MORE THAN INFRASTRUCTURE PROVIDERS – DIGITAL PLATFORMS' ROLE AND POWER IN RETAIL DIGITALISATION IN GERMANY

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ABSTRACT

Digital platforms, such as Amazon, represent the major beneficiaries of the Covid-19 crisis. This study examines the role of digital platforms and their engagement in digitalisation initiatives targeting (small) brick-and-mortar retailers in Germany, thereby contributing to a better understanding of how digital platforms augment, substitute or reorganise physical retail spaces. This study applies a mixed-method approach based on qualitative interviews, participant observation as well as media analysis. First, the study illustrates the controversial role of digital platforms by positioning themselves as supporting partners of the (offline) retailers, while simultaneously shifting power towards the platforms themselves. Second, digital platforms have established themselves not only as infrastructure providers but also as actors within these infrastructures, framing digital as well as physical retail spaces, inter alia due to their role as publicly legitimised retail advisers. Third, while institutions want to help retailers to survive, they simultaneously enhance retailers' dependency on digital platforms.

Key words: platform economy; digitalisation initiative; e-commerce; Covid-19; two-sided markets; framing

INTRODUCTION

Digital (transaction) platforms count as the great beneficiaries of the Covid-19 crisis (Kenney & Zysman 2020a), which is particularly the case for retail platforms, such as Amazon (HDE 2021a; Herrera 2021). Yet, our understanding of how they augment, substitute or reorganise physical retail spaces is limited. These corporations benefited greatly from measures taken against the containment of the pandemic such as 'stay at home' protocols as well as government-ordered lockdowns, which resulted in the temporary closure of 200,000 brick-and-mortar stores in Germany that did not provide essential goods or services (HDE 2020a). Even before the pandemic, the German retail landscape, like many others, was and still is undergoing far-reaching transformation processes (HDE 2020a). With online sales in Germany in 2020 increasing by 20 per cent (HDE 2021b; see Figure 1), online marketplaces in particular experienced growth, leaving offline retailers facing increasing challenges during the Covid-19 crisis (lockdowns).

Unsurprisingly, the urgent call for offline retailers to digitalise and participate in e-commerce as soon as possible is ubiquitous and intensifying, in particular as it is primarily small businesses (representing 54 percent of all stores in Germany) whose digitalisation is often underdeveloped. According to the HDE (German Retail Association; HDE 2020b), by mid-2020, 56 percent of German retailers did not sell online; while 25 percent sold their goods on online marketplaces.

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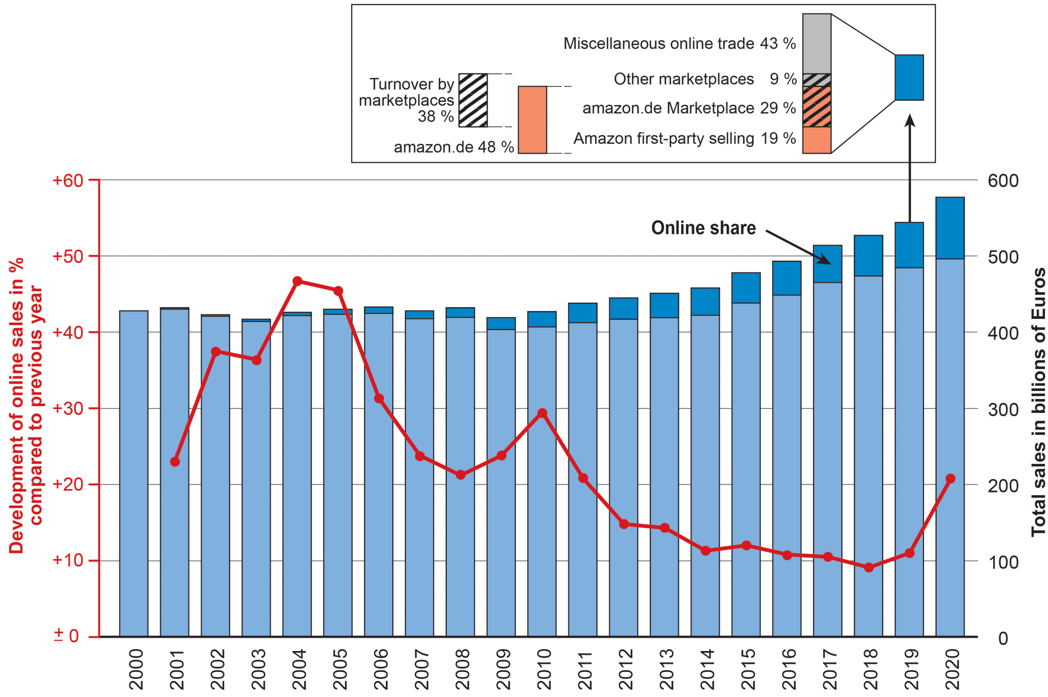

Figure 1. *Retail sales in Germany (own draft, realisation by Julia Breunig; data: HDE 2020b, 2021b).*

Against the backdrop of the increasing importance of e-commerce, currently accelerated by the Covid-19 pandemic, and the deficit in brick-and-mortar retailers' digitalisation, several so-called digitalisation initiatives are developing in Germany.

As a rule, the aim of these initiatives is to support entrepreneurs' transitions from the classic brick-and-mortar store to a hybrid business that is active offline and online. It is striking that, in addition to trade associations and state institutions, private sector companies, such as Amazon, Google, Facebook and LinkedIn, are involved in these digitalisation initiatives, having co-founded several of them. Amazon stated in their 2020 annual report that they 'launched small business accelerator programs across Europe to help entrepreneurs and small businesses succeed in the digital world' (Amazon 2021, p. 3).

Yet, it is unclear what role platforms play within the digitalisation initiatives. Generally, the economic, social and spatial effects of digital platforms on (especially) small- and medium-sized brick-and-mortar retailers are still virtually unexplored from social and economic geography perspectives. A literature review of the 20 most important economic and social geography journals, which served as the starting point for backward/forward search and which was conducted in February 2021, bears surprisingly little conducted research – despite the growing influence and pervasiveness of digital platforms and the huge offer of digitalisation initiatives.

