ‘core’ to speak again with world-systems analysis. Thus, the discussion of regional development tends to be reduced to the ways how actors outside of agglomerations might benefit from the power of agglomeration through redistributive means. What remains for the small town or the village whether part of a ‘core’ region or not – is primarily ‘lack’, albeit from the standpoint of a well-intentioned critical geography that seeks to explain injustices and uneven development on various scales. Also the discussion on financial institutions and their various logics and degrees of ‘territorial embeddedness’, seem to re-inscribe the city. Such is the case when venture capital is described as “highly localized” (Coe et al., 2004, p. 472) or when emphasis is put on “globally decentralized financial networks that are mediated through global financial centers (e.g. New York and London)” (Coe et al., 2004, p. 473). This provides, again, two different possible objections. The first one refers to the kind of inevitability with which non-agglomerations and non-‘core’-regions ‘lack’ by pointing at the dynamics: away from the ‘core’ and ‘periphery’ and towards notions of ‘peripheralisation’ – and its reverse – ‘core’-ization in order to more fully understand the dynamic nature of global re-structuring and the ‘agency’ of ‘peripheralized’ actors (Kühn, 2015; Lang, 2015), including companies therein. But, second, and more importantly, we think that what is at stake is not only ‘economic growth’ (or ‘value capture trajectories’ in GPN parlance) for the ‘region’ or any other (spatial) beneficiary, but to go beyond notions of growth (Leick and Lang, 2018) by means of scrutinizing the normative underpinnings of such an approach (see e.g. Kothari et al 2019).

### 3.5 Integration in the global economy: firm innovation in ordinary places beyond the Global North

#### Born globals in ordinary places beyond the global north

Born globals (BGs) was a term that originated from studies conducted on new and emerging firms in Australia. The literature on BG is broad, and there are different concepts associated with BG, such as leaping frogs (Hedlund and Kverneland, 1985), high technology start-ups (Jolly et al., 1992) and international new ventures (McDougall, 1994 as cited in Rasmussen and Madson, 2002, p.13). BGs are understood to be “young, highly entrepreneurial firms” with “superior international performance” (Knight and Cavusgil, 2004, p.125), who behave differently from the traditional exporter firms, but there is no empirical evidence on factors that drive their performance (Knight and Cavusgil, 2004, p.125). They can overcome initial barriers in foreign markets (Ferguson et al., 2019) due to the fact that BGs often do not need to adapt their products, services, and marketing to the foreign market, because they operate in a highly specialised niche providing competitive advantage (Rasmussen and Madsen, 2002).

Empirical research has shown that BG firms are capable of internationalising right from the early stage. These understandings come from research conducted in developed countries like Australia and Denmark (Rasmussen and Madsen, 2002). Only a few studies have been conducted in developing and emerging economies in Latin American countries such as Chile and Brazil and in African countries such as Nigeria. A Chilean study showed that BGs in developing countries exhibited entrepreneurial behaviour like those in developed countries but are more extractive in nature and cultivated natural resources (Cancino and Coronado, 2014). They had no high technology content, and firms located in the capital or with administrative offices in the capital were likely to be BGs. Oladimeji and Eze (2017) studied BGs in Nigeria, and their study showed that enterprise support agencies and cultural proximity increased Nigerian exporting SMEs chances to be born global. However, their study further showed that the technology level, in which the firms do business, does not significantly increase the probability of a Nigerian exporting SME being a born-global firm.

One of the things that distinguish SMEs from large firms in terms of building GVC relationships is that SMEs seem to depend more on informal and personal relationships (McDougal et al., 1994 and Freeman et al., 2006 as cited in Do et al., 2018). We would like to know if the BGs can be a ‘lead firm’ in GVCs, especially those from developing regions that can cause an upside down in the ‘core’-peripheral relations. A study by Do et al. (2018) on seven BGs across some European countries indicated the challenges for the BGs concerning integrating into GVCs were mainly based on their domestic market issues. In terms of government structure, the study concluded that:

*“main critical factors that distinguish born globals’ governance structures include firm size, their international experience, network involvement, their market position in the industry and the replaceability of their partners. The level of coordination and autonomy in the relationship also determines the type of governance structure” (Do et al., 2018).*

There is a research gap in examining born globals beyond the global north, looking at how they overcome structural barriers and integrate in the global economy. Such firms may not necessarily have high technological content but have adopted pathways to be integrated in international markets.

#### Local knowledge and peripheral innovation

The issue of concern here is how we regard knowledge in terms of development in the context of countries located beyond the Global North. What is often ignored, is the knowledge inherent within the people that influences their social-cultural and economic dimensions – in a reciprocal relation-



ship between place and culture. Antweiler (1998) explained that local knowledge is what actors themselves possess with little extraneous influence. Understanding local knowledge should not be attributed to the so-called 'traditional knowledge', passed on from one generation to another. We refer to the complex system of knowledge built as a result of endogenous factors and exogenous factors utilising an understanding of place as constituting multiple identities with networks and social relations (Massey, 1994). The dimension of this knowledge could be local, regional or global. Knowledge can be subject to a place, and a place can be subject to knowledge.

In knowledge production and accumulation, spatial proximity is often imagined to be an essential factor, perhaps due to the nature of tacit knowledge. Territorial innovation models (TIMs) have explored how geographical proximity aids in interactive learning, creating and diffusing knowledge. Agglomeration economies, clusters and innovative milieus foster face-to-face interaction and build soft institutions, such as trusts, to expand knowledge creation and innovation. However, geographical proximity is not a prerequisite nor a sufficient condition; other forms of proximity are equally relevant (Boschma, 2005; Fitjar and Rodríguez-Pose, 2011; Bathelt et al., 2004). Though 'peripheries' may not utilise large clusters, agglomeration economies and creative hubs, there are ways to build on the knowledge stock and networks of their populations. However, firms cannot depend solely on localised knowledge networks. Knowledge creation and knowledge-based activities involve interlinkages and various forms of mobility. According to Bathelt and Cohendet (2014), the process of knowledge creation cannot be limited to specific local knowledge pools but also depend on knowledge flows and linkage to knowledge pools elsewhere. In ordinary places, firms and economic agents will depend on several quality connections between regional and international networks to build their innovation capacity (Fitjar and Andrés Rodríguez-Pose, 2010), adding to particular qualities of endemic local knowledge. Relational proximities can better capture processes of knowledge creation in transnational contexts according to Bathelt and Cohendet (2014). Conceptually and empirically, existing research on the geographies of innovation maintains a strong focus on the global north, and herein also on economically successful regions. New knowledge is needed on how innovative companies understand knowledge and innovation and manage to become successful at international levels.

## 4 Diverse and postcolonial perspectives on the innovative firm in global economies

In this section, we discuss alternative understandings of firm innovation and knowledge that might disclose a politics of possibility for 'ordinary places' beyond the bleak picture that a more hegemonic understanding of the global knowledge economy suggests. Particularly, we will draw on the Diverse / Community Economies approach in widening our imaginative geographies associated with firm innovation and internationalisation. Postcolonial and decolonial approaches to the economy, widening our understanding of place, institutions and innovation, are finally discussed.

### 4.1 Diverse Economies, value and solidarity-based entrepreneurship

#### The diverse economies framework

A promising starting point to challenge dominant understandings of both the global knowledge economy and what innovation entails can be formulated from a Diverse / Community Economies perspective due to its scepticism towards *power / domination* as an overarching analytical and explanatory framework. Instead of a 'reading for dominance', it formulates 'reading for difference' as a general methodological strategy (Gibson-Graham, 2008, pp.623–625; Gibson-Graham, 2020). Originally, Gibson-Graham introduced this feminist epistemology to abide the view of an always-already powerful structure that ends up in a totalising view of the economy as some form of capitalist globalisation-cum-domination (Gibson-Graham, 1993, 1996). Instead, the Community Economies perspective challenges a 'capitalocentric' discourse by hinting at the manifold economic practices that exist *beyond*, and are thus not reducible to, capitalism. In a similar vein, we can argue that there is not only one type of globalisation – accumulation based on spatio-temporal fixes (Harvey, 2001) – that innovative companies pursue. While much Neo-Marxian literature makes the case of innovation as a driver and amplifier of capitalist dynamics, in our project, we ask about the possibilities to resist reducing innovation to a pre-defined concept and want to highlight differences in strategies pursued by innovative companies instead – based on a broader perspective on innovation. So far, companies were rather themselves 'othered' in the project of imagining and enacting inhabitable worlds. O'Neill and Gibson-Graham (1999, p. 12) contend that

*“the traditional portrayal of the enterprise is as an ordered, autonomous and ultimately rational economic subject that operates according to a central logic and manifests predictable dynamics. To the extent that the firm is addressed in neoclassical economics, this representation reigns supreme. And even in Marxian political economy, theories of the capitalist firm largely draw upon a version of this idealized vision. The representation of the monopoly capitalist firm, for example, is of a complex organization whose unity is embodied in a logic of accumulation and the drive to increase profit rates by any and all means – super-exploitation of labor, manipulation of political relations with unions and governments, avoidance of the costs of environmental and community devastation and so on.”*

More than any other metaphor in economic geography, the transnationally operating company and capital stands for primitive accumulation (Marx, 1999 [1867]: Chapter 26) or what was termed accumulation by dispossession (Harvey, 2004), the enclosure of the commons (Linebaugh, 2010), development by displacement (Escobar, 2004), the cheapening of natures and associated increase of energy use (Moore, 2015; Patel and Moore, 2020). In the face of a global pandemic, they are even

considered as cause for pathogen emergence and spread (Wallace, 2016; Wallace, Liebman, Chaves, and Wallace, 2020).

Yet, we want to highlight that this perspective invites us to formulate also the *why* of innovation, i.e. to see innovation and knowledge creation not as an end in itself (or for the sake of profit alone) but as a purposeful activity with profound consequences for communities, the perhaps most central category of this approach. This is in line with more recent scholarship on innovation that also illuminates its 'dark sides' for more-than-human communities (Godin and Vinck, 2017). The Diverse Economies approach invites us to treat research objects not as 'matters of fact' but as 'matters of concern' (Gibson-Graham, Cameron, Healy, and McNeill, 2019; Latour, 2004 for the original discussion). This pushes us not only to analyse how 'peripheral' companies contribute to some kind of unitary 'capitalist globalisation', but also, how they contribute to imagining and enacting different worlds, alternative capitalist or even entirely non-capitalist futures.

Common tactics by Diverse / Community Economies researchers include de- and reconstructing the monolithic, hierarchical, capitalist company (O'Neill and Gibson-Graham, 1999). More interestingly, they open the field by analysing alternative forms of economic organization based on different modes of appropriating and distributing surplus value, especially in studies of the cooperative (Klagge and Meister, 2018; Ruccio, 2011), or social enterprises (Johanisova, Sovová, and Fraňková, 2020), but also in mixed enterprise studies (Gibson-Graham et al., 2019). Not so much concerned with multi-scalar hierarchies, this approach promotes the local as being not sub-ordinated vis-à-vis the global (Gibson-Graham, 2003, 2007). It further asks for the subjectivities that emerge from economic activity by underlining the motivations (beyond notions of 'greed') that underpin all economic activities (Byrne and Healy, 2006; Healy, 2010, 2014; Madra and Özselçuk, 2010; Özselçuk and Madra, 2010). In this sense, the Diverse Economies approach perceives innovation as social innovation (Gibson-Graham and Roelvink, 2009) and as a possibility to imagine and enact different worlds.

### **Value, solidarity and the firm**

We grant that companies (whatever their organizing principles) might be not only interested in producing exchange values, arguing that this is what 'abstract capital' devoid of any particular actors wants. Companies, too, might be interested in producing different forms of culturally specific use values based on specific forms of geographically assembled knowledges, although the degree to which the production of exchange values dominates the production of use values shall be treated as an empirical problem. These use values shall not only be analysed from the vantage point of the consumer, but also from within producers, (intermediary) exchange networks and the communities in which they are embedded. This is to ask to what extent the production process and the commodity can be reconsidered as a design issue in which 'things' have use value for more-than-human communities and might be an integral part of how producers, exchangers and consumers inhabit non-alienated worlds (Costanza-Chock, 2020; Ehn, Nilsson, and Topgaard, 2014; Escobar, 2018; Manzini, 2015) at the 'edges of capitalism' (Grubačić and O'Hearn, 2016). In this sense, we also seek to illuminate alternative forms of economic activity such as the solidarity economy that might bring a transformative approach to economic activity (Miller, 2010).

Thus, we also diverge with regard to the understanding of 'creative destruction' that 'innovation' since Schumpeter has accompanied. In some sense, where Schumpeter and Marxian scholars might agree, much innovation has been precisely about finding temporary 'spatial fixes' (Harvey, 2001) – before the next crisis occurs – accompanied by 'creative destruction' of value regimes and natures (Harvey, 2018a). This is because new technologies or products lead to "discrete, discontinuous changes which shift the paradigm altogether, breaking organisational routines and driving economic development" and as a result, Parker continues, "a wave of entrepreneurial innovation hits the economy, displacing old products and production processes, followed by rapid imitation by new competitors.

Ultimately stability is restored, and entrepreneurship reaches a temporary cessation before the next wave of creative destruction occurs” (Parker, 2018, p.542). Yet, this view is profoundly informed by the notion of radical innovation. As the innovation literature has pointed out, there are different types of innovation, including product and process innovation whose effects are more incremental. Therefore, we emphasize that innovators are not only to be conceived as ‘disruptors’ that attempt to radically transform the economy, turning supply chains and entire modes of production upside-down (and by so doing also restructuring places as well as territories, networks and scales), but that they can be also concerned with creating places of adequate material abundance for more-than-human and translocal network / communities in line with their feelings of belonging.

## 4.2 Postcolonial and decolonial perspectives on innovation

Precisely because Diverse Economies is very much concerned with enacting different worlds beyond capitalocentrism, we need to engage with perspectives that help us deal with potentially more hybrid forms of institutions that foster innovation. Both postcolonial and decolonial perspectives might be invaluable for this endeavour although next to commonalities certainly some tensions exist (Bhambra, 2014; Grosfoguel, 2011; Gu, 2020; Radcliffe, 2017). A postcolonial perspective can better ask for the modalities of power stemming from concrete experiences of settler colonialism that until today shape the economies in the macro regions we analyse. This could for example yield to a questioning of the frameworks of mainstream GCC / GVC / GPN accounts that take ideal type Western-style – formal – market institutions for granted and do not properly describe and theorize the ‘hybridity’ of institutions found in other world regions (Hughes, McEwan, and Bek, 2015). In this sense, it is more about an evolutionary perspective that asks how the colonial experiences and encounters trigger a particular postcolonial configuration of institutions in the context of formal independence.

A decolonial perspective – most forcefully elaborated in the Latin American context – asks for the *why* and *how* of innovation and might better excavate how imaginations of innovation need to be “unlearned” (Tlostanova and Mignolo, 2012) in the first place. Critical of a perspective that takes Western models as the basis of ‘catch-up’ development, decolonial approaches hint at the various origins of power that impose a forceful definition on what counts as knowledge or innovation, possibly based on the conceptual triad of modernity / coloniality / decoloniality (Mignolo, 2018). Even within Western theorising, R&D and ‘highly-skilled labor’ as primary elements of innovation are increasingly deconstructed (Jensen, Johnson, Lorenz, and Lundvall, 2007). From a decolonial perspective, there cannot be a ‘one-size-fits-all’ approach that tries to ‘benchmark’ whole countries and populations based on a technology- and R&D-centred understanding of innovation, coupled with a strongly liberalised institutional framework (as exemplified by the Global Innovation Index or the Knowledge Economy Index). Such an approach takes growth and increased global competitiveness as an unquestioned benchmark of development, and thus tends to impose the South to Northern measurements and ideas of development and reinforce prevailing power relations. Instead of ranking and quantifying (which always implies hierarchy and set competition in motion) the innovation system based on a framework that puts little emphasis on ethical and ecological components, decolonial scholars see an urgency to strengthen “those relational ways of being-in-the-world capable of countering the ontology of defuturing” (Escobar, 2018, p. 16).<sup>1</sup> While such rankings tend to normalize a view of technology-rooted innovation as the *yardstick* of development, de-colonial approaches *de-familiarise* the reader with what innovation could mean in the first place: thus pleading in favour of “learning to unlearn” (Tlostanova and Mignolo, 2012) by embracing the notion of the pluriverse (Demaria and Kothari, 2017; Escobar, 2018; Kothari, Salleh, Escobar, Demaria, and Acosta, 2019): a world in which many worlds fit, that is a

1 Defuturing conveys the idea that some economic activities (e.g. hyper-extractivism) might rather obstruct the future for younger generations and more-than-human communities.

world in which different understandings of being-knowing-doing can co-exist. It entails a need to *normalise* alternative activities rooted in different ontologies of knowledge and innovation and perhaps *scrutinise* innovation based on the exploitation of nature and care relations.

Indeed, there is much reason to view the allegedly liberating effects of technological innovation within a capitalist global knowledge economy with suspicion. Zuboff's intriguing analysis of 'surveillance capitalism' by innovative and globally successful companies like Google and Facebook is a powerful case in point (Zuboff, 2019). In this view, capitalism now operates under a form of 'knowledge predation' in which common or at least multi-scalar knowledge networks are increasingly subsumed under and patented by technological lead firms (Rikap and Lundvall, 2020). A de-colonial approach does not deny that technology and innovation can contribute to enacting more sustainable and just worlds. Yet, it calls to think deeply about "the community's engagement with heteronomous social actors and technologies (including markets, digital technologies, extractive operations, and so forth) from the perspective of the preservation and enhancement of the community's autopoiesis (Escobar, 2018, p. 188)". Escobar ponders the principles of innovation in terms of "designs for the pluriverse" (Escobar, 2018). Agreeing with other design and innovation thinkers to not "reduce innovation to a matter of expertise at the service of capital" (Escobar, 2018, p. 47), Escobar especially concurs with Manzini's work on social innovation as small, open, local and connected (Manzini, 2015). Thus, he asks to re-insert materiality and ecological design to make production as autonomous and community-serving as possible. As one of the few more corporate examples, he cites the "field of fashion and sustainability" in which, according to Escobar, production takes "seriously the social and ecological challenges of the industry in an attempt to transform it" by means of "reductions in the environmental impact of materials and processing to reuse and refashion strategies, place-based production, and biomimicry" in a political and creative codesign process (Escobar, 2018, p. 44). This means to "engage in the re-localization of making things and in the socially and culturally complex task of networking sustainable innovations (Escobar, 2018, p. 123)". In other words: localized production, but globalized knowledge networks or – again echoing Manzini – embracing a "cosmopolitan localism" (Escobar, 2018, p. 159). It is Escobar's ability to examine this cosmopolitanism within ordinary places of the Global South which makes this perspective valuable for our project because it grants local agency and thus produces spaces of possibilities for acting 'peripheries'. Reflecting on territorial groups, he asserts that the "chief political implication" is that "care of communal territories / worlds is the fundamental political task of our times" (Escobar, 2018, p. 219). While technological innovations are often destructive, and partly counteract what Escobar proposes, this does not prevent technological innovations from having a proper place in the pluriverse provided that they are used for making worlds more sustainable and just.