This study's goal is to fill this research gap. In more detail, the paper examines if and how platforms are expanding their reach on (small- and medium-sized) brick-and-mortar retailers during the pandemic, particularly in consideration of the digitalisation initiatives they are involved in. To help shape the analysis, this paper combines insights from the digital platform literature with the concept of framing/overflowing (Callon 1998).

The study's contribution is twofold: (i) First, it adds to the extension or rather redefinition of digital platforms from intermediaries to active shapers and mediators of the retailing industry. It argues that they gained legitimacy to continue to shift power away from brick-and-mortar retailers towards the platforms themselves. This is most likely to happen as they have transformed into and established themselves not only as infrastructure providers but also as active players, which is due to the fact that they shape their environment, inter alia due to their role as publicly legitimised retail advisers. (ii) Second, this study presents a starting point for future economic geography research regarding digital platforms in the retailing sector, their economic, social and spatial effects on (especially) small- and medium-sized brick-and-mortar retailers.

The paper is organised as follows: After a discussion of the literature on digital (transaction) platforms, in particular from an economic geography perspective, and presenting Callon's (1998, 2007) framing and overflowing, the methodology applied in this paper is introduced. Juxtaposed to the discussion and main findings, the conclusion is presented.

DISRUPTING ECONOMIC GEOGRAPHIES

A digital platform is understood as a two-sided or rather multisided matchmaker (Rochet & Tirole 2004), enabling multiple actors 'who would otherwise struggle to find each other (sellers, buyers, advertisers etc.)' (Schwarz 2017, p. 3) to connect. In just a few years, digital platforms have gained enormous power, redefining the role of consumers, producers and even property. They increasingly dictate the way the economy is organised, having paved the way for the so-called platform economy (Kenney & Zysman, 2016, 2019, 2020b), representing some of the most valuable companies in history (Cabral *et al.*, 2019). They reterritorialise existing infrastructures and sectors (Kenney & Zysman 2016, 2019) by continually reforming spatial representations (Graham 2020) as well as reorganising urban interactions and operations (Richardson 2020).

A variety of sectors exist, where noticeable examples of platform-based business models causing substantial market changes can be found: Uber and Lyft (rearranging transport services, e.g. Hall & Krüger 2017; Berger *et al.* 2018; Wells *et al.* 2020); Airbnb (private accommodation, e.g., Zervas *et al.* 2017; Cocola-Gant & Gago 2019; van Doorn 2019); Google, Facebook and YouTube (search, social networks and content creation; e.g. van Dijck *et al.* 2018; Zuboff 2019; Kenney & Zysman 2020a); as well as Amazon (retailing sector; e.g. Culpepper & Thelen 2019; Kenney *et al.* 2019) where the so-called disrupters are 'creating new rules of retail altogether' (Hänninen & Smedlund 2019, p. 37). Digital platforms such as America's Amazon, China's Alibaba or Japan's Rakuten were already founded in the days of Web 1.0. Back then, these e-commerce platforms were simply treated as an additional sales channel, having developed into platforms over time. They are characterised by the fact that they are not part of a sequential chain between suppliers and retailers, in which they play the role of assortment filter, that is, they buy and then sell goods. Instead, platforms generate customer contacts based on powerful, scalable IT landscapes (Kenney & Zysman 2016, 2019). In order to feed these customer relationships with goods, they enable other suppliers and retailers to conduct business themselves via their platform. Hänninen *et al.* (2018, p. 156) define multisided digital platforms as 'platforms that facilitate the interaction and the seamless exchange of products between consumers and independent suppliers through a multi-sided digital platform mediated marketplace'. The core power of digital platforms derives from their ability to increase their network, seeking to add value through the leveraging of network effects (Weitzel *et al.* 2000; Gawer & Cusumano 2014; Langley & Leyshon 2017; Srnicek 2017; Kenney *et al.* 2019). The extension of customers' reach regarding suppliers and vice versa is impossible to gain for incumbent retailers such as brick-and-mortar stores. Moreover, the creation of consumer value through a wide-ranging variety of services, including loyalty programmes, within their digital ecosystem (Hänninen *et al.* 2019), but also the generating of an incredible amount of data makes platforms generally powerful. Recent research argues that digital platforms are not just neutral intermediaries between different user groups (matchmakers), which they often claim to be (Evans & Schmalensee 2016; Kenney *et al.* 2019). Instead, a large number of digital platforms actively shape markets as so-called market makers (e.g. Langley & Leyshon 2017; Schwarz 2017; Frenken *et al.* 2018; Kirchner & Schüßler 2020). Such infiltration not only causes disruption of established markets but also consequently develops entirely new markets (Berger *et al.* 2018). While the idea of companies acting as intermediaries is far from new, digital platforms are changing existing frameworks in their respective industries and reorganise the geography of doing business with complex and multiscale methods (Bearson *et al.* 2019; Grabher & König 2020; Grabher & van Tuijl 2020; Graham 2020; Katta *et al.* 2020). The platform economy which represents a new organisational form based on a relationship between the platform and the ecosystem of firms dependent upon the platform, and users who interact and transact through it, is redefining spatial relationships, gradually introducing themselves into value chains and labour markets (Kenney & Zysman 2016, 2019, 2020a; Langley & Leyshon 2017; Srnicek 2017; Frenken *et al.* 2018). Simultaneously, the platform economy is reorganising value creation processes and the respective value chains (Schwarz, 2017; Barns 2019; Bearson *et al.* 2019; Grabher & van Tuijl 2020). This has far-reaching implications for economic geography: Graham (2020, p. 1) argues that digital platforms 'mediate spatial interactions, and thereby exert immense power over local economic geographies', profoundly challenging and reshaping whole business sectors, such as the retail sector. As Grabher and König (2020, p. 94) argue: 'At stake is rather a fundamental transformation of the social and economic fabric through novel modes of algorithmic power and control'. Schwarz (2017, p. 10) claims that '[t]hese gargantuan actors are running what could be called platform-based "superstructures" creating infrastructural conditions with global validity'. In the geography literature, the business model of digital platforms is often heavily criticised. Indeed, digital platforms often escape accountability due to their 'un-democratic, and usually distant' character, revealing 'no interest in promoting local voices or investing in local priorities', as argued by Graham (2020, p. 2), being heavily criticised for their strategic avoidance of labour protections and other regulatory frameworks. Despite their perception as revolutionary business models (Parker *et al.* 2016), research on digital platforms in the economic geography literature is in its infancy, with Kenney and Zysman (2019) and Hardaker (2021) arguing that economic geographers are underestimating the effects of digital platforms. Similarly, research in the retailing literature is relatively scarce, with recent exceptions focusing on customer value proposition (Hokkanen *et al.* 2021), product valuation (Mathmann *et al.* 2017), counterfeiters in online marketplaces (Sun *et al.* 2020), as well as platform strategies in terms of search, display and membership revenues (Lee *et al.* 2018). Amazon has served as a prominent case study for research on its impact on consumer buying decisions (e.g. Farah & Ramadan 2017; Ramadan *et al.* 2019), its review system (e.g. Kaushik *et al.* 2018), strategic contracting on platforms (e.g. Zennyo 2020), its distribution network and strategy (e.g. Hahn *et al.* 2018; Rodrigue 2020) as well as its business model and internationalisation strategy (e.g. Wu & Gereffi 2018). To the best of the author's knowledge, there are no studies on digital platforms actively engaging in digitalisation initiatives targeting brick-and-mortar retailers. This represents a major research gap, especially when it comes to understanding digital platforms power increase in terms of the Covid-19 pandemic and thereafter. While it is obvious that the lockdowns and the changing consumer behaviours since the start of the pandemic (and even before) have accelerated the growth of e-commerce, in particular of digital platforms, it is less obvious how digital platforms augment, substitute or reorganise physical retail spaces – in particular against the backdrop of the Covid-19 crisis, the state-ordered lockdowns and the rise in digitalisation initiatives.

This study seeks to shed light on this subject by combining insights from the digital platform literature with the concept of framing/overflowing (Callon 1998), which has been widely applied, inter alia in geography studies (e.g. Franz *et al.* 2014; Bauer 2018;

Higgings & Richards 2019). Callon's (1998) concept pair of framing (which he borrows from Goffman's (1974) frame analysis) and overflowing addresses the continuous process of defining and redefining markets. The concept 'describe[s] the contingent, tentative, and indeterminate nature of organising in a world on the move' (Hernes 2014, p. 184). To put in a nutshell, framing 'reflects the process of stabilising market boundaries', while overflowing 'represents its necessary corollary, namely that all entities included in such framing efforts at the same time constitute potential conduits to the outside world' (Chimenti 2020, p. 132). In more detail, Callon (1998) argues that 'frame' defines what counts for the actors engaged in a collective action. Consequently, what is important and what should be the focus of actions is defined by the action of framing. Callon (1998, p. 249) reasons that actors agree 'on the frame within which their interactions will take place and on the courses of action open to them'. Yet, he (1998, p. 249) states that framing is not fully detached from its surrounding context, as actors bring with them 'cognitive resources as well as forms of behaviour and strategies which have been shaped and structured by previous experiences'. Therefore, the whole process of framing is 'rooted in the outside world, in various physical and organisational devices. This is why framing puts the outside world in brackets, as it were, but does not actually abolish all links with it' (Callon 1998, p. 249). Chimenti (2020, p. 133) argues that framing 'creates a paradox', acting as both – 'a divider and a connector between markets, creating conditions for things to interfere', therewith often representing a contested activity (Holm & Nielson 2007). In regard to such paradoxes, Callon (2007, p. 330) speaks of performation struggles, which – in combination with framing and overflowing – 'highlights the precariousness of redrawing established boundaries within a highly contested environment' (Chimenti 2020, p. 134). This struggle arises 'when processes to establish alternative market boundaries interfere with and potentially threaten each other' (Chimenti 2020, p. 133).

Each form of framing imposes costs and creates new externalities that are not previously foreseeable as everything is principally connected. The phenomenon of the impossibility of total framing, hence, absolute stability, and the unintended generation of new externalities, as every device is separating and (re) connecting (Muniesa *et al.* 2007), is called overflowing by Callon (1998). From this point of view, 'externalities are simply the results of imperfections or failures in the framing process' (Callon 1998, p. 251). Generally, overflowing can take the form of positive or negative externalities occurring during the implementation of the theoretical model in the real world (Callon 1998).

Muniesa *et al.* (2007) point out the existence of a wide spectrum of market devices that intervene in the framing of concrete markets and the formatting of exchange mechanisms and evaluation processes, bringing about distributed calculative agency. With markets representing sociotechnical agencements (Caliskan und Callon 2010), and various market devices shaping particular markets (Callon *et al.* 2007; Cochoy 2007; MacKenzie *et al.* 2007; Muniesa *et al.* 2007), it is of continuing interest 'how these agencements are designed, implemented, maintained and reproduced' (Berndt & Boeckler 2010, p. 560). Thereby, instruments, equipment and infrastructure play an important role, which can be used strategically in quest for political and economic advances (Berndt & Boeckler 2020). Callon and Muniesa (2005) argue that being able to control these overflows, allow us to legitimise the particular framing at work. In regard to the conceptualisation of 'markets as arrangements of people, things and sociotechnical devices' (2010, p. 560), Berndt and Boeckler (2020, p. 560) specifically address the importance of technical (non-human) devices for the framing of markets, referring to them as being political, as they 'are never innocent and neutral', actively taking part 'in the reworking and reproduction of social difference.'