### 4.3 Open questions

Based on the Diverse Economies critique of political economy, we ask: what are the possibilities to insert 'difference' into a debate that often is characterized by clear-cut visions and representations of what a company is and does? Escobar, too, for the most part centers his discussion around ethno-territorial groups in the Global South and (often imagined as 'urban') oppositional degrowth and design thinkers in the Global North. Although he elsewhere more openly calls to "encourage diverse economies", including "alternative capitalist" (Escobar, 2018, p. 188) practices. The Diverse Economies approach, too, embraced the notion of the pluriverse to emphasize that "different practices and different rationalities of enterprise, labour, exchange, relationships to things and land, and ways of investing in the future coexist" (Gibson-Graham and Dombroski, 2020, p. 17) and as means to destabilize capitalocentric imaginaries of the profit-seeking company. After all, we want to stress that in our reading, also profit-seeking companies, belong to the pluriverse since "Western thought is part of the pluriversal. Western thought and Western civilization are in most / all of us, but this does not mean

a blind acceptance, nor does it mean a surrendering to North Atlantic fictions" ( Mignolo and Walsh, 2018, p. 3).

In this endeavour, our research project finds itself in a difficult position. On the one hand, the idea of innovation and business internationalization clearly depends on Northern ways of thinking, and often operates under adopted Northern legal and institutional forms and frameworks as well, and therefore itself requires a decolonization of the international company as the epitome of economic and innovative success. On the other hand, we evidently also seek to pluralize the understanding of business internationalization as always entrenched in buttressing capitalist globalization. The underlying frameworks of these alternative conceptualizations privilege a reconnect of ecology and economy (as oikos): So, what are the possibilities for companies to engage in economic practices to nourish communities, territories and Earth or what Tsing has called "the possibility of life in capitalist ruins" (Tsing, 2015)? Are ordinary places in 'non-core' regions a good setting to observe alternative innovation practices exactly because they offer possibilities for experimentation? Do they contribute to performing alternative knowledge economies, perhaps not so much characterized by R&D expenditures?

Yet, decolonial, postcolonial and Diverse Economies approaches also demand much on how research itself is conducted. Diverse Economies stipulate to go beyond self-reflexivity by fully taking into account the performative nature of research (Gibson-Graham, 2008). They ask for the inclusion of research objects – reframed and enacted as co-producers / co-designers of knowledge – in the research process and thus away from a monological towards more dia- or polylogical forms, all of which are constrained and enabled by the material funding and modalities of research (Pollard, McEwan, Laurie, and Stenning, 2009; Raghuram and Madge, 2006). How does our funding inform our research practices? Which openings and constraints do they produce for engaging with knowledge holders beyond appropriating their knowledge? How can companies benefit from our research? Finally, the openness of these approaches also makes it harder to conduct fieldwork as they are precisely not about arriving with pre-established conceptual framework and a thoroughly structured interview questionnaire but require 'thick description' and 'weak theory' (Gibson-Graham, 2014), and an ability to understand and promote difference.

Another contention is a possible undertheorization of political issues that a firm-centred perspective may fail to properly appreciate. Varieties of capitalism (Soskice and Hall, 2001) can be seen as a possible contribution to our debate, whereas this concept itself is characterized by an overreliance on Northern cases to narrate diversity and far less emphasis is placed on the differentiation among the majority world of Southern countries, including differentiations among our macroregions. However, we would also rather not depart from pre-established notions of institutionally mediated forms of capitalism as this may end up in overtheorizing the company as conditioned by macro- and meso-structures. Rather, this criticism is helpful in properly constructing the institutional network that enable or constrain business practices and to explore the role of the political environment in later stages of our research. This is so, as we feel that openly talking about the influence of polity, politics and policies on the business requires a certain degree of trust relations and might itself depend on the influence that politics asserts on business and vice-versa.

## 5 Introducing Central Asia / South Caucasus and Sub-Sahara Africa

This chapter first delineates a wider 'imaginary' associated with the macroregions from an albeit Northern and Anglophone perspective and charts various state-led regionalism projects onto it. Second, in the absence of much literature on peripherally located companies in Central Asia and Sub-Sahara Africa (beyond agricultural development), we discuss the institutional and governance contexts in which companies operate as well as qualitative studies on SMEs / innovative companies in the region. Third, we identify the gaps in the literature so far.

### 5.1 Central Asia and the South Caucasus

#### The view on the region

The South Caucasus and Central Asia consist of eight internationally recognized countries and at least three internationally unrecognized 'de facto' states (Markedonov, 2015). Stretching over a territory comparable to the EU in size, it hosts a human population of around 90 million that are embedded in a diversity of ecosystems. As part of the Soviet Union for most of the 20th century, the populations were subject to large-scale and often violent social and political experiments, including economic transformation, leading to path dependencies that transcend the Soviet aftermath (Teichmann, 2007 for the case of cotton).

However, the degree of actual 'peripheralization' within the Soviet Union varied considerably with R&D concentration not only in Moscow but also in Soviet Yerevan, Armenia. Intra-regional trade and regionalism projects within Central Asia and the South Caucasus are nowadays limited. Therefore, we should consider Central Asia and the South Caucasus as powerful spatial imaginaries, too, with little institutional or organizational penetration beyond mainly Western development organizations' 'regional offices' in the 'South Caucasus' or 'Central Asia'. In the case of the South Caucasus, dialogues with offices in Armenia and Azerbaijan are usually negotiated via regional head offices in Tbilisi, Georgia. The imaginary of a South Caucasian unity largely stems from its past (Brisku and Blauvelt, 2021) but seems further away than ever, given the recent full-scale war between Armenia and Azerbaijan in 2020.

Since their independence in 1991, the countries followed different trajectories, ranging from the service-dominated, liberalized and deregulated Georgian economy to a Soviet-style and fossil-based economy of Turkmenistan. Political Economy (PE) approaches differentiate usually between fossil-based energy-rich countries (Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan) and energy-poor countries (Armenia, Georgia, Kyrgyzstan, Tajikistan) (Salhi, Kern, and Rößler, 2010) that have several implications. First, approaches link resource abundance to authoritarianism in which rent is usually channelled to the "ruling elites" and few diversification strategies (Esanov, Raiser, and Buiters, 2006; Franke, Gawrich, and Alakbarov, 2010) thus placing it in a larger discussion on "resource curse". Energy-poor countries, on the other hand, are said to depend more on FDI flows as a development strategy which comes with its own caveats: analyses suggest limited cooperation of TNCs with local companies (Kudina and Jakubiak, 2011) or show the volatility in the face of political instability as decreasing FDI-flows after the Georgian-Russian war in 2008 suggest (Timm, 2014). Another distinction, especially in Central Asia, is between upstream and downstream countries as water is detrimental to the PE of these countries, too. Mountainous upstream countries (Kyrgyzstan and Tajikistan) use water as an energy source for their economies, leading to conflicts with its downstream neighbours which need water for the irrigation of cotton and agriculture (Abdolvand et al., 2015). Yet, the limits of PE

approaches are acknowledged, both applying to the resource curse but also to more sophisticated varieties of capitalism approaches “that are highly arbitrary by picking specific historical and cultural contexts that suit the case” (Rustemova, 2011, p. 31).

Other spatial imaginaries do not seek for explanations in the present but analyse path dependency. Thus, in many (academic) imaginaries, the Soviet past continues to haunt the present and future: ‘post socialist’ and ‘post-Soviet’ thus belong to the standard vocabulary in academic inquiry as a sort of inevitable condition. Partly, this reaction can be explained as a justified unwillingness to conceptualize transformation only as exogenously driven by outside forces and as a resistance toward universalizing globalization discourses (Stenning and Hörschelmann, 2008; Stenning, Smith, Rochovská, and Świątek, 2010). Starting with Tlostanova’s collaboration with Walter Mignolo (Tlostanova and Mignolo, 2012), decoloniality is increasingly inserted as a new field of inquiry (Morozov, 2015; Müller, 2018, 2019; Tlostanova, 2012, 2018) while building on long-standing discussions on Russian and the highly contested nature of Soviet imperialisms (Hirsch, 2005; Martin, 2001; Northrop, 2004; Suny, 2011; Suny and Martin, 2001).

30 years after independence, however, the limitations of the post-socialist and post-Soviet labels are increasingly acknowledged (Müller, 2019) with the ‘Global East’ as a new contender (Müller, 2018) to open up comparative perspectives. This imaginary invokes the ‘East’ as the third destabilizing term between oppressor (North) and oppressed (South) and in favour of conceptualizing the ‘East’, specifically Russian and Soviet imperialism, as an internally colonized ‘subaltern’ Empire of capitalist – or for that matter socialist – modernity (Morozov, 2015). But this imaginary thus risks also to exonerate Russian and Soviet colonization vis-à-vis the Caucasus and Central Asia (Koplatadze, 2019) based on a long history of not only military (Morrison, 2021) but also literary (Layton, 1994), ethnographic-scientific (Hirsch, 2000, 2005) and economic (Teichmann, 2007) conquest of the Russian / Soviet ‘periphery’. This argument centrally builds on, but also complicates, widespread (and internalized) Northern notions of in-between-ness, both spatially (Caucasus and Central Asia as influence sphere of China, US, Russia, EU and India) and temporally (between tradition and modernity; ethnic and civic nationalism; informal and market economy). Spatial in-betweenness tends to deny the agency to actors in the region, and temporal in-betweenness measures all practices against the yardstick of an ideal-type Western market economy.

A wide range of centrifugal and centripetal forces can be identified. Centrifugal forces refer to the decision to open borders and integrate into the global economy: some of them more, some less voluntarily. Centripetal forces refer to inward-looking attempts since independence also meant nation- and state-building and decreasing dependencies on forces perceived as a threat to independence. Therefore, (non-state actor-led) regionalisation and (state-led) regionalism (Börzel and Risse, 2016) – as specific forms of globalisation projects – must be understood differently. On the one hand, there is a ‘holding-together regionalism’, as exemplified by the Eurasian Economic Union (EEU). On the other hand, we can observe various forms of ‘coming-together regionalism’, e.g. with the European Union and the Belt and Road Initiative (BRI) (Libman and Vinokurov, 2012). Choices reflect the emancipation from a perceived imperial centre in Moscow to recognition from, and integration into, a broader regional / international community as an integral part of nation- and state-building. While Georgia most vociferously supports Euro-Atlantic integration, Kazakhstan proves itself as staunch supporter of ‘Eurasianism’, as the Russian Federation and Turkmenistan strictly avoids membership in any geopolitical format. In this peculiar geopolitical assemblage, an ‘and’ choice is increasingly replaced by an ‘or’: either European or Eurasian integration – with the BRI so far somewhat compatible with both but also creating new uncertainties (Alff, 2016). While some scholars see the BRI as a form of ‘inclusive globalization’ (Liu and Dunford, 2016) others are more sceptical. Behind a too simplistic ‘debt trap’ discussion (Lai, Lin, and Sidaway, 2020 for a research agenda beyond the debt trap), problematic racializing and securitizing connotations that underpin the ‘Chinese threat’ discourse are openly displayed in much Northern knowledge production (Rekhviashvili, 2020). Finally, Chinese and Russian-led integration projects offer avenues for globalizing the economy, while retaining the possibility



for continued authoritarianism (Bader, Grävingsholt, and Kästner, 2010). Yet, EU democracy and human rights promotion turn “from lofty principles to lowly self-interests” (Crawford, 2008) in Central Asia in the face of energy diversification strategies. The diverse policies of the EU, and US and the national and international organisations that they champion (especially IMF, WB, EBRD and various development agencies from German GIZ / KfW to USAID), too, focus much on infrastructure development, private sector development and importing the ‘right’ market institutions in what has been poignantly called – for the case of the EBRD – ‘fail forward neoliberalism’ (Shields, 2020). Although some studies attest significant progress in the innovation regime (IMF, 2014; Nazarov and Akhmedjonov, 2016), others argue that the hoped-for innovation boom predicated upon this form of capitalist modernity is not materializing even in forerunner countries like Kazakhstan (Smirnova, 2014). Hence, also alternatives beyond individual responsibility and liberalization and in favour of welfare state and common interests are articulated (Kluczevska, 2020). Moreover, there is also interest in researching entanglements beyond the EU, EEU and the BRI, such as the hardly illuminated entanglements of Central Asia with Turkey and Gulf countries (Çokgezen and Özcan, 2008; Koch, 2013).

Yet most imaginaries intersect in contributing to the view of the region as primarily ‘acted upon’. As a result, all activities are understood as adaptations, translations, emulation and resistances to globalizing forces as embodied by an assemblage of institutions. What we miss not only in the economic realm, but beyond, is how developments emanating from this region can be understood as globalization projects or instances of unintended diffusion processes. While there are increasing attempts by scholars and practitioners alike to ‘bring back’ certain spatial imaginaries for English-speaking audiences, these are usually confined to the past (but intended as remedies to the future). Well-known examples include Frederick Starr’s and Peter Frankopan’s Anglophone attempts to re-write world history by somewhat anachronistically placing Central Asia and the Silk Road, respectively, as the true centres of civilization (Frankopan, 2016; Starr, 2015) while others ponder the possibilities to conceptualizing the Soviet Caucasus and Central Asia as avenues of ‘alternative globalizations’ (Mark, Kalinovskiy, and Marung, 2020). Yet others attempt to reverse and invalidate the imperial gaze by examining how Central and South Asian travellers imagined the ‘West’ and thus rendering it as ‘peripheral’ to Islamic Indo-Eurasia by opening space for more queered and cosmopolitan understandings of transnational entanglements (Garcia, 2020).

### **Innovation, Entrepreneurialism and its institutional context**

The centrifugal and centripetal forces as well as Central Asian and Caucasian positionalities in past and present are also reflected in the research on innovation. Based on the assumption that opening the economy and finding a niche in the global economy opens up perspectives for development, the innovation literature focuses tremendously on building National or Regional Innovation Systems as a means of achieving these goals (Huseynova and Закир, 2014; Ivaniashvili-Orbeliani, 2009; Khnkoyn, 2012; Kurpayanidi and Muminova, 2016; Poghosyan, 2017; Акбулатов, Ерыгин, and Волкова, 2019; Алгулиев and Алиев, 2011; Днишев, 2019; Иванишвили-Орбелиани, 2009; Ипалаков and Гольцев, 2008; Исмоилова, Азизов, and Ахмедова, 2017; Комилов and Файзуллоев, 2011; Маридашвили and Мепаришвили, 2018; Пястолов, 2012; Ставбунник, 2019). Academic focus on innovation, or lack therefore, concentrates on R&D expenditures and activities as well as (the failure of) university-firm linkages associated with a workforce that is imagined to have ‘wrong skills’ (from the vantage point of international capital). *Konkurentospasobnost’* (competitiveness) is thus seen as the prime goal of innovation in a globalized world that is taken-for-granted as much as the expert surveys that hierarchically rank these countries as deficient (Global Innovation Index, Entrepreneurship Survey, Ease of Doing Business). Finally, most analyses are firmly in a national or regional container-paradigm of space. Even comparative case studies largely treat countries as independent units. GPN / GVC are often reflected upon (Belyavskiy, 2020; Акбулатов et al., 2019; Волгина, 2017; Волкова, 2018;

Кукушкина, 2016 for a rather pessimistic reception; Мазитова and Дёмина, 2017; Островская & Мануйлов, 2016), but did not yield many results for the Caucasus / Central Asia (Султанова, 2017 for an optimistic exception). More sector-specific, challenges to build a sustainable GVC for the cotton industry in Central Asia seem to abound (Khurana and Ataniyazova, 2020; Rudenko, Bekchanov, Djanibekov, and Lamers, 2013). In the textile industry, remarkable progress and expansion in the Kyrgyz case has been observed *despite* negative rankings for Kyrgyzstan’s institutional business and innovation systems (Botoeva and Spector, 2013; Spector, 2018; Spector and Botoeva, 2017). Also, despite relatively low payment, the authors insert that satisfaction is derived from producing ethnically inspired apparel products. While we therefore pledge for a critical reading of the Global Innovation Index (GII) and the Knowledge Economy Index (KEI) (Cornell University, INSEAD, and WIPO, 2020; EBRD, 2019b), we include the 2018 rankings in Table 1 to show where technological innovations in this understanding are most likely to occur. These are highly aggregated indices that include other highly contested indices such as the Ease of Doing Business ranking whose logic Krever succinctly marks as “neoliberal common sense” for it penalizes welfare policies (Krever, 2013). Georgia, Armenia and Kazakhstan have the leading positions in these rankings (see Table 1).