METHOD

The methodology draws on a mixed-method approach. While the focus lies on qualitative interviews, it is supplemented by observations as participant of webinars held by digitalisation initiatives as well as media analysis of several digitalisation initiatives. The study therewith follows Hänninen *et al.*'s (2018) call for future research to apply a mixture of qualitative and quantitative methods in order to deepen our understanding on digital platforms in the retail sector. Moreover, the study responds to a current call of Hokkanen *et al.* (2021) for an explorative, qualitative research strategy due to the novelty of platform's engagement in digitalisation strategies for brick-and-mortar retailers.

Sixteen expert interviews (see Table 1) with representatives of digitalisation initiatives, digital platforms as well as representatives of cities (responsible for retail and digitalisation) and institutions, such as the German Retail Association (HDE) and Chamber of Commerce and Industry (IHK), were conducted in order to triangulate, approve and interpret the media analysis and webinar observations.

Interviewees identified as having potentially important insights (in particular representatives of the respective digitalisation initiatives) were initially recruited via LinkedIn, a social network that focuses on professional networking and career development. Further interview partners were selected on the basis of a snowball sample. The semistructured interviews took place via Zoom from February until June 2021 and lasted between 40 and 75 minutes. Interview questions followed a preplanned interview guideline, which was sent to all interview partners beforehand, giving them the opportunity to think about their answers in advance. Nevertheless, there was room for spontaneity and flexibility with a range of follow-up questions that arose during the interviews (Salmons 2012). All interviews were transcribed and a qualitative content analysis using categories has been conducted (Cohen *et al.* 2017). Interview questions focused on the implications of the Covid-19 crisis on a platform's business, their role, intentions as well as benefits within the digitalisation initiatives.

Generally, reasons that speak for conducting interviews online include financial restraints or geographical boundaries. Yet, in the course of this study, the choice for conducting interviews online was mainly due to restrictions accompanying the Covid-19 crisis as well as time constraints on the part of interview partners, which made a rethink of research approaches necessary (Howlett 2021). Interviews were therefore conducted via Zoom. Yet, there is a considerable difference between conducting interviews online and offline (Deakin & Wakefield 2013; Roulston & Choi 2018).

While interview partners can 'meet' virtually and observe non-verbal communication

Table 1. *List of interview partners.*

ID	Interview partner	Date
I	Digital Coach for the federal state of NRW in Germany	February 2021
II	Founder and CEO (Big Amazon Marketplace Agency)	February 2021
III	Founder and CEO of Shoptimist	February 2021
IV	IHK Officer for the Department of Innovation and Digitalisation	March 2021
V	Managing Director *Kompetenzzentrum Handel* (*Competence Center for Retail*)	March 2021
VI	Google Zukunftswerkstatt (*Initiative Future Retail*), Representative	March 2021
VII	Politician; Consultant for Network Policy and Digitalisation	April 2021
VIII	*Quickstart Online*; Consultant for Network Policy and Digitalisation at the German Trade Association (HDE)	April 2021
IX	Project Manager at the Economic Development Agency (Medium German City)	May 2021
X	Project Manager at the Economic Development Agency (Medium German City)	May 2021
XI	Project Manager at the Economic Development Agency (Large German City)	May 2021
XII	Project Manager at the Economic Development Agency (Small German City)	May 2021
XIII	Founder and CEO of a city-based digital retail platform	May 2021
XIV	Founder and CEO of a leading local online marketplace provider	June 2021
XV	Founder and CFO of a city-based digital retail platform	June 2021
XVI	Expert for digital platforms and local commerce	June 2021

(Gray *et al.* 2020), online interviews often stand for an increased flexibility for timing and length of the interviews (Deakin & Wakefield 2013). On both the ends, the researchers' as well as the interviewees' personality and comfort level with technology influences how rapport is established. In some cases, this may actually lead to richer and more insightful results, especially when discussing personal or sensitive topics (Jenner & Myers 2019). Indeed, most of the interview partners were interviewed while they were working from home. In three occasions, the interviewees' children entered the room at some point during the interview. While there may have been distractions or lack of privacy, interview partners generally seemed comfortable speaking about their personal opinion or controversies in a space of their own choosing. Yet, it remains open for discussion whether this represents an advantage or disadvantage. Generally, the study is based on a limited number of expert interviews.

While the interviews present the focus of the methodology applied, the author additionally took part in eight trainings centred on the topic of 'retailing on platforms' as a participant. The trainings, which lasted between 1 and 2 hours are offered free of charge by different digitalisation initiatives and are open to all interested retailers upon registration. They are conducted in the form of webinars followed by a Q&A session. During the webinars attended, screenshots were taken throughout the presentation and combined with note-taking. Furthermore, questions posed by attending retailers as well as answers of the representatives of the respective digitalisation initiative were documented. In addition, a media content analysis of the websites and social media presence of three initiatives has been conducted. The analysis included the initiatives Quickstart Online, Zukunft Handel (Future Retail) as well as Kompetenzzentrum Handel (Competence Centre Retail), as interviews with representatives of the respective initiatives were conducted as well as webinars attended. The observations gained through the participation as well as the media analysis allow a better assessment of the presentation and content on the part of the digital platforms as well as a better understanding of questions and challenges on behalf of small- and medium-sized brick-and-mortar retailers.

ANALYSIS AND DISCUSSION

Framing the digitalisation processes of brick-and-mortar retailers – Undoubtedly, the retailing industry is undergoing a socio-technical transition, which culminates in the increasing development and widespread adoption of digital platforms, so-called two-sided or multisided marketplaces. According to Hagberg *et al.* (2017, p. 695), digitalisation 'includes the transformation of physical products into digital services, consumer recommendations in social media, and the incorporation of digital devices into the purchasing process – such as online information searches leading to offline purchases.' Simultaneously, the lockdowns during the Covid-19 crisis have revealed that many small- and medium-sized retailers are not yet sufficiently digitally equipped and often lack even basic knowledge, particularly in the area of e-commerce. Challenges lie particularly in the fact that brick-and-mortar retailers can hardly transfer their experience and expertise to online retailing. Neiberger (2020) refers inter alia to existing expertise on location searches, familiar merchandise management processes for managing inventory in stores, brick-and-mortar assortment concepts, marketing, pricing and employee qualifications that are no longer valuable when applied to online retailing. Unsurprisingly, the urgent call for offline retailers to digitalise and participate in e-commerce as soon as possible is ubiquitous and intensifying.

Generally, there have been plenty of digitalisation initiatives, for example, in form of local platforms, during the last years, most of them focusing on a certain city or region (Schade *et al.* 2018; Berendes *et al.* 2020; Hardaker 2022). Often, they are supported by public initiatives, including so-called 'Kümmerer' ('caretaker') who try to encourage, support and accompany the digitalisation process of small- and medium brick-and-mortar-retailers in the respective city. However, non-local initiatives, generally

Table 2. *Selection of digital initiatives (own elaboration; various websites).*

Starting year	Name of initiative (***English translation***)	Initiators	Website
2020	Händler helfen Händlern (*Retailers Help Retailers*)	Leading medium-sized trading companies	www.haendler-helfen-haendlern.com
2020	Quickstart Online	HDE (*German Retail Association*), Amazon, Händler helfen Händlern (*Retailers Help Retailers*), Handelsblatt (newspaper)	https://quickstart-online.de/
2020	Zukunft Handel (*Future Retail*)	Google, HDE	https://award.handelsblatt.com/initiativezukunfthandel/
2019	Kompetenzzentrum Handel (*Competence Centre Retail*)	HDE, ibi research at the University Regensburg, IFH Köln and EHI Retail Institute	https://kompetenzzentrumhandel.de/
2019	Zukunftsoffensive: Basisbox (*Initiative for the Future*)	IHK (Chamber of Commerce and Industry) München and Oberbayern; IHK Düsseldorf, Gewerkschaft Verdi (Union); Fraunhofer IAO; Google	https://learndigital.withgoogle.com/zukunftswerkstatt/courses/initiative/basisbox
2017	'Pack ma's digital' (*Let's do it digital*)	IHK (Chamber of Commerce and Industry) München and Oberbayern; Bavarian Ministry of Economic Affairs, Telekom Germany, Facebook, LinkedIn, MediaMarktSaturn; Giesecke & Devrient	https://www.ihk-muenchen.de/de/pack-mas-digital/

targeting small and medium brick-and-mortar-retailers all over Germany, are a rather recent phenomenon. The pandemic certainly has and will continue to accelerate this (see Table 2).

The initiatives, focusing on small brick-and-mortar retailers, can be seen as niche actors gaining momentum, making use of the current window of opportunity, which has been triggered through policy intervention (lockdowns), which in turn, as confirmed by all interviewees involved in these initiatives, resulted in a drastic increase in demand. 'Normally, we have 30, 40 participants and throughout the Covid-19 pandemic we suddenly have 400 to 500' (Interview V). What becomes clear throughout the interviews, webinars as well as media analysis is that the respective initiatives specifically address small- and medium-sized brick-and-mortar retailers and advertise participation in the webinars:

> We have a very high response to the Zukunft Handel initiative *[Initiative Future Retail]*. But you have to be aware that we run advertising spots before the Tagesschau (*evening news, prime time*), so there is a lot of budget behind it. We contacted over 200,000 retailers for this initiative, with an extra package where everything was described, where you had QR codes, where you could go in directly. We tried to break down every barrier that we could. (Interview VIII)

In total, 70,000 brick-and-mortar retailers are reported to have participated in the initiative (Schasche 2021). Another interview partner recalls:

> It has also happened, as in the example of Zalando, with whom we had a few info events that we explicitly approached shoe retailers and that was really a case when I made cold calls for the first time and approached the retailers and asked them, but most of them were already tied up on some other platform. (Interview I)

In regard to several digitalisation initiatives that have been specifically founded due to the Covid-19 crisis (see Table 2), the HDE is playing a prominent role. The HDE is the umbrella organisation of the German retail trade, with its headquarters in Berlin. As an employers' and trade association, it represents the interests of the retail trade in Germany and the European Union. It is inter alia in partnership with Google (Initiative Zukunft Handel; *Initiative Future Retail*), with DHL (Lokal handeln; *Act locally*) and Amazon (Quickstart Online). In regard to Quickstart Online, Amazon (2021, p. 3) states that 'these programs offer free access to online training, expert advice, live events, and services.' One interviewee argues that.

> the idea is to take away their [*brick-and-mortar retailers*] fear of going down these paths. We have to consider that of the 410,000 retail stores here in Germany, around 250,000 are owner-operated. And it's precisely these that we need to capture – that's the wrong word – but empower to take these steps toward digitalization. (Interview V)

The successful empowerment of a new frame requires the articulation of expectations and of visions that are summarised in a socially acceptable narrative. Narratives should set positive expectations for the future in order to make the new frame appear useful in a broader socio-political context. While it is obvious that digitalisation initiatives gain momentum because offline retailers from certain sectors are simply not able to create revenue during Covid-19-related lockdowns, several interviewees suggest that the association of a well-known platform attracts interested retailers to the initiative.