**Table 1:**  
Rankings in the Global Innovation Index (GII) / and EBRD Knowledge Economy Index (KEI) in 2018

GII / KEI	Ranking GII	Ranking KEI	MEAN	Overall Ranking
Armenia	1	4	2,5	3
Azerbaijan	4	3	3,5	5
Georgia	2	1	1,5	1
Kazakhstan	3	2	2,5	3
Kyrgyzstan	5	5	5	5
Tajikistan	6	7	6,5	6
Turkmenistan		8	8	8
Uzbekistan	7	6	6,5	6

Source: Cornell University, INSEAD, and WIPO, 2018; EBRD, 2019a

Recent discussions – especially in Kyrgyzstan or Kazakhstan – also advance the idea of a supranational innovation system within the EEU (Иваницкая and Названова, 2016; Соловьёва, 2016; Таубаев, 2015; Таубаев, Каменова, Орынбасарова, Сайфуллина, and Борисова, 2019; Улыбышев and Кенжебеков, 2017; Шугурова, 2019) and clusters, too, are discussed as a spatial strategy (БАБАЯН Э.А. and ГАБРИЕЛЯН Б.В., 2019; Кулбатыров and Асенова, 2014). Despite the promises of technology / knowledge transfer mainly from Russia, empirical work on existing intra-EEU knowledge transfer is missing. The EEU has no equivalent to the ‘smart specialization’ policy (Asheim, 2019; Sörvik, Teräs, Dubois, and Pertoldi, 2019) of the EU and BRI projects which are related mostly on infrastructure development (Inan and Yayloyan, 2018; Lin, Sidaway, and Woon, 2019). Adding state institutions (legal framework, innovation agencies, funding programs), and private institutions (venture capital, start-up incubators) to this picture, we arrive at a complex governance assemblage that could be termed ‘internationalized rule’ (Morcillo Laiz and Schlichte, 2016) in which STI-centred approaches dominate. Most STI funding and promotion activities are based in capital cities as preliminary analysis of funding patterns for several innovation-related projects by the World Bank in Kazakhstan and Georgia

(by its financing of Georgia's Innovation and Technology Agency GITA) as part of our research project suggest (GITA; World Bank, 2020). Thus, innovation promotion instead seems to strengthen regional polarization in countries that already face extreme concentrations of GDP in the metropolitan regions (Salukvadze and Golubchikov, 2016 for the case of Tbilisi, Georgia). This does not mean, however, that 'peripheral development' is off the agenda. While we find innovation agencies and technology parks outside the capital, they mainly serve to ignite interest in technology within the younger generation (as is the case in Armenia, Georgia and Kazakhstan). Primarily, however, we identify tourism and agricultural programs and organizations dealing with issues of 'peripheral' and 'rural' development'.

Few qualitative studies on SMEs in Central Asia suggest that mainstream definitions of 'innovation' must be scrutinized in the first place as institutional settings – including rules and norms – and are both different to Western contexts but also internally heterogeneous (Makhmadshoev and Crone, 2014; Makhmadshoev, Ibeh, and Crone, 2015; Makhmadshoev and Laaser, 2020; Özcan, 2008, 2010). Therefore, Özcan argues that the "innovative challenge ... tends to be less concerned with technological and product development and more profoundly based on managerial ability to deal with uncertainty in business start-up and to develop a successful survival strategy" (Özcan, 2008, p. 69). Both Özcan and Makhmadshoev therefore deal with the complexities of social relations in which business activities are embedded; and that defy any unproblematic market-state distinction, thereby relating to a larger literature that scrutinizes the (infamous) role of 'informality' in 'post-Soviet' economies (Barsukova and Radaev, 2012; Horak et al., 2020; Ledeneva, 2006; Oka, 2015; Polese and Rekhviashvili, 2017; Polese, Rekhviashvili, Kovács, and Morris, 2019; Rasanayagam, 2011; Rekhviashvili, 2016, 2017; Rekhviashvili and Sgibnev, 2020; Slade, 2017; Steenberg, 2020). The literature suggests to also take seriously the 'moral economies' in which actors are embedded as illustrated by entrepreneurial activities based on Islamic notions of the community (*cemaat*) that sometimes stand in tension with state views on development and power (Özcan, 2010, pp. 190–219).

### Further avenues

While some academic interest exists with regard to how (Western) TNCs interact with host economies, we find large gaps for research on more locally rooted companies, both with regard to knowledge creation and how they perform value. It remains to be seen how local actors negotiate the various state-led regionalism projects and complex institutional environments. This includes whether or not companies' activities direct their attention to the EEU, EU and BRI (the focus of Northern knowledge production) or whether they form networks or transnational communities with countries and regions neglected so far (e.g. Turkey, India, Gulf countries). Moreover, we find little consideration for the importance of geographies of belonging (see Chapter 8) in production activity and its effects for the nested communities in which they are embedded. Although there is growing body of work in this direction, the focus is usually not (explicitly) on the transnationally active company but rather on petty traders for both the South Caucasus and Central Asia. Finally, it remains to be seen whether companies only integrate their activities in production networks and follow rules and standards established elsewhere or whether they imagine and enact the economy in different terms, thus destabilizing Eurocentric notions of innovation.

## 5.2 Sub-Saharan Africa (SSA)

In this section, we discuss the 'peripheralisation' of the region taken into account colonialism and economic structural programmes. We also dive further into the changes in the region and the overview of technology within it. Finally, we discuss initiated policies and examine some empirical evidence from certain regional blocs.

## The view on the region

The macro-region imagined as SSA is located geographically at the south of the Sahara. The UNDP lists 46 of the 54 African countries as sub-Saharan while the World Bank refers to 48 countries in their data set (UNDP, 2021; World Bank, 2021). It is also divided into regional blocs that are East, Central, West and Southern Africa. Between 1950 and 2010, the population of SSA has grown from 186 million to 856 million, and is projected to increase further (Bakilana, 2015). The region is diverse in terms of ethnicity, culture, languages and resources. Despite its richness in resources, over 45% of the population in SSA live below the international poverty line of 1.90 US dollar a day (based on World Bank Data from 2015, Carmody, 2016). A country like Guinea in West Africa produces almost half of the world's bauxite, yet, the national budget equals only 0.0005 per cent of that of France, its former colonial power (Carmody, 2016).

The post-independence period saw many SSA states embroiled in economic challenges and political instability. Independent African states in the 1960s had inadequate institutional capacities and underdeveloped human and physical resources to govern the economy (Ocran, 2019). In Ocran (2019), most African economies post-independence were more homogenous, with a strong dependence on agriculture and exports of raw materials. Colonial trade relations did not change, and most of these raw materials were exported to industrialised countries. Initially the terms of trade were favourable but by the 1970s, the terms of trade had fallen, affecting most countries except countries with crude oil resources (Ocran 2019; Watts, 1993).

As a result of the economic meltdowns facing many SSA countries, most state-owned enterprises deteriorated (Nellis, 2005). And between the 1980s and the 1990s, SSA countries were introduced to the structural adjustments program prescribed by the World Bank and the IMF to gain access to credit/loans to recover their economies. However, these measures did not lead to diversifying the economy or alleviating poverty but centred on liberalisation and privatisation of state-owned enterprises, cutbacks and retrenchment (Carmody, 2016). There was a stagnant economic growth rate following the structural adjustment programmes (Austin, 2010).

By the end of the 1990s, improvements in the economy were recorded. In the late 1990s the IMF published on growth in the economy with growth rate in real GDP with an average of 4% increase compared to the 1% increase between 1990s to 1994 (Hernández-Catá, 1999). Although per capital declined in the first half of the 1990s by 2% in its annual average rate it increased to 1% on its annual average rate between 1995 to 1998 (Hernández-Catá, 1999). The publication attributed improvements in policies of SSA countries to such performance and though there were improvements, the region was still behind in development compared to other world regions.

By the first decade of the 21st century, Africa saw an increase in real GDP, and there was also an increase in telecommunications, banking, retailing and construction, private investment flows and the rise of middle-class consumer (Mbembe, 2016). We see some economies thriving with high economic growth rates, corporate empires, digital age technologies, and rising cities (Adesida et al., 2019). Economic development and empowerment have been an essential priority in the region reflected in policies. These policies engineered towards development, with much focus on innovation and technology. Many technological opportunities have been assigned to address human development challenges (Mugabe, 2011). Despite weak institutions and high dependence on foreign donors, there are diversities in innovation levels and competition among states in Africa, which can harness complementary and synchronising policies to boost innovation and development; hence, a regional approach in building innovation seems essential (Oloruntoba, 2019).

## Overview of innovation and technology in Africa

There has been a significant structural change in the economies of Africa over the last decades (Osakwe and Moussa, 2017). In terms of services, value-added has increased from 30% in 1970 to 57% in 2014, with a subsequent decrease in the total value added of the share of mining and utilities. Also, the share of value-added in the agriculture and the manufacturing sector has been low over the period. They accounted for 15% and 12% of the total added value in 2014, respectively (Osakwa and Moussa, 2017). While there has been an increase in entrepreneurship numbers over the above-mentioned period, knowledge-based activities may still be low in Africa (African Development Report, 2011).

Nevertheless, there has been a rise in technology entrepreneurship in the region with newly established tech hubs (Friederici, 2016). These hubs are clustered around the region, and some receive backing from big techs like Facebook and Google. Mobile banking technology is recognised as offering banking opportunities to small and medium enterprises and partnerships between banking and non-banking institutions (Ondiege, 2010). Even in agriculture, farmers connect to the market through initiatives by social enterprises using mobile phone technology. To bridge the information gap through mobile technology, a company like Farmerline and Esoko offers important market information to small-scale farmers (Acheampong, 2019). Farmerline, for instance, provides such information in local languages for easy accessibility for the farmers.

The New Partnership for Africa's Development (NEPAD) and AUDA-NEPAD assessed the rate of innovative firms in 2014 in some African countries (primarily those in the SSA region). The organisation used the OECD/Eurostat (2005) definition of innovation to define and assess innovation attesting to the argument raised earlier of the dominant understanding of how innovation is defined and interpreted from perspectives from the Global North. In the report, most SSA countries reported high firm innovation rates ranging between 40.1% and 77.0% in 2014, and the proportion of abandoned innovative activities by firms was low, ranging from 0.47% to 25.3% (NEPAD, 2014). Also, analysing these results, Egbekotun et al. (2016) explained that *innovativeness* at the micro-level might not depend on the current economic growth level and that even poorer countries may be more innovative than richer ones (p. 162). While this claim is interesting and calls for further probing, it testifies that we need to analyse innovation from a more holistic and diverse perspective.

Regarding the global markets, a study by Foster-McGregor (2015) showed that Africa is heavily involved in GVCs but mainly limited to upstage production, which is often associated with low value-added primary productions and thus learning and upgrading are likely to be limited in these countries.

For a rough indication of national economies' innovation dimension in its classical understanding, the table below presents the top ten scores and ranking of the Global Innovation Index (GII) and the Global Knowledge Economy index (GKE) in 2020 (Cornell, INSEAD and WIPO 2020; UNDP and the Mohammed Bin Rashid Al Maktoum (MBRF) Knowledge Foundation 2020). We simply presented the scores and not the overall average as shown in the previous table because some countries did not make it in both list. The countries performed better in the global innovation index compared to the knowledge economy index. Only Mauritius and South Africa were able to retain their ranking in both indicators but performed better in the innovation dimension as compared to the knowledge economy. The GI report indicated that although SSA had low levels in science and technological activities and a high reliance on donor agencies for R&D, most of the economies have significant potentials in innovation.

**Table 2:**  
**Rankings in the Global Innovation Index (GII) / and Knowledge economy in 2020**

Country	GII score (out of 100)	Ranking on GI	Country	GKE (out of 100)	Ranking on KE
Mauritius	47.8	1	Mauritius	34.35	1
South Africa	45.1	2	South Africa	32.65	2
Namibia	42.5	3	Kenya	26.13	3
Kenya	42	4	Botswana	24.43	4
Botswana	41.4	5	Rwanda	25.06	5
Rwanda	39.9	6	Senegal	23.75	6
Ghana	38.7	7	Namibia	22.51	7
Zimbabwe	37.5	8	Ghana	22.28	8
Tanzania	36.6	9	Malawi	21.44	9
Senegal	35	10	Côte d'Ivoire	21.24	10

Source: Cornell University, INSEAD, and WIPO (2020); UNDP and the MBRF (2020)

### Regional integration and policy context for innovation

Accelerating regional integration has become essential for African countries, and the region considers it an essential tool for development (Mugabe, 2011; Gachie and Govender, 2017). It is done through an institutional arrangement such as the Common Market for Eastern and Southern Africa (COMESA), Economic Community of West African States (ECOWAS) and Southern African Development Community (SADC) and the East African Community (EAC) (Mugabe, 2011). Each of these regional blocs has adopted policies and strategies to increase STI activities in the region. For example, the ECOWAS adopted a science and technology policy named ECOPOST in 2011 to be a blueprint to 2020 and aligned with ECOWAS' vision 2020 policy framework (Forson, 2017). In 2007, the EAC also created the East African Science and Technology Council (Mugabe, 2007). The SADC has established the Science Technology and Innovation Desk within their Secretariat to pursue the goals and objectives of the region for science, technology and innovation as indicated in the Regional Indicative Strategic Development (RISDP) (SADC, 2020). The African Union Development Agency (AUDA-NEPAD) developed the African Science, Technology and Innovation Indicators (ASTII) initiative in response to the concern raised by the African Union Ministerial Conference in charge of Science and Technology (AMCOST) on understanding and improving the state of STI in the region (NEPAD, 2010).

The African Continental Free Trade Area (AfCFTA) is a trade agreement between the member states of the African Union (AU). The agreement was signed in 2018 by 44 African countries to boost free trade (Shaban, 2018) and commerce was further implemented in January 2021, with 52 member states in agreement (GIZ, 2021). The purpose is to accelerate internal trade within Africa's region and boost Africa's position in the global market (AU, 2021). In addition, it establishes a single market of goods and services, eliminated 90% of tariffs, and tackles non-tariff barriers such as customs delays. The AfCFTA agreement may likely help SSA firms to internationalise within the region and might also bring a boost to their global connections. For example, within four days of commencement, two firms in Ghana became pioneer exporters using the AfCFTA preferences (Ighobor, 2021).

Mugabe (2011) stressed that despite the efforts on developing regional STI cooperation in the EAC, SADC, there are still weak national innovation systems. Literature on STI policies in Africa shows that most African countries adopted ST policies, often neglecting innovation. A study on STI policies in East Africa showed that almost half of the countries, i.e. Botswana, Ethiopia, Kenya, Malawi, Namibia and Tanzania, had policies towards science and technology, excluding innovation, in the 1990s (Iizuka et al., 2015). It further indicated that Kenya and Tanzania had science and technology policies dating as far back as the 1970s and 1980s. However, innovation policies became only a recent trend in these countries (Iizuka et al., 2015). This was also confirmed in a study by Eboh et al. (2013), which showed that many African countries implemented science and technology initiatives but lacking the promotion of innovation. The authors added that budgets for education, R&D and innovation and technology subsidies were reduced or eliminated due to economic challenges in early 1990, especially in countries like Kenya and Tanzania. A study on the innovation policies of countries in the Economic Community of West African States (ECOWAS) showed that some member states have established new institutions and have strengthened existing ones in support of STI activities such as Ivory Coast (see Forson, 2020).

Though ST policies have been enforced in the region for a long time, policies towards innovation seem to be a recent phenomenon. This may explain some challenges to innovation for entrepreneurs and SMEs in SSA compared to other world regions.

## 6 Conclusions: Firms' spatial ordering in multi-scalar institutional contexts

In this chapter, we first draw inspiration from both the situated knowledge debate and subaltern studies to make methodological arguments about how to insert the actors' perspective and actions into a wider analytical framework. We deem this necessary as Northern knowledge production in these macro-regions is confronted with ethical issues. In the remaining sub-chapters, we synthesize the previous debates to formulate our own preliminary conceptualization of firm activity in a multi-scalar world which is based on a commitment toward multi-perspectivity. This means to move back from more systemic perspectives that leave little space to companies in terms of their agency, towards a more agency accentuated account of firm activity beyond the 'economic' realm by stressing the socio-material and multi-scalar dimensions of knowledge and value creation.

### 6.1 Situated Knowledge and subaltern positions

In a decisive intervention more than three decades ago, Haraway argued for displacing the masculinist God Eye's view from nowhere with *situated knowledge* and *partial perspective* (Haraway, 1988). While it is impossible to fully delineate the debate that it kindled, the epistemic problems it poses, and opportunities it opens, are substantial. First, Haraway did not imply that situated knowledge should be construed as a *deficit model* that needed to be overcome in favour of the God Eye's view. By designating situated knowledge as a *privilege*, she politicized knowledge as the claim of situated knowledge which can be applied to 'researcher', 'researched' and the relationship between them. Similar to a subaltern perspective (Spivak, 1988), situated knowledge asks to what extent marginalized perspectives and voices – such as those we aim to understand with our focus on companies in 'peripheral' positions – can 'speak' for themselves. Academia produces this problem as it tries to re-translate the subalterns' perspective back into a specific jargon and publishes it in narrow formats (e.g. based on the written word, in journal paper, and books). Situated knowledge can further be framed within the long tradition of modernist/colonial practices of appropriating knowledge for capitalist or – in the case of academia – reputational purposes, without improving (and often even deteriorating) the living conditions of those whose knowledge has been appropriated or, to cite Haraway: "There is a premium on establishing the capacity to see from the peripheries and the depths. But here there also lies a serious danger of romanticizing and/or appropriating the vision of the less powerful while claiming to see from their positions" (Haraway, 1988, pp. 583–584). While postcolonial/ decolonial scholarship handles these issues qua object of analysis, Diverse Economies are shaped by a feminist critique and reconstruction of Marxist and psychoanalytical – and thus epistemologically Western – vocabulary that is seen as inspiration and with suspicion by some decolonial scholars (Mignolo and Walsh, 2018). But even Science and Technology Studies (STS), from which the intervention by Haraway derives, are not free from tensions of relying almost exclusively on a certain European vocabulary and a willingness to provincialize Europe (Law and Lin, 2017). Thus, the project aims at relating to the roots of this knowledge more fairly by means of establishing feedback loops together with the actual producers of knowledge.

Yet, while 'subaltern' is implicitly or explicitly directed at making a distinction between those voices that are marginalized and those that are not (rather in a grey zone than in a binary understanding), situated knowledge can be understood as a general condition of knowledge production. Yet even Haraway admits that marginalized perspectives harbour the possibility to uncover unjust and oppressive structures that are invisibilized by a perspective concentrated on too powerful actors whose speech is not *silenced* but rather *enabled* by collective knowledge structures. The problem then is



*“how to have simultaneously an account of radical historical contingency for all knowledge claims and knowing subjects, a critical practice for recognizing our own ‘semiotic technologies’ for making meanings, and a no-nonsense commitment to faithful accounts of a ‘real’ world, one that can be partially shared and that is friendly to earth wide projects of finite freedom, adequate material abundance, modest meaning in suffering, and limited happiness (Haraway, 1988, p. 579)”.*

Simandan even suggests four ‘epistemic gaps’ within the situated knowledge tradition that are valuable in our framework (Simandan, 2019). The first gap is between possible vs. realized worlds (for her exemplified by e.g. the Diverse Economies approach; discussed in Chapter 4). The second gap refers to the ‘realized world vs. witnessed situation’. This means our ability to witness the world based on our positionality in a specific socio-spatial context. The third gap deals with the ‘witnessed situation versus remembered situation’ and the discrepancies between the ‘original’ situation and the way how we recount it. The last gap, finally, evaluates the ‘remembered situation versus confessed situation’. This gap therefore tackles problems of our (sometimes) *unconscious* being-in-the-world but also how we produce socially conform accounts that do not reflect how we remember a situation. We would add, however, that the element of the unconscious, or the fantasy structure that permeates our thinking (Byrne and Healy, 2006; Healy, 2010), shines through all these layers.