> I believe that the name 'Google Zukunftswerkstatt' is helping to attract companies because they see that there is really someone who comes from Google, well, they are not from Google, they are independent, but they are trainers who are approved and certified by Google. And I think they're happy to listen and take on board what we're offering. (Interview IV)

In the participated trainings, experts were explaining how to engage in e-commerce and become visible online with the particular platforms or on Google respectively. Presentations were easy to follow, mostly with no prior knowledge necessary. All presentations ended with best practice examples, portraying small- and medium-sized retailers who are able to generate a large part of their turnover online, successfully managing the Covid-19 crisis. While the sessions were structured as webinars, participants were able to ask questions after the presentations. One of the main arguments brought forward to engage in digital platforms is the fact that they represent a relatively easy way to engage in e-commerce and allow access to a huge market of potential consumers. This is also ubiquitous on the websites of the initiatives: They all advertise positive user feedback, they offer direct coaching appointments and they represent themselves with a benevolent attitude, assisting and helping brick-and-mortar retailers. The conducted interviews confirm this. Sharing their expertise and waiving commission for the first months, one interview partner argues that

> Digital platforms are doing something for the brick-and-mortar retail sector (Interview V) and it's great that the platforms are active here because they simply have incredible expertise. Amazon is a large part of German e-commerce, so why shouldn't they be actively involved? (Interview II)

Generally, interviews confirm that digital platforms are regarded as the experts of e-commerce, while simultaneously providing the infrastructure. In their role as advisers, they fill an institutional gap that cannot be fully closed otherwise. The managing director of the Kompetenzzentrum Handel (Interview V) points out that 'We can't be everywhere as a retail competence centre and are happy when others support us.' Most

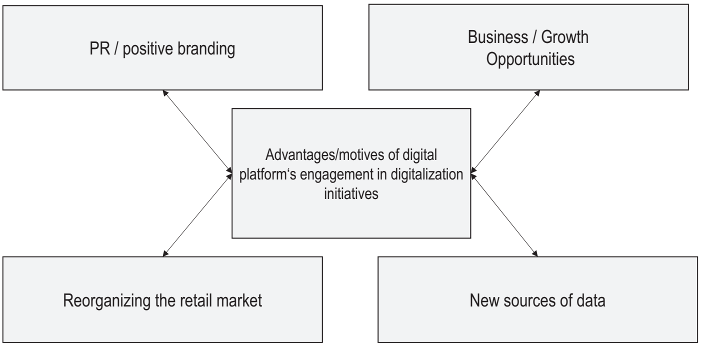

Figure 2. *Compilation of main advantages and motives of digital platform's engagement in digitalisation initiatives (own interviews, media analysis, webinar participation).*

programmes, as in the case of Quickstart Online, are put together in a partner consortium, where themes and speakers are defined.

> (…) the entire technical process runs through Amazon. They film it, they coordinate the agencies, and everything is done by agreement. We clarified once how it should look, but then it all goes through them. (Interview XIII)

Thus, digital platforms frame the digitalisation process of brick-and-mortar retailers engaging in the initiatives (Callon 1998). What they share with their public partners is that they act towards creating or transforming the rules, respectively, the frames of the retail market (Callon 1998, 2007). In addition, framing can also be identified on the side of the institutions that engage with the digital platforms in the further training and participation of retailers regarding the platforms. Yet, the intentions seem to differ substantially.

Being asked what digital platforms such as Google, Amazon and Facebook further gain from these initiatives and co-operations, a variety of reasons are named, highlighting inter alia their intention to enhance their business opportunities, including new sellers as well as more data (see Figure 2). In addition, the results indicate that digital platforms aim to take on a more active role in the digitalisation process of brick-and-mortar retailer and, respectively, branding this as positive PR.

Creating paradoxes – 'Going to bed with the devil?' – While platforms are regarded as experts in the retail digitalisation field, interviews reveal that the initiatives helped digital platforms to increase their reach upon (small) brick-and-mortar retailers. The paper now turns to the investigation of the controversy of digital platforms engagement in these initiatives, as pointed out by the majority of interview partners and observed in several webinars and presentations offered by the initiatives.

Generally, it is clear that digital platforms pursue their own interests:

> Of course they are interested in the marketplace growing. It can only grow if more retailers with exciting products and services are on it. That is, of course, and we are not naive here, such an initiative also serves to explain Amazon and possibly to make Amazon attractive to retailers who have not considered it so far. The same applies to eBay or Google. The workshop also explains how to set up Google Business Accounts. Of course, we have very clear corporate interests here. (Interview XII)

The controversial role is indicated by all interviewees outside the digital platforms, including the HDE representative, which is the main co-operation partner:

> We thought for a long time about how this would be received by the retailers, whether it wouldn't somehow be taken as a mockery when a letter from Google and the HDE is received during the lockdown.

Indeed, retail-related studies disclose that the platforms' role in reorganising the retailing landscape is far from ambivalent (Blake 2019; Marks 2019). On the one hand, as in the case of Amazon or eBay, the retail platforms support and enable (small) retailers' entry to e-commerce (Battermann & Neiberger 2018), contributing to small retailers' resilience in times of the Covid-19 pandemic due to the lockdowns and the accompanying many closed brick-and-mortar shops (Appel & Hardaker 2021). On the other hand, they are confronted with huge criticism due to their market power and their (mis-)use of the latter (Calvano & Polo 2020; Mattioli 2020), posing 'a threat to incumbent retail business models' (Hänninen *et al.* 2018, p. 163). Some retailers critically question the digital platform approach, asking for instance: 'Why should we, as small and medium-sized companies, support Amazon that ruin the retail sector and evade taxes in the EU?' (Anonymous participant, Webinar on Marketplaces, 04.03.2021). More closely examined, others reveal for instance that Amazon is pushing out suppliers by directly competing with them by entering their product spaces (Zhu & Liu 2018; Gilbert 2020). A current study for the German retail sector reveals that, for example, 84 per cent of active retailers on Amazon define the relationship as highly difficult or not amounting to a partnership with Amazon, reporting of a large variety of severe power dependencies (BVOH 2021). Digital platforms are responsible and in control of the infrastructure that allow retailers and customers to get together, providing them with the power to increase fees, modify their algorithms (e.g. their recommendation algorithms to put more importance on price) and expect sellers to advertise if they want remain visible in search results. Besides platforms, they simultaneously sell products on a marketplace that they operate (Hagiu *et al.* 2020). This represents a controversial practice with far-reaching implications for retailers participating on the digital platforms and the respective power asymmetries. As Hagiu *et al.* (2020, p. 1) point out: 'This practice has raised regulatory concerns [...] and led to investigations in Europe and the United States, with calls from various commentators and politicians for Amazon to be forced to separate its retail business from its marketplace.' This is particularly the case for Amazon, next to the selling of its own products, the vertical expansion of the platform for instance includes Amazon Pay, Amazon Prime and the fact that Amazon handles more and more of their own logistics.