This makes it then also difficult to research ‘situated knowledge’ as it requires its own sophisticated methods of visioning (of which Simandan writes little). We therefore deem it indispensable to conduct fieldwork as knowledge is embodied, as we want to analyse the situation not only as ‘representation’ (MacLure, 2013), but in the processual emergence and reproduction. This in no way means that ‘confessed situations’ are not interesting but that they require their own speculative hermeneutics. Knowledge, in our view – and here we can also draw on innovation research that problematizes ‘knowledge’ – is not only about codified knowledge (and thus can be easily ‘extracted’ from an interview) but as much about a bodily enacted practice that can be observed and hardly verbalized (‘tacit’) (Gertler, 2003). This is not to suggest a strict separation between the two, or a strict separation between consciousness and unconsciousness for that matter. Practices of knowledge creation but also practices of value production and distribution can be verbalized, but there is always the danger that something important disappears. One is certainly well advised to *not only* take CEO talk seriously when analysing the *contribution* of innovation to the ecology in which it is embedded, e.g. when asking about care practices within the web of life. Yet, one should avoid a different vice, too: to conceptualize all practices, especially in case of perceived discrepancy between practice and its representation (within an interview), in a pre-established (Marxian or not) language behind which only fetishes, false consciousness and alike represent how actors are situated. This is even more problematic in the context of longstanding Western knowledge production in and on Africa and Central Asia / South Caucasus by Northern organizations and researchers. This constitutes the problem of the subaltern that we cannot solve but need to tackle: the problem to take the language of the ‘researched’ seriously without resorting to *only* positing this language as non-situated knowledge and thus as an entirely ‘authentic’ account of reality. The problem of developing a situated academic account that seeks for at least *inter-subjectivity*<sup>2</sup> between researchers and the (perhaps multiple) owners of that knowledge. Thus, STS emphasize that an account can be *objected*. Knowledge producers are given a chance to (in) validate the translation processes as proposed by our research team. Contra STS, this not necessarily means consensus – an ideal which might simply be not enforceable – but that objection must be made transparent. Otherwise, the ‘subaltern’ (and non-human to add) will always remain silent.

2 Note that STS approaches usually define this as ‘objectivity’ in the process of assembling the social and to highlight the role of non-humans as possible objectors. Thus, Latour proposes that objectivity “does not refer to the traditional sense of matters of fact—with their cold, disinterested claims to ‘objectification’—but to the warm, interested, controversial building sites of matters of concern. Objectivity can thus be obtained (...) by the presence of many objectors — even though there is no pretence for parodying the objectivist genre” Latour (2005, p. 125). At this stage, however, we are not sure, whether we can assemble many non-human objectors.

## 6.2 Spatial ordering through firm activities

Thus, we return to the question of powerfully constructed spatial orders (e.g. the global knowledge economy as a mode of capitalist domination) and how entrepreneurs stabilize them or create different and incommensurable alternatives to it. This is to treat 'peripheries' as "acting peripheries" with aspirations counteracting their discursive 'peripheralization' (Görmar and Lang, 2019).

### Spatial orders and spatial ordering

In order to emphasize our scepticism toward meta-discourses that proclaim an overarching totality of the economy (global knowledge economy, information economy, digital economy), we opt for a more process-based and fluid understanding based on 'ordering' instead of clear-cut 'orders'. Whereas in 'orders' the only opportunity for actors is to 'integrate' (thus implicitly favouring a reproductionism of the current system said to be in place), in 'ordering', we find albeit powerful yet incomplete and therefore potentially collapsible processes that might be fixed at a given time but subject to change thereafter (Law, 1994). Further, by stressing the process dimension of ordering, we highlight the struggles, contestations and competition between different (imaginings of) spatial orders in place in parallel at the same time. Hence, there are always multiple forms of economic globalisation, notwithstanding that one or some of those might gain dominance in discourse.

In the debates that we delineated, we see manifold processes of such ordering. On the one hand, while policy makers stress the *potential* mobility of knowledge in the global knowledge economy and therefore its ability to contribute to a fairer 'one-world world' (Law, 2015), reviewed perspectives rightfully resist this temptation. WCN and GVC / GPNs can direct our attention to a dynamic world of 'peripheralization' and 'core'-ization (or centralisation). In their view and from the viewpoint of capitalist modernity itself, 'knowledge-intensive' activities add most value in the production process. Yet, this split is not necessarily between Global South and Global North but rather between a *hierarchy of some* (urban) economic centres in both Global North and South, in which innovation is said to occur and through which value must be ultimately transferred, and the *many peripheralized places*. In this sense, the imagining of the global knowledge economy seems to rather strengthen inequalities than erase them, especially with regard to the agglomeration / non-agglomeration divide. Yet, a growing body of work suggests that innovation is not confined to agglomerations (Fitjar and Rodríguez-Pose, 2011; Graffenberger and Vonnahme, 2019; Graffenberger, Vonnahme, Brachert, and Lang, 2019) and that non-core regions might seek their fortunes not in forceful definitions of innovation as patented rent-seeking and growth stimulus but in alternative practices (Kinossian, 2018; Leick and Lang, 2018; Moolaert, Martinelli, Swyngedouw, and Gonzalez, 2005).

Moreover, we are wary of the underlying rationalistic model that stipulates the possession of, and indeed obsession with, monetized value as the prime *motivation* for economic activity as a naturalized fact. First, we think that a less science and technology driven conceptualization of innovation will considerably widen what can count as 'innovation' / 'knowledge' in the global economy without resorting to the vice of claiming a too strong relationship between agglomerations and STI-driven activities. Second, we expect geographies of belonging to eventually mediate the geographical transfer of value. Third, we think spatial ordering must transcend an analysis of value distribution / capture. The latter approach obliterates the moment of appropriation and consumption / waste – and often renders passive the manifold *active* but *devalued* natures that are indispensable to generate 'rent' (Kallis and Swyngedouw, 2017 for an inconclusive but insightful discussion on the notion of 'rent'). In other words, it fails to conceive the economy as an ecology although the common root *oikos* can help us to conceive their unity, by questioning the Nature / Society distinction that profit-seeking capitalism as *one* type of ecology creates in the first place (Foster, 1999, 2000; Moore, 2015).

## Belonging, value and the company

A place-based, but not place-bound, perspective (cf. Escobar, 2018) that takes into account the geographies of belonging might help us in re-envisioning this shift. Therefore, we suggest evading both the knowledge creation-centred geographies of innovation literature *and* the value-centred eschatology of GVCs / GPNs and WCN perspectives by considering the geographies of belonging that shape both processes. This means to create a conceptual triangle of knowledge creation – value production (here widely understood incl. appropriation, actual production process, distribution, consumption, waste) – belonging. The insertion of belonging is not a simple *addition* that leaves the coordinates of the GOI and GVC / GPNs untouched. It is to be understood as a reconstruction of existing GVC / GPN accounts as it re-poses the question of what exactly economic value is *beyond* its all-too obvious materialization as *exchange value* expressed in US dollars.

While we do not want to deny the explanatory potency of *power*, we reject a too dualistic perspective on power. We thus posit that ‘peripherally’ located companies in Central Asia / South Caucasus and Sub-Sahara Africa should not be conceptualized as powerless or the mythical places of knowledge appropriation and land expropriation by Western TNCs or national capitalists, supported by governments subscribing to this mode of modernity / coloniality (and thus suggesting a dialectical interpretation of Western TNCs / national capitalists vs its counter-movements). We will ask to what kind of globalization, or rather pluriversalization projects, do companies, knowledge and innovation contribute via spatial ordering? Will they necessarily strengthen an OECD-style capitalist global knowledge economy based on rigorously appropriated and enforced intellectual property rights, or alternatively, could they be re-envisioned as the starting point for more diverse *Pluriversal Knowledge Economies* premised perhaps on a new ‘spatial format’ that we tentatively could label *Pluriversal Value Communities* (in accordance with, but also contradistinction to, GCC / GVC / GPNs)? Are we thus better equipped to observe the multiplicities of value regimes (Harvey, 2018a, 2018b), grounded in multiple ontologies of valorization?

We think such a shift in perspective would be able to de-center a tradition that equates value with the socially necessary labour time by human labour power (in a given society as Marx pointed out) as *one* among *many possible* ways how economic actors institute value in practice. In this sense, the ‘death drive’ around exchange value expansion as the object-cause of desire (Özselçuk and Madra, 2005) can be replaced. Instead, we focus on the very negotiation what is ontologically at stake when economic actors produce and exchange commodities: Spatial ordering based on *Pluriversal Value Communities* is thus to be understood as an “interontological” (Escobar, 2018, p. 176) negotiation of value along not only networks, but perhaps also communities.

In the process of knowledge and commodity circulation, frictions occur (Tsing, 2005). But similarly, spatial ordering is about daring to ask whether and how a postcapitalist company, or a company not rooted in colonial modernity and embedded in a different kind of relation to its ecology, is possible to be imagined and practiced in the first place. In Marxian thought, which still dominates economic geography’s imaginary, the choice in vocabulary is relatively poor: on the one hand is the capitalist ‘corporation’ premised on private ownership of the means of production, on the other hand, the ‘cooperative’ based on workers’ ownership of the means of production (and, similarly, the state enterprise based on ‘state ownership’). Everything in between – a variety of classifications and taxonomies along various dimensions, that include amongst many other social enterprises, fair trade networks, family-run businesses – were conceived as residual categories that could be subsumed under any of the two in case of doubt. Seen in this light, spatial ordering should be capable in delineating not just the *quantity* (firm growth, employee growth, *exchange value* expansion) but essentially the *quality* of the production process, thus of *use value* creation and distribution with and for more-than-human communities. In line with Marx’ original insights on the commodity (Marx, 1999 [1867]: Chapter One), it asks what kind of *social relations* are produced spatially through a commodity and brings back the often overlooked cultural-ecologically specific *use value*, which should not be conflated with an ‘objective’ utility but

rather as a *contribution* to certain goals within nested communities, vis-à-vis *exchange value*, that seeks its realization under the universal value-form of money. While we take Marxian criticism of *commodity fetishism* seriously, we want to be conceptually more generous by conceiving economic relationships between manifold exchangers in *Pluriversal Value Communities* as more than a priori cases of *exploitation* and instances of power hierarchies.

'Overdetermination' might be key to understanding place-based activities: maybe after all, in some companies, there is no mutual exclusion between exchange value and use value, profits and community-making, commodity and non-alienated worlds, closed innovation and sharing of knowledge etc. In line with the Diverse Economies approach, this leads to an emphasis not on *ownership of the means of production* (which still decisively matter) but on how the economy, especially valorization, is *performed*, as well as on the multiscalar institutions, from geopolitical organizations down to 'informalized' institutions, that shape this process.

One way of expressing the relationship of companies and their geographies of belonging can be formulated with reference to 'embeddedness' (Granovetter, 1985), a term widely used in economic geography. Yet, we consciously refrained from discussing the concept too prominently. This is because 'embeddedness' has recently succumbed to another 'source' through which profits can be advanced, competitiveness strengthened, and firm survival secured (Belyavskiy, 2020; Radaev, 2016; Uzzi, 1996). GPN approaches also have a long tradition of theorizing (network, territorial, societal) 'embeddedness' (especially Hess, 2004) but the accounts are rather rudimentary, and ultimately tend to locate ethical behaviour *external to* companies and within Civil Society Organizations, consumers, in an often antagonistic sense (Levy, Reinecke, and Manning, 2016), and /or 'consulting' companies that try to 'diminish' reputational damages through voluntary CSR schemes (Coe and Yeung, 2015, 57; 154). Moreover, we argue the model itself, and not the interactions on the ground, limited the vocabulary of emotions to the problem of '(mis-)trust'. While we concur with that '(mis-)trust' might be indeed crucial for any business to occur, for any worker to be hired, for any supply chain to be shifted, we think that 'network embeddedness', once established, can be more than only an issue of 'trust' but also an issue of care up to the point that 'network' itself might be simply a misnomer in what might be more pointedly conceived as a 'community' (Steenberg, 2014). 'Societal embeddedness', on the other hand, must go beyond showing some socio-cultural specificities that nonetheless are subordinated to the dominance of *exchange value*. Rather, they shall hint at

*"representing the richness of the economy in terms of the links between the affective, cognitive and material, between circuits of value, meaning and matter, between the moments of production, exchange and consumption and between political economies grounded in different concepts of value and processes of valuation". (Hudson, 2008, p. 438)*

Taking the affective dimension seriously, we think current frameworks of embeddedness are still too 'rationalistic', reserve other logics for extra-firm actors only, and thus reify the exchange value-obsessed company as a naturalized fact. While we think that 'territorial' embeddedness precisely should be seen as a category through which place-based and holistic understandings of a company towards its more-than-human communities can be examined (this is what we mean with 'belonging'), empirical analyses too often equal 'territorial embeddedness' as an 'asset' through which regional growth-coalitions and regional competitiveness can be strengthened (Coe and Lee, 2013; Nunes and Lopes, 2015; Pallares-Barbera, Tulla, and Vera, 2004 as examples for such an approach). Territorial embeddedness is effectively subjected to the growth paradigm and can easily co-exist with various destructive forms of economic activity that precisely do *not* treat *place* as a 'unique', holistic category embedded in manifold ecologies (cf. Kelly, 2013 for a critique). Instead, the holism of *place* becomes reduced to the quantification of various '(exchange) value capture', 'rent capture' and 'firm growth' measures.

Overdetermined exchange relations can show how commodity exchange might be at the same time an instance that binds actors to a certain degree (not only independent exchangers but socially

interconnected network / community members) (Gregory, 2015 [1982]; Osteen, 2002) in what Steenberg has poignantly called 'mutual embeddedness' of economic and social rationales (Steenberg, 2016) and thus also co-existence of 'network' and 'community' logics within exchange (Steenberg, 2014) as tropes of socio-material relations. While capitalism is said to function due to a one-sided devaluing of the 'free gifts of nature' or 'cheap natures' based on tremendous amounts of unpaid work / energy (Moore, 2018), we can conversely conceive of exchange relations as positive projects of mutualization. In other words, companies have the ability to (re-)connect in the holistic sense of *oikos*. Thus, what lies outside the company but can be internalized does not appear anymore as passive 'rent' (socialized R&D expenditures, the work of non-humans, care relations that reproduce life) for the capitalist but as active part-and-parcel of the economy.

### Spatial ordering, situated knowledge and place-based practices

In line with the account of situated knowledge, spatial ordering processes can be best observed based on not only trust and power relations and their implications for knowledge and commodity exchange (as many GVC / GPN would posit) but on the basis of how overdetermined exchange relations (at the intersections of use value, exchange value and forms of emotioning and belonging including care) are practiced. This could include (or be more accentuated within) the family, kin, the workers within the firm, but could extend as much to (parts of) the local or regional community, the nation, suppliers or other partners within the supply chain, whether they are national or not ('strategic partners', raw material suppliers etc.), and "Earth Others" (e.g. aimed at the reproduction of energy sources and ecologies on which economic activity depends). In this sense, spatial ordering by enterprises can be also understood as deliberate attempts to extend our definition of community as Haraway has recently suggested with reference to 'kin' (Haraway, 2016). Instead of re-inscribing any territory as the sole legitimate beneficiary of 'abstract value' (might it be the company, the 'periphery', the region, the nation etc.), we want to see how innovative companies themselves negotiate knowledge creation and (use and exchange) value creation and which kind of communities are thus included and excluded in the respective globalization / pluriversalization projects.

In this sense, spatial ordering is also premised on place-based spatial imaginations of belonging and kin / community. For these more conscious instances, entrepreneurs can provide an account of the mismatch between *imagination* and the *enactment* of spatial ordering. They can tell us themselves where they feel the impossibility to internationalise their business (as they envision) due to some impediments and objectors. However, the very idea of imagination itself is firmly rooted in the materiality of the entrepreneurs, in their being-in-the-world. Thus, for elements that are rather rooted in a more unrecognized being-in-the-world, fieldwork will be crucial to overcome a too representational logic expressed through interviews. Precisely because there can be a misfit between rhetoric and practice, fieldwork offers the unique opportunity to see how spatial practices, how 'being-with' is practiced and becomes institutionalized as ordering. This, of course, is not to radically pit speech against practice, to ruthlessly expose perceived contradictions, but to open a mutually enriching dialogue. As each one stands at a specific point, researcher, company, its workers, and the communities in which they are embedded, we do not imply a multi-sited ethnography (Hannerz, 2003; Marcus, 1995) in which we travel all along a given commodity chain or along knowledge networks, leading to possibly infinite sites that need to be woven into a complex narrative. Rather, we think the place-based activities suffice to conduct what has been recently called a 'multi-scalar ethnography' (Xiang, 2013) in which the frictions are not analysed within the supply chain itself as the *unit of analysis* but rather *place-based practices* of knowledge creation and manifold exchange relations. While the municipality, federal / national and supranational levels must be considered, place-based multi-scalar ethnography does not accumulate primary data on all these scales but relies on how companies negotiate these demands on the ground.

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## References

- Abdolvand, B., Mez, L., Winter, K., Mirsaeedi-Gloßner, S., Schütt, B., Rost, K. T., and Bar, J. (2015). The dimension of water in Central Asia: Security concerns and the long road of capacity building. *Environmental Earth Sciences*, 73(2), 897–912. <https://doi.org/10.1007/s12665-014-3579-9>
- Acemoglu, D., and Robinson, J. A. (2017). The economic impact of colonialism. *The Long Economic and Political Shadow of History Volume I. A Global View*, 81.
- Acheampong, G. (2019). The nature of corporate digital agricultural entrepreneurship in Ghana. In *Digital Entrepreneurship in Sub-Saharan Africa* (pp. 175-198). Palgrave Macmillan, Cham.
- Adesida, O., Karuri-Sebina, G., and Resende-Santos, J. (2016). *Innovation Africa: Emerging hubs of excellence*. Emerald Group Publishing.
- African Development Report. (2011). The Role of the Private Sector in Africa’s Economic Development.pdf. Retrieved January 23 2021, from <https://www.afdb.org>
- Alff, H. (2016). Flowing goods, hardening borders? China’s commercial expansion into Kyrgyzstan re-examined. *Eurasian Geography and Economics*, 57(3), 433–456. <https://doi.org/10.1080/15387216.2016.1200993>
- Alhassan, A., and Kilishi, A. A. (2019). Weak economic institutions in Africa: a destiny or design?. *International Journal of Social Economics*.
- Alheet, A. F., and Hamdan, Y. (2020). Evaluating innovation-driven economic growth: A case of Jordan. *Entrepreneurship and Sustainability Issues*, 7(3), 1790–1802. [https://doi.org/10.9770/jesi.2020.7.3\(23\)](https://doi.org/10.9770/jesi.2020.7.3(23))
- Antweiler, C. (1998). Local knowledge and local knowing. An anthropological analysis of contested’ cultural products’ in the context of development. *Anthropos*, 469-494.
- Asheim, B. T. (2019). Smart specialisation, innovation policy and regional innovation systems: What about new path development in less innovative regions? *Innovation: The European Journal of Social Science Research*, 32(1), 8–25. <https://doi.org/10.1080/13511610.2018.1491001>
- Austin, G. (2010). *African economic development and colonial legacies* (No. 1, pp. 11-32). Institut de hautes études internationales et du développement.
- Audretsch, D. B. (2021). Have we oversold the Silicon Valley model of entrepreneurship?. *Small Business Economics*, 56(2), 849-856.
- Bader, J., Grävingsholt, J., and Kästner, A. (2010). Would autocracies promote autocracy? A political economy perspective on regime-type export in regional neighbourhoods. *Contemporary Politics*, 16(1), 81–100. <https://doi.org/10.1080/13569771003593904>
- Bakilana, M.A. (2015, October 29). 7 facts about population in Sub-Saharan Africa. World Bank. <https://blogs.worldbank.org/african/7-facts-about-population-in-sub-saharan-africa>
- Barnard, H., and Chaminade, C. (2011). *Global Innovation Networks: what are they and where can we find them?(Conceptual and Empirical issues)* (No. 2011/4). Lund University, CIRCLE-Center for Innovation Research.

- Barsukova, S., and Radaev, V. (2012). Informal Economy in Russia: A Brief Overview. *Economic sociology – The European electronic newsletter*, 13(2), 4–12. Retrieved from <https://publications.hse.ru/mirror/pubs/share/folder/1i2wqajqn0/direct/70677537.pdf>
- Bathelt, H., and Cohendet, P. (2014). The creation of knowledge: local building, global accessing and economic development—toward an agenda. *Journal of Economic Geography*, 14(5), 869–882.
- Bathelt, H., Malmberg, A., and Maskell, P. (2004). Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography*, 28(1), 31–56. <https://doi.org/10.1191/0309132504ph4690a>
- Bell, D. (1973). *The coming of post industrial society*. New York: Basic Books.
- Belyavskiy, B. (2020). Social embeddedness as a business goal: New theoretical implications from the case of a global value chain. *Экономическая социология*, 21(3), 151–173. Retrieved from <https://cyberleninka.ru/article/n/social-embeddedness-as-a-business-goal-new-theoretical-implications-from-the-case-of-a-global-value-chain.pdf>
- Bhambra, G. K. (2014). Postcolonial and decolonial dialogues. *Postcolonial Studies*, 17(2), 115–121. <https://doi.org/10.1080/13688790.2014.966414>
- Börzel, T. A., and Risse, T. (Eds.) (2016). *The Oxford handbook of comparative regionalism* (First edition). Oxford: Oxford University Press.
- Boschma, R. (2005). Proximity and innovation: a critical assessment. *Regional studies*, 39(1), 61–74.
- Botoeva, A., and Spector, R. A. (2013). Sewing to satisfaction: Craft-based entrepreneurs in contemporary Kyrgyzstan. *Central Asian Survey*, 32(4), 487–500. <https://doi.org/10.1080/02634937.2013.862963>
- Boussebaa, M. (2020). Identity regulation and globalization. In *The Oxford Handbook of Identities in Organizations*. Oxford: Oxford University Press.
- Boussebaa, M., Morgan, G., and Sturdy, A. (2012). Constructing global firms? National, transnational and neocolonial effects in international management consultancies. *Organization Studies*, 33(4), 465–486.
- Brisku, A., and Blauvelt, T. (2021). *The Transcaucasian Democratic Federative Republic of 1918: Federal Aspirations, Geopolitics and National Projects*. London: Routledge.
- Brown, E., Derudder, B., Parnreiter, C., Peluassy, W., Taylor, P. J., and Witlox, F. (2010). World City Networks and Global Commodity Chains: Towards a world-systems' integration. *Global Networks*, 10(1), 12–34. <https://doi.org/10.1111/j.1471-0374.2010.00272.x>
- Brubaker, R. (2012). Categories of analysis and categories of practice: A note on the study of Muslims in European countries of immigration. *Ethnic and Racial Studies*, 36(1), 1–8. <https://doi.org/10.1080/01419870.2012.729674>
- Byrne, K., and Healy, S. (2006). Cooperative Subjects: Toward a Post-Fantasmatic Enjoyment of the Economy. *Rethinking Marxism*, 18(2), 241–258. <https://doi.org/10.1080/08935690600578919>
- Cancino, C. A., and Coronado, F. C. (2014). Exploring the determinants of born-global firms in Chile. *Academia Revista Latinoamericana de Administración*, 27(3), 386–401. <https://doi.org/10.1108/ARLA-10-2013-0154>
- Carlaw, K., Oxley, L., Walker, P., Thorns, D., and Nuth, M. (2006). Beyond the hype: Intellectual property and the knowledge society/knowledge economy. *Journal of Economic Surveys*, 20(4), 633–690.
- Carmody, P. (2016). *The new scramble for Africa*.
- Castree, N. (2001). Commodity Fetishism, Geographical Imaginations and Imaginative Geographies. *Environment and Planning A: Economy and Space*, 33(9), 1519–1525. <https://doi.org/10.1068/a3464>
- Catalone, R. J., Cavusgil, S. T., and Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31(6), 514–524.
- Chakrabarty, D. (2000). *Provincializing Europe: Postcolonial thought and historical difference* ([ACLS Humanities E-Book edition]). Princeton, N.J.: Princeton University Press. Retrieved from <http://hdl.handle.net/2027/heb.04798.0001.001>
- Chen, D. H., and Dahlman, C. J. (2005). The knowledge economy, the KAM methodology and World Bank operations. *World Bank Institute Working Paper*, (37256).
- Coe, N. M. (2021). *Advanced introduction to global production networks*. Elgar advanced introductions.
- Coe, N. M., and Lee, Y.-S. (2013). 'We've learnt how to be local': The deepening territorial embeddedness of Samsung-Tesco in South Korea. *Journal of Economic Geography*, 13(2), 327–356. <https://doi.org/10.1093/jeg/lbs057>
- Coe, N. M., and Yeung, H. W.-c. (2015). *Global production networks: Theorizing economic development in an interconnected world*. Oxford: Oxford University Press.
- Coe, N. M., Dicken, P., Hess, M., and Yeung, H. W.-C. (2010). Making connections: Global Production Networks and World City Networks. *Global Networks*, 10(1), 138–149. <https://doi.org/10.1111/j.1471-0374.2010.00278.x>
- Coe, N. M., Hess, M., Yeung, H. W.-c., Dicken, P., and Henderson, J. (2004). 'Globalizing' regional development: A global production networks perspective. *Transactions of the Institute of British Geographers*, 29(4), 468–484. <https://doi.org/10.1111/j.0020-2754.2004.00142.x>
- Çokgezen, M., and Özcan, G. B. (2008). *Orta Asya'da girişimcilik: fırsatlar, sorunlar ve çözüm önerileri* (yayın no:2008-05). İstanbul: İstanbul Ticaret Odası.
- Collyer, F., Connell R., Maia, J., and Morrell, R. (2019). *Knowledge and Global Power: Making New Sciences in the South*. Wits University Press.

- Cornell University, INSEAD, and WIPO (2018). *The Global Innovation Index 2018: Energizing the World with Innovation*. Ithaca, Fontainebleau, Geneva. Retrieved from <https://www.WIPO.int/publications/en/details.jsp?id=4330>
- Cornell University, INSEAD, and WIPO (2020). *Global Innovation Index 2020: Who Will Finance Innovation?* Ithaca, Fontainebleau, Geneva.
- Costanza-Chock, S. (2020). *Design justice: Community-led practices to build the worlds we need. Information policy series*. Cambridge, Mass.: MIT Press.
- Crawford, G. (2008). EU human rights and democracy promotion in Central Asia: From Lofty principles to Lowly self-interests. *Perspectives on European Politics and Society*, 9(2), 172–191. <https://doi.org/10.1080/15705850801999669>
- Demaria, F., and Kothari, A. (2017). The Post-Development Dictionary agenda: Paths to the pluriverse. *Third World Quarterly*, 38(12), 2588–2599. <https://doi.org/10.1080/01436597.2017.1350821>
- Derudder, B., and Taylor, p. J. (2020). Three Globalizations Shaping the Twenty-first Century: Understanding the New World Geography through Its Cities. *Annals of the American Association of Geographers*, 110(6), 1831–1854. <https://doi.org/10.1080/24694452.2020.1727308>
- Dicken, p. (2015). *Global shift: Mapping the changing contours of the world economy* (7th edition). Los Angeles, London, New Delhi, Singapore, Washington DC: Sage.
- Do, H., Smallbone, D., and Blackburn, R. (2018, November 14). *The governance of born globals and their value chains*.
- EBRD (2019a). *EBRD Knowledge Economy Index*. London. Retrieved from <https://www.EBRD.com/news/publications/brochures/EBRD-knowledge-economy-index.html>
- EBRD (2019b). *Introducing the EBRD Knowledge Economy*. London.
- Eder, J. (2019). Innovation in the Periphery: A Critical Survey and Research Agenda. *International Regional Science Review*, 42(2), 119–146. <https://doi.org/10.1177/0160017618764279>
- Edler, J., & Fagerberg, J. (2017). Innovation policy: what, why, and how. *Oxford Review of Economic Policy*, 33(1), 2–23.
- Eggink, M. E. (2013). A Review of the Theoretical Context of the Role of Innovation in Economic Development. *International Journal of Economics and Management Engineering*, 7(11), 7.
- Ehn, P., Nilsson, E. M., and Topgaard, R. (Eds.) (2014). *Making futures: Marginal notes on innovation, design, and democracy*. Cambridge, Massachusetts: The MIT Press. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=886368>
- Esanov, A., Raiser, M., and Buiter, W. (2006). Nature's blessing or nature's curse? The political economy of transition in resource-based economies. In R. Auty and I. de Soysa (Eds.), *Energy, Wealth and Governance in the Caucasus and Central Asia: Lessons not learned* (pp. 39–56). London: Routledge.
- Escobar, A. (2004). Development, Violence and the New Imperial Order. *Development*, 47(1), 15–21. <https://doi.org/10.1057/palgrave.development.1100014>
- Escobar, A. (2018). *Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds. New ecologies for the twenty-first century*. Durham, London: Duke University Press.
- Evoh, C. J., Byalusago Mugimu, C., and Chavula, H. K. (2013). Knowledge Production in the Knowledge Economy: Higher Education Institutions and the Application of Innovations in ICT for Capacity Development in Africa. In A. W. Wiseman and C. C. Wolhuter (Eds.), *International Perspectives on Education and Society* (Vol. 21, pp. 285–323). Emerald Group Publishing Limited. [https://doi.org/10.1108/S1479-3679\(2013\)0000021013](https://doi.org/10.1108/S1479-3679(2013)0000021013)
- Ferguson, S., Henrekson, M., & Johannesson, L. (2021). Getting the facts right on born globals. *Small Business Economics*, 56(1), 259–276.
- Fitjar, R. D., and Huber, F. (2015). Global pipelines for innovation: Insights from the case of Norway. *Journal of Economic Geography*, 15(3), 561–583. <https://doi.org/10.1093/jeg/lbu017>
- Fitjar, R. D., and Rodríguez-Pose, A. (2011). Innovating in the Periphery: Firms, Values and Innovation in Southwest Norway. *European Planning Studies*, 19(4), 555–574. <https://doi.org/10.1080/09654313.2011.548467>
- Forson, J. A. (2020). Innovation financing and public policy dilemmas in the Economic Community of West African States (ECOWAS). *African Journal of Science, Technology, Innovation and Development*, 12(1), 1–11. <https://doi.org/10.1080/20421338.2019.159957>
- Foster, J. B. (1999). Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology. *American Journal of Sociology*, 105(2), 366–405. <https://doi.org/10.1086/210315>
- Foster, J. B. (2000). *Marx's ecology: Materialism and nature*. New York: Monthly Review Press. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=516472>
- Foster-McGregor, N., Kaulich, F., & Stehrer, R. (2015). *Global Value Chains in Africa*. (UNU-MERIT Working Paper 2015-024, United Nations University). <http://www.merit.unu.edu/publications/wppdf/2015/wp2015-024.pdf>
- Frank, A.G. (1967). *Capitalism and Underdevelopment in Latin America*. New York: Monthly Review Press.
- Frank, A.G. (1978). *Dependent Accumulation and Underdevelopment*. New York: Monthly Review Press.
- Franke, A., Gawrich, A., and Alakbarov, G. (2010). Kazakhstan and Azerbaijan as Post-Soviet Rentier States: Resource Incomes and Autocracy as a Double 'Curse' in Post-Soviet Regimes. *Europe-Asia Studies*, 61(1), 109–140. <https://doi.org/10.1080/09668130802532977>



- Frankopan, P. (2016). *The silk roads: A new history of the world* (Paperback edition). London, Oxford, New York, New Delhi, Sydney: Bloomsbury.
- Friederici, N. (2016). *Innovation hubs in Africa: Assemblers of technology entrepreneurs*. Oxford, UK.
- Friedmann, J. (1986). The World City Hypothesis. *Development and Change*, 17(1), 69–83. <https://doi.org/10.1111/j.1467-7660.1986.tb00231.x>
- Gachie, W., and Govender, D. W. (2017). Innovation Policy and Governance in The African Region. *International Business & Economics Research Journal (IBER)*, 16(2), 119–130. <https://doi.org/10.19030/iber.v16i2.9926>
- Garcia, H. (2020). *England Re-Oriented: How Central and South Asian Travelers Imagined the West, 1750-1857: How Central and SouthAsian Travelers Imagined the West, 1750-1857* (Critical Perspectives on Empire). Cambridge: Cambridge University Press.
- GaWC (2020). The World According to GaWC 2020. Retrieved from <https://www.lboro.ac.uk/gawc/world2020t.html>
- Gertler, M. S. (2003). Tacit knowledge and the economic geography of context, or The undefinable tacitness of being (there). *Journal of Economic Geography*, 3(1), 75–99. <https://doi.org/10.1093/jeg/3.1.75>
- Ghai, D., and de Alcdntara, C. H. (1990). *The Crisis of the 1980s in Sub-Saharan Africa, Latin America and the Caribbean: Economic Impact, Social Change and Political Implications*. 38.
- Gibson-Graham, J. K. (1993). Waiting for the Revolution, or How to Smash Capitalism while Working at Home in Your Spare Time. *Rethinking Marxism*, 6(2), 10–24. <https://doi.org/10.1080/08935699308658052>
- Gibson-Graham, J. K. (1996). *The end of capitalism (as we knew it): A feminist critique of political economy*. Cambridge, Oxford: Blackwell Publishers.
- Gibson-Graham, J. K. (2003). An Ethics of the Local. *Rethinking Marxism*, 15(1), 49–74. <https://doi.org/10.1080/0893569032000063583>
- Gibson-Graham, J. K. (2007). Beyond Global vs. Local: Economic Politics Outside the Binary Frame. In A. Herod and M. W. Wright (Eds.), *Geographies of Power: Placing Scale* (pp. 25–60). Chichester: John Wiley and Sons.
- Gibson-Graham, J. K. (2008). Diverse economies: Performative practices for `other worlds'. *Progress in Human Geography*, 32(5), 613–632. <https://doi.org/10.1177/0309132508090821>
- Gibson-Graham, J. K. (2014). Rethinking the Economy with Thick Description and Weak Theory. *Current Anthropology*, 55(S9), S147-S153. <https://doi.org/10.1086/676646>
- Gibson-Graham, J. K. (2020). Reading for Difference in the Archives of Tropical Geography: Imagining An(Other) Economic Geography for Beyond the Anthropocene. *Antipode*, 52(1), 12–35. <https://doi.org/10.1111/anti.12594>
- Gibson-Graham, J. K., and Dombroski, K. (2020). Introduction to The Handbook of Diverse Economies: inventory as ethical intervention. In J. Gibson-Graham and K. Dombroski (Eds.), *The Handbook of Diverse Economies* (pp. 1–23). Cheltenham, Northampton: Edward Elgar Publishing.
- Gibson-Graham, J. K., and Roelvink, G. (2009). Social Innovation for Community Economies. In D. MacCallum, F. Moulaert, J. Hillier, and S. Vicari Haddock (Eds.), *Social innovation and territorial development* (pp. 25–37). Farnham, Burlington, VT: Ashgate.
- Gibson-Graham, J. K., Cameron, J., Healy, S., and McNeill, J. (2019). Roepke Lecture in Economic Geography—Economic Geography, Manufacturing, and Ethical Action in the Anthropocene. *Economic Geography*, 95(1), 1–21. <https://doi.org/10.1080/00130095.2018.1538697>
- GITA. (n.d.). Our Startup. Retrieved from <https://webacc.leibniz-ifl.de/PT/https://gita.gov.ge/eng/startups>
- GIZ. (2021). *African Continental Free Trade Area (AfCFTA)*. Retrieved from <https://www.giz.de/en/worldwide/59611.html>
- Godin, B. (2006). The Knowledge-Based Economy: Conceptual Framework or Buzzword? *The Journal of Technology Transfer*, 31(1), 17–30. <https://doi.org/10.1007/s10961-005-5010-x>
- Godin, B., and Vinck, D. (Eds.) (2017). *Critical studies of innovation: Alternative approaches to the pro-innovation bias*. Cheltenham, UK, Northampton, MA: Edward Elgar Publishing.
- Görmar, F., and Lang, T. (2019). Acting Peripheries: An Introduction. *ACME: An International Journal for Critical Geographies*, 18(2), 486–495.
- Graffenberger, M., and Vonnahme, L. (2019). Questioning the 'Periphery Label' in Economic Geography. *ACME: an International Journal for Critical Geographies*, 18(2), 529–550. Retrieved from <https://www.acme-journal.org/index.php/acme/article/download/1557/1473>
- Graffenberger, M., Vonnahme, L., Brachert, M., and Lang, T. (2019). Broadening perspectives: Innovation outside of agglomerations. In K. Koschatzky, T. Stahlecker, and D. Antonioli (Eds.), *Book series "Innovations potentials": Innovation-based regional change in Europe: Chances, risks and policy implications* (pp. 47–68). Stuttgart: Fraunhofer Verlag.
- Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, 91(3), 481–510.
- Gregory, C. A. (2015 [1982]). *Gifts and Commodities*. HAU – Classics in Ethnographic Theory. Chicago: HAU Books. Retrieved from <https://ebookcentral.proquest.com/lib/gbv/detail.action?docID=5510771>
- Grosfoguel, R. (2011). Decolonizing Post-Colonial Studies and Paradigms of Political Economy: Transmodernity, Decolonial Thinking, and Global Coloniality. *TRANSMODERNITY: Journal of Peripheral Cultural Production of the Luso-Hispanic World*, 1(1).