These controversies are reflected in the interviews, yet, neglected in the media analysis and webinars attended:

> In the short term, if a retailer joins Amazon or Zalando, it can help him, but in the long term he is kicked out again, because he can not withstand the price pressure and the comparison with the Far East, because if he is successful, Amazon has the information and will mercilessly exploit this, they will then source or manufacture themselves and it will all come from the Far East. (Interview III)

Furthermore, the interviewee argues

> Of course, their primary goal is to reach a critical mass on Google Shopping, also to reach assortment, but if then all are in there, then the predatory competition is just like before. Only those with the best price and those who pay the best CPC (Cost-per-Click) will be on top again. I.e. as a small retailer, you will still be squeezed out. (...) This is an American platform economy concept. (Interview III)

In regard to such controversies and disagreements, performation struggles (Callon 2007, p. 330) are apparent, as platform models and brick-and-mortar retailers potentially represent competition. The engagement of digital platforms in the digitalisation initiatives and the accompanying rising onboarding of brick-and-mortar retailers, The engagement of digital platforms in digitisation initiatives and the accompanying rising involvement of brick-and-mortar retailers is leading to an increasing power imbalance. While they support brick-and-mortar retailers in entering the online retail market who otherwise would have struggled, the engagement does create dependencies.

This represents a contested activity (Holm & Nielson 2007). In this regard, Chimenti (2020, p. 133) argues that framing 'creates a paradox', acting as both – 'a divider and a connector between markets, creating conditions

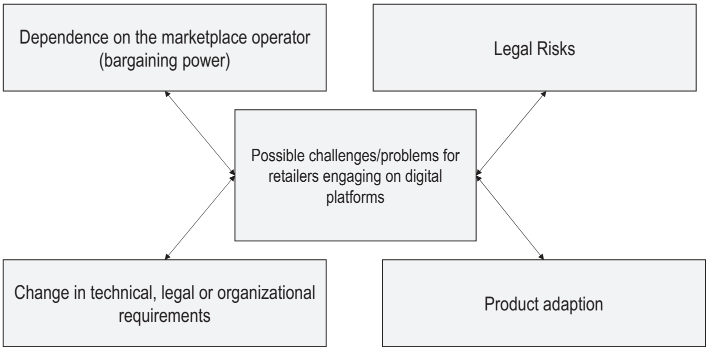

Figure 3. *Possible challenges/problems for retailers regarding digital platforms (own illustration based on several interviews and webinar presentations).*

for things to interfere.' Consequently, the long-term overflowing probably takes place in particular on the side of the institutions' goals: With their framing, they want to ensure that the local retailers survive, but in doing so they contribute to their dependency on digital platforms.

One interviewee exemplifies this with the example of Zalando:

> I would distinguish between the short-term and the long-term effect. Zalando also has a strong onboarding strategy, especially for the textile industry, which has been hit hard. But we also know people from Zalando and we talk to them and we know that once they are on board, after that Zalando knows what is bought and what is not bought. It will end up that there will only be Zalando in the textile trade. (Interview III)

Interestingly, all interviewed representatives of digitalisation initiatives point out the need for retailers to spread the risk, not focusing on one platform too much due to potential dependencies. This could also be observed in the webinars attended: The danger of dependency was always mentioned, but to highly differing degrees. This stands in contrast to the results of the media analysis: Here, no reference is made to potential risks.

Several interview partners (Interview I, V, IV) highlight the fact that risk diversification through additional marketplaces or sales channels is recommended. They argue for several (similar) reasons as pointed out by one webinar presenter (Webinar on Marketplaces, 04.03.2021) (see Figure 3).

The HDE representative emphasises this problem:

> These are all attempts to somehow resolve this dilemma. (…) Realistically, however, we also say that we must now see to it that the small and medium-sized retailers survive. If we look realistically at the situation, retailers have to be on Google in order to sell something. It's no use sacrificing small and medium-sized brick-and-mortar retailers, just so we've made our point that we don't like to have data monopolists. (…) At the moment, they have to use these tools to survive and we try to make it as easy as possible for them to do so. (Interview XIII)

More than infrastructure providers – Implications for local geographies – Interviews reveal that digital platforms already count as infrastructure providers: 'You can't get around them (digital platforms), you simply can't' (Interview IV). Cutolo and Kenney (2019) reason that certain vendors should, 'in fact, be understood as "platform-dependent entrepreneurs", as Amazon controls nearly every facet of their online business operations.' Kenney and Zysman (2020a, p. 69) argue 'Amazon's business model is a powerful engine for increasing spatial inequality.' This is acknowledged by an interviewee with strong business ties to Amazon:

> At the end of the day, Amazon has the most important gateway for product searches in Germany, and if I'm not visible there, I'm

> foregoing the majority of e-commerce customers. That's why it's also a question of do I want to afford it, can I afford it. (Interview II)

Interestingly, all interview partners agree that some kind of regulation on digital platforms is necessary due to their dominant market position and tax avoidance. As pointed out strongly by one interviewee, 'I believe that for antitrust and social reasons, there's really no way around the fact that these platforms have to be regulated in some form' (Interview VI).