- Grubačić, A., and O'Hearn, D. (2016). *Living at the edges of capitalism: Adventures in exile and mutual aid*. Oakland, California: University of California Press. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&AN=1132477>
- Gu, M. D. (2020). What is 'decoloniality'? A postcolonial critique. *Postcolonial Studies*, 23(4), 596–600. <https://doi.org/10.1080/13688790.2020.1751432>
- Hannerz, U. (2003). Being there... and there... and there! Reflections on Multi-Site Ethnography. *Ethnography*, 4(2), 201–216. <https://doi.org/10.1177/14661381030042003>
- Haraway, D. (1988). Situated Knowledges. The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14(3), 575–599.
- Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene. Experimental futures Technological lives, scientific arts, anthropological voices*. Durham, London: Duke University Press.
- Harvey, D. (2001). Globalization and the "Spatial Fix". *geographische revue*, 2, 23–30.
- Harvey, D. (2004). The 'New' Imperialism: Accumulation by Dispossession. *Socialist Register*, 40, 63–87.
- Harvey, D. (2018a). *Marx, capital and the madness of economic reason*. New York, NY: Oxford University Press.
- Harvey, D. (2018b). Marx's Refusal of the Labour Theory of Value. Retrieved from <http://davidharvey.org/2018/03/marxs-refusal-of-the-labour-theory-of-value-by-david-harvey/>
- Haskel, J., and Westlake, S. (2018). *Capitalism without capital: The rise of the intangible economy* (First paperback printing). Princeton: Princeton University Press.
- Healy, S. (2010). Traversing Fantasies, Activating Desires: Economic Geography, Activist Research, and Psychoanalytic Methodology. *The Professional Geographer*, 62(4), 496–506. <https://doi.org/10.1080/00330124.2010.501266>
- Healy, S. (2014). The biopolitics of community economies in the era of the Anthropocene. *Journal of Political Ecology*, 21(1). <https://doi.org/10.2458/v21i1.21133>
- Hedlund, G., and Kverneland, A. (1985). Are strategies for foreign markets changing? The case of Swedish investment in Japan. *International Studies of Management and Organization*, 15(2), 41–59.
- Helbrecht, I., Pohl, L., Genz, C., and Dobrusskin, J. (2021). Imaginationen der Globalisierung. In M. Löw, V. Sayman, and J. Schwerer (Eds.), *Re-Figuration von Räumen. Am Ende der Globalisierung: Über die Refiguration von Räumen* (pp. 307–335).
- Hernández-Catá, E. (1999). Sub-Saharan Africa: Economic policy and outlook for growth. *Finance & Development*, 36(001).
- Hess, M. (2004). 'Spatial' relationships? Towards a reconceptualization of embedded ness. *Progress in Human Geography*, 28(2), 165–186. <https://doi.org/10.1191/0309132504ph479oa>
- Hirsch, F. (2000). Toward an Empire of Nations: Border-Making and the Formation of Soviet National Identities. *Russian Review*, 59(2), 201–226.
- Hirsch, F. (2005). *Empire of nations: Ethnographic knowledge & the making of the Soviet Union. Culture & society after socialism*. Ithaca, N.Y.: Cornell University Press.
- Hopkins, T. K., and Wallerstein, I. (1986). Commodity chains in the world-economy prior to 1800. *Review (Fernand Braudel Center)*, 10(1), 157–170.
- Horak, S., Afiouni, F., Bian, Y., Ledeneva, A., Muratbekova-Touron, M., and Fey, C. F. (2020). Informal Networks: Dark Sides, Bright Sides, and Unexplored Dimensions. *Management and Organization Review*, 16(3), 511–542. <https://doi.org/10.1017/mor.2020.28>
- Hudson, R. (2008). Cultural political economy meets global production networks: A productive meeting? *Journal of Economic Geography*, 8(3), 421–440. <https://doi.org/10.1093/jeg/lbn005>
- Hughes, A., McEwan, C., and Bek, D. (2015). Postcolonial Perspectives on Global Production Networks: Insights from Flower Valley in South Africa. *Environment and Planning A: Economy and Space*, 47(2), 249–266. <https://doi.org/10.1068/a130083p>
- Humphrey, J., and Schmitz, H. (2002). How does insertion in global value chains affect upgrading in industrial clusters? *Regional Studies*, 36(9), 1017–1027. <https://doi.org/10.1080/0034340022000022198>
- Huseynova, A., and Закир, Н. (2014). *Синергетический подход Национальной инновационной системе* (EcoMod No. 7574).
- Ighobor, K. (2021, April). AfCFTA: 100 days since start of free trading, prospects seem bright. Retrieved from <https://www.un.org/africarenewal/magazine/april-2021/AfCFTA-100-days-start-free-trading-prospects-seem-bright>
- Iizuka, M., Mawoko, P., and Gault, F. (2015). Innovation for development in Southern & Eastern Africa: Challenges for promoting ST&I policy. *UNU-MERIT Policy Brief*, 1, 1–8.
- IMF (2014). *The Caucasus and Central Asia: Transitioning to Emerging Markets*. Washington DC.
- Inan, F., and Yayloyan, D. (2018). *New Economic Corridors in the South Caucasus and the Chinese One Belt One Road*. Ankara.
- Ivaniashvili-Orbeliani, G. (2009). The role of national innovation system in economic competitiveness of Georgia. *The Caucasus & Globalization*, 3(2–3). Retrieved from <https://cyberleninka.ru/article/n/the-role-of-national-innovation-system-in-economic-competitiveness-of-georgia.pdf>
- Jasanoff, S. (2015). One. Future Imperfect: Science, Technology, and the Imagination of Modernity. In *Dreamscapes of modernity* (pp. 1–33). University of Chicago Press.

- Jasanoff, S., Kim, S. H., & Sperling, S. (2007). Sociotechnical imaginaries and science and technology policy: a cross-national comparison. *NSF Research Project, Harvard University*.
- Jasanoff, S., and Kim, S. H. (2009). Containing the atom: Sociotechnical imaginaries and nuclear power in the United States and South Korea. *Minerva*, 47(2), 119.
- Jensen, M. B., Johnson, B., Lorenz, E., and Lundvall, B. Å. (2007). Forms of knowledge and modes of innovation. *Research Policy*, 36(5), 680–693. <https://doi.org/10.1016/j.respol.2007.01.006>
- Johanisova, N., Sovová, L., and Fraňková, E. (2020). Eco-social enterprises: Ethical business in a post-socialist context. In J. Gibson-Graham and K. Dombroski (Eds.), *The Handbook of Diverse Economies* (pp. 65–73). Cheltenham, Northampton: Edward Elgar Publishing. <https://doi.org/10.4337/9781788119962.00014>
- Jolly, V. K., Alahuhta, M., and Jeannet, J. P. (1992). Challenging the incumbents: How high technology start-ups compete globally. *Strategic Change*, 1(2), 71–82.
- Kallis, G., and Swyngedouw, E. (2017). Do Bees Produce Value? A Conversation Between an Ecological Economist and a Marxist Geographer. *Capitalism Nature Socialism*, 29(3), 36–50. <https://doi.org/10.1080/10455752.2017.1315830>
- Kelly, P. F. (2013). Production networks, place and development. Thinking through Global Production Networks in Cavite, Philippines. *Geoforum*, 44, 82–92.
- Khmkoyan, A. (2012). National Innovation System and the Development of Scientific and Innovation Policy in the Republic of Armenia. *Nauka ta innovacii*, 8(3), 75–83. <https://doi.org/10.15407/scin8.03.075>
- Khurana, K., and Ataniyazova, Z. (2020). Insights and future forward for fashion and textile value chain in Uzbekistan. *Research Journal of Textile and Apparel*, 24(4), 389–408. <https://doi.org/10.1108/RJTA-03-2020-0020>
- Kinossian, N. (2018). Planning strategies and practices in non-core regions: A critical response. *European Planning Studies*, 26(2), 365–375. <https://doi.org/10.1080/09654313.2017.1361606>
- Klagge, B., and Meister, T. (2018). Energy cooperatives in Germany – an example of successful alternative economies? *Local Environment*, 23(7), 697–716. <https://doi.org/10.1080/13549839.2018.1436045>
- Kluczewska, K. (2020). Worlds apart? The World Bank's business rankings and small entrepreneurship in Tajikistan. *Eurasian Geography and Economics*, 29(4), 1–31. <https://doi.org/10.1080/15387216.2020.1807382>
- Knight, G. A., and Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, 35(2), 124–141. <https://doi.org/10.1057/palgrave.jibs.8400071>
- Koch, N. (2013). Why Not a World City? Astana, Ankara, and Geopolitical Scripts in Urban Networks. *Urban Geography*, 34(1), 109–130. <https://doi.org/10.1080/02723638.2013.778641>
- Konrad, K., and Böhle, K. (2019). Socio-technical futures and the governance of innovation processes—An introduction to the special issue. *Futures*, 109, 101–107.
- Koplatadze, T. (2019). Theorising Russian postcolonial studies. *Postcolonial Studies*, 22(4), 469–489. <https://doi.org/10.1080/13688790.2019.1690762>
- Kothari, A., Salleh, A., Escobar, A., Demaria, F., and Acosta, A. (Eds.) (2019). *Pluriverse: A post-development dictionary*. New Delhi: Tulika Books.
- Kraemer, K. L., Linden, G., and Dedrick, J. (2011). Capturing value in global networks: Apple's iPad and iPhone. *Research supported by grants from the Alfred P. Sloan Foundation and the US National Science Foundation (CISE/IIS)*.
- Krever, T. (2013). Quantifying Law: Legal indicator projects and the reproduction of neoliberal common sense. *Third World Quarterly*, 34(1), 131–150. <https://doi.org/10.1080/01436597.2012.755014>
- Kudina, A., and Jakubiak, M. (2011). The Motives and Impediments to FDI in the CIS. In M. Dąbrowski and M. Maliszewska (Eds.), *EU eastern neighborhood: Economic potential and future development* (pp. 71–82). Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg. [https://doi.org/10.1007/978-3-642-21093-8\\_5](https://doi.org/10.1007/978-3-642-21093-8_5)
- Kühn, M. (2015). Peripheralization: Theoretical Concepts Explaining Socio-Spatial Inequalities. *European Planning Studies*, 23(2), 367–378. <https://doi.org/10.1080/09654313.2013.862518>
- Kurpayanidi, K. I., and Muminova, E. A. (2016). Modern Approaches to Defining the Nature and Function of National Innovation System of the Uzbek Economy. *Theoretical and Applied Science*, 33(1), 75–85. <https://doi.org/10.15863/TAS.2016.01.33.16>
- Lai, K. P. Y., Lin, S., and Sidaway, J. D. (2020). Financing the Belt and Road Initiative (BRI): Research agendas beyond the “debt-trap” discourse. *Eurasian Geography and Economics*, 61(2), 109–124. <https://doi.org/10.1080/15387216.2020.1726787>
- Lang, T. (2015). Socio-economic and political responses to regional polarisation and socio-spatial peripheralisation in Central and Eastern Europe: A research agenda. *Hungarian Geographical Bulletin*, 64(3), 171–185. <https://doi.org/10.15201/hungeobull.64.3.2>
- Latour, B. (2004). Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern. *Critical Inquiry*, 30(2), 225–248. <https://doi.org/10.1086/421123>
- Latour, B. (2005). *Reassembling the social: An introduction to Actor-Network-Theory*. Clarendon lectures in management studies. Oxford: Oxford University Press.
- Law, J. (1994). *Organizing modernity*. Oxford: Blackwell.
- Law, J. (2015). What's wrong with a one-world world? *Distinktion: Journal of Social Theory*, 16(1), 126–139. <https://doi.org/10.1080/1600910X.2015.1020066>

- Law, J., and Lin, W.-y. (2017). Provincializing STS: Postcoloniality, Symmetry, and Method. *East Asian Science, Technology and Society*, 11(2), 211–227. <https://doi.org/10.1215/18752160-3823859>
- Layton, S. (1994). *Russian literature and empire: Conquest of the Caucasus from Pushkin to Tolstoy* (digital printing). *Cambridge studies in Russian literature*. Cambridge: Cambridge Univ. Press.
- Ledeneva, A. V. (2006). *How Russia really works: The informal practices that shaped post-Soviet politics and business. Culture and society after socialism*. Ithaca N.Y.: Cornell University Press. Retrieved from <http://www.jstor.org/stable/10.7591/j.ctt7zdpw>
- Lee, J. (2010). Global commodity chains and global value chains. In *Oxford Research Encyclopedia of International Studies*.
- Leick, B., and Lang, T. (2018). Re-thinking non-core regions: Planning strategies and practices beyond growth. *European Planning Studies*, 26(2), 213–228. <https://doi.org/10.1080/09654313.2017.1363398>
- Leijten, J. (2019). Innovation policy and international relations: directions for EU diplomacy. *European Journal of Futures Research*, 7(1), 1–21.
- Levy, D., Reinecke, J., and Manning, S. (2016). The Political Dynamics of Sustainable Coffee: Contested Value Regimes and the Transformation of Sustainability. *Journal of Management Studies*, 53(3), 364–401. <https://doi.org/10.1111/joms.12144>
- Libman, A., and Vinokurov, E. (2012). *Holding-Together Regionalism: Twenty Years of Post-Soviet Integration. Euro-Asian studies*. Basingstoke: Palgrave Macmillan.
- Lin, S., Sidaway, J. D., and Woon, C. Y. (2019). Reordering China, Respacing the World: Belt and Road Initiative (一带一路) as an Emergent Geopolitical Culture. *The Professional Geographer*, 71(3), 507–522. <https://doi.org/10.1080/00330124.2018.1547979>
- Linebaugh, p. (2010). Enclosures from the Bottom Up. *Radical History Review*, 2010(108), 11–27. <https://doi.org/10.1215/01636545-2010-007>
- Liu, J., Chaminade, C., and Asheim, B. (2013). The geography and structure of global innovation networks: a knowledge base perspective. *European Planning Studies*, 21(9), 1456–1473.
- Liu, W., and Dunford, M. (2016). Inclusive globalization: Unpacking China's Belt and Road Initiative. *Area Development and Policy*, 1(3), 323–340. <https://doi.org/10.1080/23792949.2016.1232598>
- Machlup, F. (1962). *The production and distribution of knowledge in the United States*. Princeton: Princeton University Press.
- MacLure, M. (2013). Researching without representation? Language and materiality in post-qualitative methodology. *International Journal of Qualitative Studies in Education*, 26(6), 658–667. <https://doi.org/10.1080/09518398.2013.788755>
- Madra, Y. M., and Özsəlçuk, C. (2010). Jouissance and Antagonism in the Forms of the Commune: A Critique of Biopolitical Subjectivity. *Rethinking Marxism*, 22(3), 481–497. <https://doi.org/10.1080/08935696.2010.490409>
- Makhmadshoev, D., and Crone, M. (2014). Exploring the influence of the national institutional environment on SME exporters: Comparative evidence from Tajikistan and the Kyrgyz Republic. In M. Thai and E. Turkina (Eds.), *Internationalization of Firms from Economies in Transition* (pp. 303–332). Edward Elgar Publishing. <https://doi.org/10.4337/9781783474707.00022>
- Makhmadshoev, D., and Laaser, K. (2020). Breaking away or holding on to the past? Exploring HRM systems of export-oriented SME in a highly uncertain context: insights from a transition economy in the periphery. *The International Journal of Human Resource Management*, 23(2), 1–32. <https://doi.org/10.1080/09585192.2020.1841816>
- Makhmadshoev, D., Ibeh, K., and Crone, M. (2015). Institutional influences on SME exporters under divergent transition paths: Comparative insights from Tajikistan and Kyrgyzstan. *International Business Review*, 24(6), 1025–1038. <https://doi.org/10.1016/j.ibusrev.2015.02.010>
- Manzini, E. (2015). *Design, when everybody designs: An introduction to design for social innovation. Design thinking, design theory*. Cambridge, Massachusetts: The MIT Press. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&AN=961044>
- Maradana, R. P., Pradhan, R. P., Dash, S., Gaurav, K., Jayakumar, M., and Chatterjee, D. (2017). Does innovation promote economic growth? Evidence from European countries. *Journal of Innovation and Entrepreneurship*, 6(1), 1. <https://doi.org/10.1186/s13731-016-0061-9>
- Marcus, G. E. (1995). Ethnography in/of the World System: The Emergence of Multi-Sited Ethnography. *Annual Review of Anthropology*, 24(1), 95–117. <https://doi.org/10.1146/annurev.an.24.100195.000523>
- Mark, J., Kalinovsky, A. M., and Marung, S. (Eds.) (2020). *Alternative globalizations: Eastern Europe and the postcolonial world*. Bloomington: Indiana University Press.
- Markedonov, S. (2015). De facto statehood in Eurasia: A political and security phenomenon. *Caucasus Survey*, 3(3), 195–206. <https://doi.org/10.1080/23761199.2015.1086565>
- Martin, T. (2001). *The Affirmative Action Empire: Nations and Nationalism in the Soviet Union, 1923-1939. The Wilder House series in politics, history and culture*. Ithaca, N.Y., London: Cornell University Press.
- Marx, K. (1999 [1867]). *Capital: A Critique of Political Economy*: Marx/Engels Internet Archive (marxists.org).
- Massey, D. (1994). *Space, place, and gender*. Minneapolis: University of Minnesota Press.
- Mazrui, A. (1986). The Africans: a triple heritage (documentary). London. *British Broadcasting Corporation*.
- Mbembe, A. (2016). Africa in the new century. *The Massachusetts Review*, 57(1), 91.