In the case of Amazon, the platform takes over the majority of the purchasing and delivery processes, has sovereignty over customer data and decision-making power, so that in many cases, the retailer is reduced to a supplier function, having no direct contact to the consumers, no access to consumer data and being at the mercy of the platform (several interviews; BVOH 2021). This confirms Graham's (2020) argument that digital platforms have power over local economic geographies. The interviews and webinars attended confirm that platforms influence and even create their institutional and regulatory framework (Frenken *et al.* 2018; Kirchner & Schüßler 2020), effectively becoming the market (Kenney *et al.* 2019), in particular through the pointed out function as advisers and best practice examples. This goes along with Callon's (1998) framing concept, in which regard digital platform managed to take on a lead role. Hernes (2014, p. 184), however, uses the term infrastructure instead of 'frame', as he argues that 'overflowing offers the possibility to create a new infrastructure for a market by modifying one or several of the existing frame constituents.' In his eyes, 'the notion of long period, maintenance and some kind of control and authority' explains the usage of infrastructure. While this paper agrees with the idea of digital platforms representing an important infrastructure for the retail market, it argues for an extended or rather defined understanding of digital platforms. More than just an intermediary that facilitates the tools to sell, they represent mediators who actively shape socio-economic performance (van Dijck 2013; Schwarz 2017). Importantly however, this paper argues that the role of platforms is actively reconfigured – not only by the platforms themselves – but also by other institutions (such as public ones). Digital platforms are actively asked to fill an important space that cannot be filled by governmental institutions, functioning as advisers, best practice case studies and implementers. Partners of digital platforms, such as the HDE, actively encourage platforms to play the guiding role in framing the digitalisation process and therewith the retail market in general. This also confirms Langley and Leyshon's (2017, p. 5) argument that 'platforms are not simply in the business of intermediating connections, but of actively curating connectivity', filling a gap political institutions are not capable of.

CONCLUSIONS

This paper argues that the engagement of platforms in digitalisation initiatives additionally supports digital platforms' ascendance, a factor that has not yet gained attention. This is due to the fact that new retailers recruited for the digital platform business results in more data, which consequently results in higher turnover, lesser competition. Furthermore, digital platforms perception as knowledgeable partners has been positively influenced, increasing their legitimacy and making them regarded as a necessity. This in particular stems from the openly active encouragement that digital platforms receive from governmental institutions and retail associations. Therefore, a continued establishment of the accompanying innovative business models and distribution mechanisms can be expected. Consequently, this paper adds evidence for the changing framing processes in favour of e-commerce, in particular via digital platforms. It argues that digital platforms actively engage in constituting the reality they envision (Callon 2007). Yet, framing processes can also be observed on part of the institutions, which engage digital platforms within the digitalisation initiatives. While this double framing can be identified, it is in particular one-sided overflowing that results from these framing processes, taking place in particular on the side of the institutions' goals. With their framing, they want to help local retailers to survive, but simultaneously enhance their dependency on digital platforms.

While the concept of framing/overflowing generally proved to be a meaningful amendment to the digital platform literature, questions arise in regard to the resulting overflows and remain largely unanswered. While positive externalities may be knowledge transfer, learning from the best (Callon 1998), negative externalities seem manifold. The results indicate how the polarisation processes in retail are accelerating. This includes a continued redefinition of spatial relationships of brick-and-mortar retailers and digital platforms as well as an advanced reconfiguration of the physical retail space. Digital platforms gradually introduce themselves into their sales processes therewith changing not only procedures on an individual level but also at a macro level, leading to changes in the retail system, which is in turn embedded in city systems, regional systems and so on. While stationary and digital are not contradictory terms, as stationary purchasing can be digitalised, the main implication for physical spaces of brick-and-mortar retailers derives from the fact that customers (including their data) are redirected to large digital platforms instead of directly engaging with the brick-and-mortar retailers. Brick-and-mortar retailers are being reduced to a supplier function and losing/not gaining access to customer data has far-reaching consequences for the physical retail space, as it is, for example, substituted or reorganised (e.g. more storage space than sales area). The consequences for physical retail space, particularly within a physical retail system and a city system, need to be evaluated if we want to understand, picture and plan future physical retail spaces in light of the growing influence of digital platforms.

So far, the paper revealed the controversial role of digital platforms in digitalisation initiatives, arguing that they gained legitimacy to continue to shift power away from brick-and-mortar retailers towards the platforms themselves. This is most likely to happen as they have transformed into and established themselves not only as infrastructure providers but also as active players, shaping their environment, inter alia due to their role as publicly legitimised retail advisers. This represents a starting point for future economic geography research regarding digital platforms in the retailing sector, their economic, social and spatial effects on (especially) small- and medium-sized retailers. In Germany, Amazon for instance is paying comparatively very little tax and not paying fair wages, consequently confronted with strikes. In December 2020, during the Covid-19-related lockdown, several news outlets reported that Amazon is increasing its billions in profits during the crisis, but refuses to pay collectively agreed wages, according to the Verdi trade union (FAZ 2020). Referring inter alia to the example of Google, Graham (2020, p. 3) predicts that we therefore 'end up with unaccountable and undemocratic organisations managing key digital infrastructures of our cities'.

Consequently, the political guidelines regarding this framing could hardly be more contradictory. On the one hand, debates and legal action are being taken to limit the power of digital platforms. On the other hand, they are actively engaged as a partner in the digitisation initiatives. While the differences between online and offline retailing are blurring, their co-existence has to be investigated further if we want to know and to influence how retail systems and city centres for instance will look like in the future. While different stakeholders are aware of the critical role of platforms, they are waiting and mostly hoping for policy regulations to be implemented. Consequently, this paper argues for a public critical debate that needs to take place. Especially on behalf of the institutional partners of digital platforms, their uncertainty and doubts have to be made transparent. So far, the controversial role of digital platforms is kept mostly secret: It is not made visible to retailers neither in the webinars they can attend nor in the context of websites and information made available to them.

While there is a continued request for regulating digital platforms, it is still open for debate what the physical retail market should and could look like and what institutional support is needed or could be provided. Institutional partners creating, supporting or cooperating with local platform providers, or generally local commerce solutions, could be one option.

Currently, platforms framing is legitimised and platforms as infrastructure providers not only confirmed but also clearly promoted. The physical retail space thus increasingly loses significance, or actively cedes it to the platforms.

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