- McDougall, Patricia P., Scott Shane & Benjamin M. Oviatt (1994). Explaining the formation of international new ventures: The limits of theories from international business research. *Journal of Business Venturing*, 9, 469-487
- Mignolo, W. D. (2018). The Conceptual Triad: Modernity/Coloniality/Decoloniality. In W. D. Mignolo and C. E. Walsh (Eds.), *On Decoloniality: Concepts, Analytics, Practice* (pp. 135–152). Durham, London: Duke University Press.
- Mignolo, W. D., and Walsh, C. E. (Eds.) (2018). *On Decoloniality: Concepts, Analytics, Practice*. Durham, London: Duke University Press.
- Miller, E. (2010). Solidarity economy: Key concepts and issues. *Solidarity economy I: Building alternatives for people and planet*, 25-41.
- Moahi, K. (2007). Globalization, Knowledge Economy and the implication for Indigenous Knowledge. *International Review of Information Ethics*, 7.
- Moisia, S. (2018). *Geopolitics of the knowledge-based economy*. London, UK: Routledge.
- Moore, J. W. (2015). *Capitalism in the web of life: Ecology and the accumulation of capital*. London, New York: Verso.
- Moore, J. W. (2018). The Capitalocene Part II: Accumulation by appropriation and the centrality of unpaid work/energy. *The Journal of Peasant Studies*, 45(2), 237–279. <https://doi.org/10.1080/03066150.2016.1272587>
- Morcillo Laiz, Á., and Schlichte, K. (2016). Rationality and International Domination: Revisiting Max Weber. *International Political Sociology*, 10(2), 168–184. <https://doi.org/10.1093/ips/olw004>
- Morozov, V. E. (2015). *Russia's postcolonial identity: A subaltern empire in a eurocentric world. Central and Eastern European perspectives on international relations*. Basingstoke: Palgrave Macmillan.
- Morrison, A. (2021). *The Russian conquest of Central Asia: A study in imperial expansion, 1814–1914*. Cambridge: Cambridge University Press.
- Moulaert, F., Martinelli, F., Swyngedouw, E., and Gonzalez, S. (2005). Towards Alternative Model(s) of Local Innovation. *Urban Studies*, 42(11), 1969–1990. <https://doi.org/10.1080/00420980500279893>
- Mugabe, J. O. (2011). *Science, Technology and Innovation in Africa's Regional Integration: From Rhetoric to Practice*. ACODE Policy Research Series, No. 44, 2011. Kampala.
- Müller, M. (2018). In Search of the Global East: Thinking between North and South. *Geopolitics*, 22(2), 1–22. <https://doi.org/10.1080/14650045.2018.1477757>
- Müller, M. (2019). Goodbye, Postsocialism! *Europe-Asia Studies*, 71(4), 533–550. <https://doi.org/10.1080/09668136.2019.1578337>
- Nazarov, Z., and Akhmedjonov, A. (2016). Monetary Fiscal Policy Regimes and Firm Innovation in Transition Economies and Residual Factors Explaining the Gap in Firm Innovation in Central Asian Economies. *Journal of Applied Economics and Business Research*, 6(1), 1–16.
- Ndlovu-Gatsheni, S. J. (2015). Decoloniality as the Future of Africa: Decoloniality, Africa, Power, Knowledge, Being. *History Compass*, 13(10), 485–496. <https://doi.org/10.1111/hic3.12264>
- Nellis, J. (2005). The Evolution of Enterprise Reform in Africa: From State-Owned Enterprises to Private Participation in Infrastructure – and Back? SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.828764>
- NEPAD (2010). *African Innovation Outlook*. Retrieved from <https://www.nepad.org>
- NEPAD (2014). *Africa Innovation Outlook*. Retrieved from <https://www.nepad.org/publication/african-innovation-outlook-ii>
- Nkrumah, K. (1965). *Neo-colonialism*. Nelson.
- Northrop, D. T. (2004). *Veiled empire: Gender & power in Stalinist Central Asia* (1st ed.). Ithaca, N.Y., London: Cornell University Press.
- Nunes, S., and Lopes, R. (2015). Firm Performance, Innovation Modes and Territorial Embeddedness. *European Planning Studies*, 23(9), 1796–1826. <https://doi.org/10.1080/09654313.2015.1021666>
- Ocran, M. K. (2019). Post-Independence African Economies: 1960–2015. In *Economic Development in the Twenty-first Century* (pp. 301-372). Palgrave Macmillan, Cham.
- OECD (2005). *The Measurement of Scientific and Technological Activities: Guidelines for Collecting and Interpreting Innovation Data: Oslo Manual, Third Edition*. Working Party of National Experts on Scientific and Technology Indicators, OECD, Paris.
- Oka, N. (2015). Informal payments and connections in post-Soviet Kazakhstan. *Central Asian Survey*, 34(3), 330–340. <https://doi.org/10.1080/02634937.2015.1047154>
- Ondiege, p. (2010). Mobile banking in Africa: taking the bank to the people. *Africa Economic Brief*, 1(8), 1-16.
- Oladimeji, M. S., and Eze, B. U. (2017). Determinants of Born-Global Firms: Evidence from Nigeria. *PUBLISHED SINCE 1957*, 377.
- Oloruntoba, S. O., and Muchie, M. (Eds.). (2019). *Innovation, Regional Integration, and Development in Africa: Rethinking Theories, Institutions, and Policies*. Springer International Publishing. <https://doi.org/10.1007/978-3-319-92180-8>
- O'Neill, P., and Gibson-Graham, J. K. (1999). Enterprise Discourse and Executive Talk: Stories that Destabilize the Company. *Transactions of the Institute of British Geographers*, 24(1), 11–22. <https://doi.org/10.1111/j.0020-2754.1999.00011.x>
- Osakwe, p. N., and Moussa, N. (2017). *Innovation, diversification and inclusive development in Africa*. UN.

- Osteen, M. (2002). Gift or Commodity? In M. Osteen (Ed.), *Routledge studies in anthropology: Vol. 2. The Question of the Gift: Essays across Disciplines* (pp. 229–247). London: Routledge.
- Ouma-Mugabe, J., Chan, K. Y., & Marais, H. C. (2021). A critical review of policy instruments for promoting innovation in manufacturing small and medium enterprises (SMEs) in South Africa. *Entrepreneurship, Technology Commercialisation, and Innovation Policy in Africa*, 237–258.
- Oyelaran-Oyeyinka, B., and Sampath, p. G. (2007). Innovation in African Development. Case Studies of Uganda, Tanzania and Kenya. *A World Bank Study*. <http://info.worldbank.org/etools/docs/library/239730/InnovationInAfricaFinalPaper.pdf> (Accessed: 22/03/2014).
- Özcan, G. B. (2008). Surviving uncertainty through exchange and patronage networks: A business case from Kyrgyzstan. In F. Welter and R. Aidis (Eds.), *Innovation and entrepreneurship: Successful start-ups and businesses in emerging economies* (pp. 69–88). Cheltenham, Northampton, Mass: Edward Elgar.
- Özcan, G. B. (2010). *Building States and Markets: Enterprise Development in Central Asia*. Basingstoke: Palgrave Macmillan UK.
- Özselçuk, C., and Madra, Y. M. (2005). Psychoanalysis and Marxism: From Capitalist-All to Communist Non-All. *Psychoanalysis, Culture and Society*, 10(1), 79–97. <https://doi.org/10.1057/palgrave.pcs.2100028>
- Özselçuk, C., and Madra, Y. M. (2010). Enjoyment as an economic factor: Reading Marx with Lacan. *Subjectivity*, 3(3), 323–347. <https://doi.org/10.1057/sub.2010.13>
- Pagano, U. (2014). The crisis of intellectual monopoly capitalism. *Cambridge Journal of Economics*, 38(6), 1409–1429. <https://doi.org/10.1093/cje/beu025>
- Pallares-Barbera, M., Tulla, A. F., and Vera, A. (2004). Spatial loyalty and territorial embeddedness in the multi-sector clustering of the Berguedà region in Catalonia (Spain). *Geoforum*, 35(5), 635–649. <https://doi.org/10.1016/j.geoforum.2004.03.004>
- Parker, S. C. (2018). *The economics of entrepreneurship*. Cambridge University Press.
- Parnreiter, C. (2019). Global cities and the geographical transfer of value. *Urban Studies*, 56(1), 81–96. <https://doi.org/10.1177/0042098017722739>
- Patel, R., and Moore, J. W. (2020). *A history of the world in seven cheap things: A guide to capitalism, nature, and the future of the planet*. London, New York: Verso Books.
- Pece, A. M., Simona, O. E. O., and Salisteanu, F. (2015). Innovation and economic growth: An empirical analysis for CEE countries. *Procedia Economics and Finance*, 26, 461–467.
- Phillips, N. (2017). Power and inequality in the global political economy. *International Affairs*, 93(2), 429–444.
- Poghosyan, T. (2017). The state of the National Innovation System of Armenia. In A. Tsvetkova, J. Schmutzler de Uribe, M. Suárez Estrada, and A. Faggian (Eds.), *New horizons in regional science. Innovation in developing and transition countries* (pp. 49–67). Cheltenham, UK, Northampton, MA: Edward Elgar Publishing. <https://doi.org/10.4337/9781785369667.00011>
- Polese, A., and Rekhviashvili, L. (2017). Introduction: Informality and power in the South Caucasus. *Caucasus Survey*, 5(1), 1–10. <https://doi.org/10.1080/23761199.2017.1295671>
- Polese, A., Rekhviashvili, L., Kovács, B., and Morris, J. (Eds.) (2019). *Post-socialist informalities: Power, agency and the construction of extra-legalities from Bosnia to China*. London, New York: Routledge, Taylor et Francis Group.
- Pollard, J., McEwan, C., Laurie, N., and Stenning, A. (2009). Economic geography under postcolonial scrutiny. *Transactions of the Institute of British Geographers*, 34(2), 137–142. <https://doi.org/10.1111/j.1475-5661.2009.00336.x>
- Powell, W. W., and Snellman, K. (2004). The Knowledge Economy. *Annual Review of Sociology*, 30, 199–220.
- Prebisch, R. (1950). *The Economic Development of Latin America and Its Principal Problems*. New York: UN Economic Commission for Latin America.
- Radaev, V. (2016). Relational exchange and the degree of embeddedness: An empirical study of supply chains. *Экономическая социология*, 17(1), 122–134. Retrieved from <https://cyberleninka.ru/article/n/relational-exchange-and-the-degree-of-embeddedness-an-empirical-study-of-supply-chains.pdf>
- Radcliffe, S. A. (2017). Decolonising geographical knowledges. *Transactions of the Institute of British Geographers*, 42(3), 329–333. <https://doi.org/10.1111/tran.12195>
- Raghuram, P., and Madge, C. (2006). Towards a method for postcolonial development geography? Possibilities and challenges. *Singapore Journal of Tropical Geography*, 27(3), 270–288. <https://doi.org/10.1111/j.1467-9493.2006.00262.x>
- Rasanayagam, J. (2011). Informal economy, informal state: The case of Uzbekistan. *International Journal of Sociology and Social Policy*, 31(11/12), 681–696. <https://doi.org/10.1108/01443331111177878>
- Rasmussen, E. S., and Madsen, T. K. (2002, December). The born global concept. In *28th EIBA conference* (Vol. 2002).
- Rekhviashvili, L. (2016). Counterbalancing marketization informally: Georgia's new-institutionalist reform and its discontents. *Journal of Contemporary Central and Eastern Europe*, 24(3), 255–272. <https://doi.org/10.1080/0965156X.2016.1260657>
- Rekhviashvili, L. (2017). Why Read Informality in a Substantivist Manner? On the Embeddedness of the Soviet Second Economy. In A. Polese, C. C. Williams, I. A. Horodnic, and P. Bejakovic (Eds.), *International Political Economy Series. The Informal Economy in Global Perspective: Varieties of Governance* (pp. 15–36). Cham: Palgrave Macmillan.

- Rekhviashvili, L. (2020). Questioning dominant accounts of Chinese investments in Eastern Europe and Eurasia. Retrieved from <https://lefteast.org/questioning-dominant-accounts-of-chinese-investments-in-eastern-europe-and-eurasia/?fbclid=IwAR0r2JGwbnOqFv8BGHVwRzwNMDf8svbOEZQG5yJcX-MZUWtmkd7lgBwsnc>
- Rekhviashvili, L., and Sgibnev, W. (2020). Theorising informality and social embeddedness for the study of informal transport. Lessons from the marshrutka mobility phenomenon. *Journal of Transport Geography*, 88(8), 102386. <https://doi.org/10.1016/j.jtrangeo.2019.01.006>
- Rikap, C. (2021). *Capitalism, power and innovation: Intellectual monopoly capitalism uncovered*. Routledge studies in the economics of innovation. Abingdon, Oxon, New York, NY: Routledge.
- Rikap, C., and Lundvall, B.-Å. (2020). Big tech, knowledge predation and the implications for development. *Innovation and Development*, 26(3), 1–28. <https://doi.org/10.1080/2157930X.2020.1855825>
- Roberts, J. (2009). The global knowledge economy in question. *Critical perspectives on international business*.
- Robinson, J. (2006). *Ordinary Cities: Between Modernity and Development*. Questioning cities series. London, New York: Routledge. Retrieved from <http://www.loc.gov/catdir/enhancements/fy0709/2005014089-d.html>
- Robinson, J. (2011). Cities in a World of Cities: The Comparative Gesture. *International Journal of Urban and Regional Research*, 35(1), 1–23. <https://doi.org/10.1111/j.1468-2427.2010.00982.x>
- Robinson, J. (2015). Thinking cities through elsewhere: Comparative tactics for a more global urban studies. *Progress in Human Geography*, 40(1), 3–29. <https://doi.org/10.1177/0309132515598025>
- Robinson, J. (2016). Comparative Urbanism: New Geographies and Cultures of Theorizing the Urban. *International Journal of Urban and Regional Research*, 40(1), 187–199. <https://doi.org/10.1111/1468-2427.12273>
- Rodríguez-Pose, A., and Crescenzi, R. (2008). Mountains in a flat world: why proximity still matters for the location of economic activity. *Cambridge Journal of Regions, Economy and Society*, 1(3), 371–388.
- Ruccio, D. F. (2011). Cooperatives, Surplus, and the Social. *Rethinking Marxism*, 23(3), 334–340. <https://doi.org/10.1080/08935696.2011.583002>
- Rudenko, I., Bekchanov, M., Djanibekov, N., and Lamers, J.P.A. (2013). The added value of a water footprint approach: Micro- and macroeconomic analysis of cotton production, processing and export in water bound Uzbekistan. *Global and Planetary Change*, 110, 143–151. <https://doi.org/10.1016/j.gloplacha.2013.09.007>
- Rustemova, A. (2011). Political Economy of Central Asia: Initial Reflections on the Need for a New Approach. *Journal of Eurasian Studies*, 2(1), 30–39. <https://doi.org/10.1016/j.euras.2010.10.002>
- SADC (2020) SADC Regional Indicative Strategic Development Plan (RISDP) 2020–2030. Retrieved from [https://www.SADC.int/sites/default/files/2021-08/RISDP\\_2020-2030.pdf](https://www.SADC.int/sites/default/files/2021-08/RISDP_2020-2030.pdf)
- Said, E. W. (1978). *Orientalism*. New York: Pantheon Books.
- Salhi, A., Kern, A., and Rößler, M. (2010). Growth Patterns in the CIS-8: A Political Economy Approach. *Transition Studies Review*, 17(4), 686–708. <https://doi.org/10.1007/s11300-010-0176-9>
- Salukvadze, J., and Golubchikov, O. (2016). City as a geopolitics: Tbilisi, Georgia – A globalizing metropolis in a turbulent region. *Cities*, 52(2), 39–54. <https://doi.org/10.1016/j.cities.2015.11.013>
- Sassen, S. (1991). *The global city: New York, London, Tokyo*. Princeton, NJ: Princeton University Press. Retrieved from <http://site.ebrary.com/lib/alltitles/docDetail.action?docID=10674435>
- Sattler, M., Lang, T., Brainoo, M., Moser, J., and Hölzel, B. (2021). Visualizing the 'global knowledge economy'. *Regional Studies*, 8(1), 328–331.
- Schiliro, D. (2012). Knowledge-based economies and the institutional environment. *Theoretical and Practical Research in Economic Fields (TPREF)*, 3(05), 42–50.
- Scott, A., and Storper, M. (2003). Regions, Globalization, Development. *Regional Studies*, 37(6-7), 579–593. <https://doi.org/10.1080/0034340032000108697a>
- Shaban, A. R. (2018, March 13). Forty-four countries sign historic African Union free trade agreement. *Africanews*. <https://www.africanews.com/2018/03/21/forty-four-countries-sign-historic-africa-union-free-trade-agreement/>
- Shearmur, R. (2012). Are cities the font of innovation? A critical review of the literature on cities and innovation. *Cities*, 29, S9–S18. <https://doi.org/10.1016/j.cities.2012.06.008>
- Shields, S. (2020). The EBRD, fail forward neoliberalism and the construction of the European periphery. *The Economic and Labour Relations Review*, 31(2), 230–248. <https://doi.org/10.1177/1035304620916652>
- Simandan, D. (2019). Revisiting positionality and the thesis of situated knowledge. *Dialogues in Human Geography*, 9(2), 129–149. <https://doi.org/10.1177/2043820619850013>
- Slade, G. (2017). Informality as Illegality in Georgia's Anti-mafia Campaign. *Caucasus Survey*, 5(1), 51–64. <https://doi.org/10.1080/23761199.2017.1283940>
- Smirnova, Y. (2014). The Innovation Infrastructure of Kazakhstan: Why did the Innovation “Boom” not Happen? In S. Bhattacharyya, L. Al-Hakim, and C. Jin (Eds.), *Quality Innovation: Knowledge, Theory, and Practices* (pp. 322–339). IGI Global. <https://doi.org/10.4018/978-1-4666-4769-5.ch15>
- Smith, K. (2002). *What is the 'Knowledge Economy'?* *Knowledge Intensity and Distributed Knowledge Bases* (UNU/INTECH Discussion Paper Series). Maastricht.
- Solow, R. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics*, 70(1), 65–94.

- Soskice, D. W., and Hall, p. (Eds.) (2001). *Varieties of capitalism. The institutional foundations of comparative advantage*. Oxford; New York: Oxford University Press.
- Sörvik, J., Teräs, J., Dubois, A., and Pertoldi, M. (2019). Smart Specialisation in sparsely populated areas: Challenges, opportunities and new openings. *Regional Studies*, 53(7), 1070–1080. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.1080/00343404.2018.1530752>
- Spector, R. A. (2018). A regional production network in a predatory state: Export-oriented manufacturing at the margins of the law. *Review of International Political Economy*, 25(2), 169–189. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.1080/09692290.2018.1428905>
- Spector, R. A., and Botoeva, A. (2017). New shop owners in old buildings: Spatial politics of the apparel industry in Kyrgyzstan. *Post-Soviet Affairs*, 33(3), 235–253. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.1080/1060586X.2016.1251024>
- Spivak, G. C. (1988). Can the Subaltern Speak? In C. Nelson and L. Grossberg (Eds.), *Communications and Culture. Marxism and the Interpretation of Culture* (pp. 271–313). London: Macmillan Education UK.
- Starr, S. F. (2015). *Lost enlightenment: Central Asia's golden age from the Arab conquest to Tamerlane*. Princeton: Princeton University Press.
- Steenberg, R. (2014). *Network or Community? Two tropes for analysing social relations among Uyghur traders in Kyrgyzstan* (Crossroads Asia Working Paper Series No. 18). Bonn. Retrieved from [https://webacc.leibniz-ift.de/PT/https://bonndoc.ulb.uni-bonn.de/xmlui/bitstream/20.500.11811/145/1/xroads\\_wp18\\_steenberg\\_network\\_or\\_community.pdf](https://webacc.leibniz-ift.de/PT/https://bonndoc.ulb.uni-bonn.de/xmlui/bitstream/20.500.11811/145/1/xroads_wp18_steenberg_network_or_community.pdf)
- Steenberg, R. (2016). Embedded rubber sandals: Trade and gifts across the Sino–Kyrgyz border. *Central Asian Survey*, 35(3), 405–420. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.1080/02634937.2016.1221577>
- Steenberg, R. (2020). The formal side of informality: Non-state trading practices and local Uyghur ethnography. *Central Asian Survey*, 39(1), 46–62. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.1080/02634937.2019.1697207>
- Stenning, A., and Hörschelmann, K. (2008). History, Geography and Difference in the Post-socialist World: Or, Do We Still Need Post-Socialism? *Antipode*, 40(2), 312–335. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.1111/j.1467-8330.2008.00593.x>
- Stenning, A., Smith, A., Rochovská, A., and Świątek, D. (2010). *Domesticating neo-liberalism: Spaces of economic practice and social reproduction in post-socialist cities. RGS-IBG Book Series*. Malden, MA: Wiley-Blackwell. Retrieved from <https://webacc.leibniz-ift.de/PT/http://dx.doi.org/10.1002/9781444325409>
- Suny, R. G. (2011). *The Soviet experiment: Russia, the USSR, and the successor states* (2. edition). New York: Oxford University Press.
- Suny, R. G., and Martin, T. (Eds.) (2001). *A state of nations: Empire and nation-making in the age of Lenin and Stalin*. Oxford: Oxford University Press.
- Svarc, J., and Dabic, M. (2015). Evolution of the Knowledge Economy: A Historical Perspective with an Application to the Case of Europe. *Journal of the Knowledge Economy*, 8, 1–18. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.1007/s13132-015-0267-2>
- Taylor, p. (2004). *World City Network: A Global Urban Analysis*. London: Routledge.
- Teichmann, C. (2007). Canals, cotton, and the limits of de-colonization in Soviet Uzbekistan, 1924–1941. *Central Asian Survey*, 26(4), 499–519. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.1080/02634930802018240>
- Timm, C. (2014). *A liberal developmental state in Georgia? State dominance and Washington Consensus in the post-communist region* (PFH Forschungspapiere/Research Papers No. No. 2014/02).
- Tlostanova, M. (2012). Postsocialist ≠ postcolonial? On post-Soviet imaginary and global coloniality. *Journal of Postcolonial Writing*, 48(2), 130–142. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.1080/17449855.2012.658244>
- Tlostanova, M. (2018). *What Does It Mean to Be Post-Soviet? Decolonial Art from the Ruins of the Soviet Empire. On Decoloniality Ser.* Durham: Duke University Press. Retrieved from <https://webacc.leibniz-ift.de/PT/https://ebookcentral.proquest.com/lib/gbv/detail.action?docID=5428242>
- Tlostanova, M., and Mignolo, W. D. (2012). *Learning to unlearn: Decolonial reflections from Eurasia and the Americas. Transoceanic studies*. Columbus: Ohio State University Press.
- Toal, G. (1996). *Critical geopolitics: The politics of writing global space*. London: Routledge.
- Tsing, A. L. (2005). *Friction: An ethnography of global connection*. Princeton, NJ: Princeton Univ. Press. Retrieved from <https://webacc.leibniz-ift.de/PT/http://site.ebrary.com/lib/alltitles/docDetail.action?docID=10519756>
- Tsing, A. L. (2015). *The Mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton, Oxford: Princeton University Press. Retrieved from <https://webacc.leibniz-ift.de/PT/http://site.ebrary.com/lib/suub/docDetail.action?docID=11094635>
- UNDP and MBRF (2020). Global Knowledge Index. Retrieved from <https://www.undp.org/publications/global-knowledge-index-2020>
- UNESCO/IESALC (2020, December 16). UNESCO/IESALC report reveals that access to higher education increased from 19% to 38% in the last two decades. Retrieved from <https://webacc.leibniz-ift.de/PT/https://www.iesalc.unesco.org/>
- Unger, R. M. (2019). *The knowledge economy*. Verso Books.



- Uzzi, B. (1996). The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect. *American Sociological Review*, 61(4), 674. <https://webacc.leibniz-ifl.de/PT/https://doi.org/10.2307/2096399>
- Vanolo, A. (2010). THE BORDER BETWEEN CORE AND PERIPHERY: GEOGRAPHICAL REPRESENTATIONS OF THE WORLD SYSTEM. *Tijdschrift Voor Economische En Sociale Geografie*, 101(1), 26–36. <https://webacc.leibniz-ifl.de/PT/https://doi.org/10.1111/j.1467-9663.2009.00508.x>
- Wallace, R. G. (2016). *Big farms make big flu: Dispatches on infectious disease, agribusiness, and the nature of science*. New York: Monthly Review Press.
- Wallerstein, I. (1974). *The Modern World System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York: Academic Press.
- Wallerstein, I. (1979). *The Capitalist World-Economy*. Cambridge: Cambridge University Press.
- Wallerstein, I. (2004). *World-systems analysis*. Duke University Press.
- Wallerstein, I. M. (2006). *World-systems analysis: An introduction* (4th printing). A John Hope Franklin center book. Durham, NC: Duke University Press.
- Watts, M. (1993). The Geography of Post-Colonial Africa: Space, Place and Development in Sub-Saharan Africa (1960–93) 1. *Singapore Journal of Tropical Geography*, 14(2), 173–190.
- Westwood, R., Jack, G., Khan, F., and Frenkel, M. (Eds.). (2014). *Core-Periphery Relations and Organization Studies*. Palgrave Macmillan. <https://webacc.leibniz-ifl.de/PT/https://doi.org/10.1057/9781137309051>
- World Bank (2020). Innovation in Kazakhstan: From Ideas to Impact. Retrieved from <https://webacc.leibniz-ifl.de/PT/https://www.worldbank.org/en/news/feature/2020/04/14/innovation-in-kazakhstan-from-ideas-to-impact>
- dXiang, B. (2013). Multi-scalar ethnography: An approach for critical engagement with migration and social change. *Ethnography*, 14(3), 282–299. <https://webacc.leibniz-ifl.de/PT/https://doi.org/10.1177/1466138113491669>
- Xing, Y. (2019). *How the iPhone widens the United States trade deficit with the People's Republic of China* (ADB Working Paper Series No. 257). Tokyo.
- Ziai, A. (2020). Neokolonialismus in der globalisierten Ökonomie des 21. Jahrhunderts—Ein Überblick. *Momentum Quarterly – Zeitschrift Für Sozialen Fortschritt*, 9(3), 128. <https://webacc.leibniz-ifl.de/PT/https://doi.org/10.15203/momentumquarterly.vol9.no3.p128-140>
- Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. New York: PublicAffairs.
- Амбулатов, Э.Ш., Ерыгин, Ю.В., and Волкова, М.А. (2019). Оценка степени интенсивности интеграции региональной экономики в глобальные цепочки создания стоимости. *Менеджмент социальных и экономических систем*. (1 (13)), 34–43. Retrieved from <https://webacc.leibniz-ifl.de/PT/https://cyberleninka.ru/article/n/otsenka-stepeni-intensivnosti-integratsii-regionalnoy-ekonomiki-v-globalnye-tsepochki-sozdaniya-stoimosti.pdf>
- Алгулиев, Р.М., and Алиев, А.Г. (2011). Некоторые аспекты формирования ИКТ-ориентированных национальных инновационных систем. *Проблемы современной экономики*, 4, 21–24. Retrieved from <https://webacc.leibniz-ifl.de/PT/https://cyberleninka.ru/article/n/nekotorye-aspekty-formirovaniya-ikt-orientirovannyh-natsionalnyh-innovatsionnyh-sistem.pdf>
- БАБАЯН Э.А., and ГАБРИЕЛЯН Б.В. (2019). О ПРОБЛЕМАХ ИННОВАЦИОННОГО РАЗВИТИЯ РЕСПУБЛИКИ АРМЕНИЯ. *АЛЛЕЯ НАУКИ*, 30(3), 337–342.
- Волгина, Н. А. (2017). Глобальные цепочки стоимости, индустриализация и промышленная политика. *ЭТАП: экономическая теория, анализ, практика*. (6), 23–32. Retrieved from <https://webacc.leibniz-ifl.de/PT/https://cyberleninka.ru/article/n/globalnye-tsepochki-stoimosti-industrializatsiya-i-promyshlennaya-politika.pdf>
- Волкова, М. А. (2018). Проблемы включения российской экономики в глобальные цепочки создания стоимости: Региональный аспект. *Мир экономики и управления*, 18(4), 190–205. Retrieved from <https://webacc.leibniz-ifl.de/PT/https://cyberleninka.ru/article/n/problemy-vklyucheniya-rossiyskoy-ekonomiki-v-globalnye-tsepochki-sozdaniya-stoimosti-regionalnyy-aspekt.pdf>
- Днишев, Ф.М. (2019). Проблемы развития инновационной системы Казахстана. *Большая Евразия: Развитие, безопасность, сотрудничество*. (2-1), 359–361. Retrieved from <https://webacc.leibniz-ifl.de/PT/https://cyberleninka.ru/article/n/problemy-razvitiya-innovatsionnoy-sistemy-kazahstana.pdf>
- Иванишвили-Орбелиани, Д. (2009). Значение национальной инновационной системы для экономической конкурентоспособности Грузии. *Кавказ и глобализация*, 3(2-3). Retrieved from <https://webacc.leibniz-ifl.de/PT/https://cyberleninka.ru/article/n/znachenie-natsionalnoy-innovatsionnoy-sistemy-dlya-ekonomicheskoy-konkurentosposobnosti-gruzii.pdf>
- Иваницкая, А.Е., and Названова, К.В. (2016). ФОРМИРОВАНИЕ ИНТЕГРИРОВАННОЙ ИННОВАЦИОННОЙ СИСТЕМЫ ЕВРАЗИЙСКОГО ЭКОНОМИЧЕСКОГО СОЮЗА: ПРОБЛЕМЫ И ПЕРСПЕКТИВЫ. *ECONOMIC SCIENCES*, 12, 868–872.
- Ипалаков, Т. Т., and Гольцев, А. Г. (2008). Формирование региональной инновационной системы в Казахстане. *Инновации*. (12), 14–19. Retrieved from <https://webacc.leibniz-ifl.de/PT/https://cyberleninka.ru/article/n/formirovanie-regionalnoy-innovatsionnoy-sistemy-v-kazahstane.pdf>

- Исмоилова, М. М., Азизов, Ф. Х., and Ахмедова, Д. А. (2017). Национальная инновационная система – основа создания экономики благосостояния. *Вестник Таджикского государственного университета права, бизнеса и политики. Серия общественных наук.* (1), 5–15. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/natsionalnaya-innovatsionnaya-sistema-osnova-sozdaniya-ekonomiki-blagosostoyaniya.pdf>
- Комилов, С. Д., and Файзуллоев, М. (2011). Формирование национальной инновационной системы Республики Таджикистан как условие обеспечения модернизации экономики страны. *Проблемы современной экономики.* (2), 216–219. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/formirovanie-natsionalnoy-innovatsionnoy-sistemy-respubliki-tadzhikistan-kak-uslovie-obespecheniya-modernizatsii-ekonomiki-strany.pdf>
- Кукушкина, Ю. М. (2016). Взаимосвязь региональной интеграции и глобальных цепочек создания стоимости. *Международная торговля и торговая политика.* (4 (8)), 66–82. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/vzaimosvyaz-regionalnoy-integratsii-i-globalnyh-tsepochek-sozdaniya-stoimosti.pdf>
- Кулбатыров, Н. Н., and Асенова, А. Е. (2014). О некоторых особенностях развития инновационного предпринимательства в Казахстане. *Проблемы современной экономики.* (3 (51)), 276–281. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/o-nekotoryh-osobennostyah-razvitiya-innovatsionnogo-predprinimatelstva-v-kazahstane.pdf>
- Мазитова, М. Г., and Дёмина, Я. В. (2017). Международные производственные сети: Роль стран Восточной Азии. *Пространственная экономика.* (1), 71–98.
- Маридашвили, М., and Мепаришвили, Д. (2018). Политика управления инновациями и региональная инновационная система в Грузии. *Научный журнал НИУ ИТМО. Серия «Экономика и экологический менеджмент».* (2), 81–90. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/politika-upravleniya-innovatsiyami-i-regionalnaya-innovatsionnaya-sistema-v-gruzii.pdf>
- Островская, Е. Я., and Мануйлов, И. А. (2016). Роль национальных кластеров в развитии глобальных цепочек стоимости. *Journal of Economic Regulation (Вопросы регулирования экономики),* 7(2), 71–80. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/rol-natsionalnyh-klasterov-v-razviti-globalnyh-tsepochek-stoimosti.pdf>
- Пястолов, С. М. (2012). Эффективность национальной инновационной системы: Инфраструктурный аспект. *Транспортное дело России,* 6(1), 18–20. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/effektivnost-natsionalnoy-innovatsionnoy-sistemy-infrastrukturnyy-aspekt.pdf>
- Соловьёва, Ю. В. (2016). Трансферт технологий стран-членов ЕАЭС: Региональные особенности. *Азимут научных исследований: экономика и управление,* 5(2 (15)), 223–228. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/transfert-tehnologiy-stran-chlenov-eaes-regionalnye-osobennosti.pdf>
- Ставбуник, Л. А. (2019). Роль уполномоченных органов государственного управления в региональной инновационной системе (пример Карагандинской области). *Гуманитарные, социально-экономические и общественные науки.* (3), 172–179. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/rol-upolnomochennyh-organov-gosudarstvennogo-upravleniya-v-regionalnoy-innovatsionnoy-sisteme-primer-karagandinskoy-oblasti.pdf>
- Султанова, Л. Ш. (2017). Центральная Азия: Экономические коридоры и глобальные цепочки создания стоимости. *Россия: тенденции и перспективы развития.* (12-1), 377–380. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/tsentralnaya-aziya-ekonomicheskie-koridory-i-globalnye-tsepochki-sozdaniya-stoimosti.pdf>
- Таубаев, А. А. (2015). Перспективы интеграции национальных инновационных систем стран Евразийского экономического союза. *Научный результат. Экономические исследования.* (1), 16–22. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/perspektivy-integratsii-natsionalnyh-innovatsionnyh-sistem-stran-evraziyskogo-ekonomicheskogo-soyuza.pdf>
- Таубаев, А. А., Каменова, А., Орынбасарова, Е., Сайфуллина, Ю., and Борисова, Е. (2019). Институциональная среда развития наукоемкого сектора и инновационного предпринимательства в странах Евразийского экономического союза. *Экономика: стратегия и практика,* 14(2), 25–38.
- Улыбышев, Д. Н., and Кенжебеков, Н. Д. (2017). Возможности и механизмы развития казахстанского инновационного бизнеса в рамках Евразийского экономического союза. *Journal of Central Asia Economy,* 1(3), 145–154. <https://webacc.leibniz-ift.de/PT/https://doi.org/10.18334/asia.1.3.38490>
- Шугурова, И. В. (2019). Политико-правовые вопросы формирования региональной инновационной системы государств – членов ЕАЭС в условиях цифровизации экономики. *Право и политика.* (8), 18–40. Retrieved from <https://webacc.leibniz-ift.de/PT/https://cyberleninka.ru/article/n/politiko-pravovye-voprosy-formirovaniya-regionalnoy-innovatsionnoy-sistemy-gosudarstv-chlenov-eaes-v-usloviyah-tsifrovizatsii.pdf>



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