The Social Supply Chain and the Future High Street

Abstract

Purpose: *The paper examines how independent social and commercial activities have developed in response to the perceived decline in the UK High Street and in response to the challenges of increasing digital retailing opportunities. This examination is undertaken through the lens of the social supply chain as a means to understanding, suggesting and expanding on current research regarding retailing and the UK High Street. We reveal some of the challenges being posed by the changing patterns of growth and consumption in cities and couple these with shifting supply chain trends.*

Design*: A case study approach is employed to explore the rapid advances and influence of digital technologies on businesses operating on the primary business street of suburban centre, towns or cities (described in the UK collectively as the 'high street'). The study is conducted through the analytical lens of the social supply chain.*

Originality*: For the purpose of this paper we use two distinct strategies relating to delivery and balancing and in relation to the actions of co-creation, co-production and co-consumption to emphasise and analyse changes currently occurring in the UK high street. We take a social supply chain management perspective to undertake a systematic critical review of the various recent efforts undertaken by local governments, communities and traders groups to revitalise the high street.*

Findings*: Theoretically extending the 'social' in the social supply chain we illustrate the usefulness of the nuanced concept of the 'social supply chain' with two related strategies concerning delivery and balance. These strategies are themselves interlinked with the actions of co-creation, co-production and co-consumption. Examples of social supply chain strategies presented include retail businesses giving away something as an incentive, where the underlying requirement from the customer is that they will bring their own specialist product, skill or social network to a specified location (real or virtual).*

Key words: social supply chain, business strategy, co-creation, co-production, co-consumption, digital high street.

1. Introduction

This paper examines how independent social and commercial activities have developed in response to the perceived decline in the UK high street and the challenges of increasing digital retailing opportunities. This examination is undertaken through the lens of the social supply chain as a means of understanding, suggesting and expanding on social research regarding retailing and the UK high street. While the social supply chain has been partially defined in previous literature (Bunte, 2006; Salam, 2009; Hoejmose et al, 2012) a systematic detailing of its distinctive features is still required as confusion remains in its terminological usage. The 'social' in much of the previous literature refers to either the use of social media and its application within existing supply chains (Moore and Neely, 2011) or the 'social' considerations embedded by corporate social responsibility agendas into existing supply chains (Porter and Kramer, 2006; Perderson, 2009; Carter and Rogers 2008). The current mixture of terminological usage and the underlying relationship that is set out in this use presents a challenge for the social supply chain. Reducing the meaning of the "social" to social media or corporate social responsibility is a convergent perspective that draws the broad meaning of the social and sociality into the narrow frameworks of ethical actions or media platforms. The use of "social" in this paper and its role within the social supply chain, in contrast, is a divergent one that is not constrained by any specific contextual application of sociality.

Considering the significance of the social supply chain through interrelated social supply chain strategies (see Figure 1) reveals the full advantage of lateral scaling and the generative capacity of the 'third revolution' or 'network society' (Rifkan, 2011; Zittrian, 2009). A key component of this framework are two interrelated strategies, firstly the delivery strategy, a logistics function dealing with the flow of materials from suppliers to end users (Houlihan 1988) and secondly the balance strategy, to synchronize the requirements of the customer with the flow of materials (La Londe and Masters 1994). These strategies are integral to the social supply chain in their ability to manage the interchange between creation, production and consumption actions.

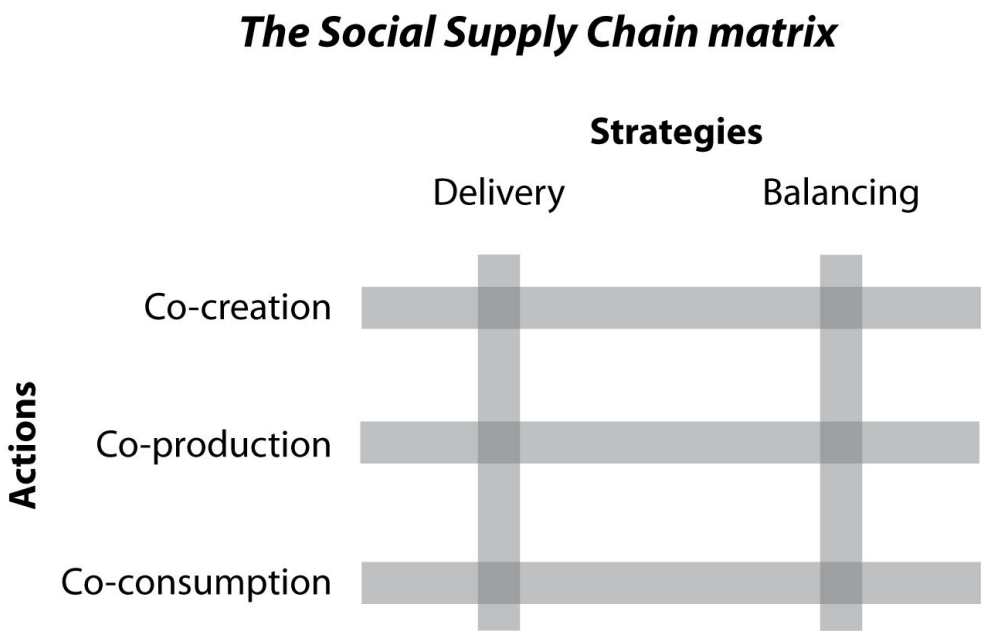

Figure 1: Strategies and actions of the social supply chain

The first strategy of the social supply chain - the delivery strategy - can be found in the movement of potentially unique items that have been grown, made, crafted or pre-owned by individuals. Items are delivered by the separate, independent actions of individuals to permanently or temporarily fixed retail or storage locations (Sioshansi, 2013, p.266). These actions mirror the recent popularity of the 'Bring Your Own Device' (BYOD) movement in the workplace and the increasingly wide availability of freely accessible Wi-Fi in public places. This example suggests that businesses are giving away something for free as an incentive to consume. However, and more importantly from the point of view of the social supply chain, the underlying requirement of BYOD is that users of the service must *bring* their own devices to a specific location. A common example of the social supply chain's delivery strategy can be found with high street charity shops throughout the UK where individuals donate to specific branches of specific charities who can then restock the stores (or pass the items onto a central warehouse).

The second strategy of the social supply chain is a balancing strategy, the delivering up of consumers to physical high street locations (Hackett & Foxall, 1994). The balancing strategy represents a critique to earlier works concerning high street retail and supply chain management (Bruce et al., 2004). Discussions of high street retail supply chains have tended to assume a linear process that begins with manufacturers and producers, proceeds through intermediaries to end with the supply of goods to retailers. This view of the supply chain deflects consideration of consumers to a separate set of issues that are associated with marketing and communications (Lamming, 1996). Similarly, studies on the digitisation of the supply chain focus

on the facilitation of linear information flows and the management of relationships between supply chain partners rather than on new ways of engaging consumers in the supply of goods (Patnayakuni et al, 2002).

We acknowledge that individual high streets have many different clients, characteristics and responsibilities that are heavily dependent upon geographical location as well as historical and economic contexts. Groceries outlets, charity shops, take-aways, barbers, bookmakers and post offices all feature in varying concentrations on 'typical' high streets. For this reason the extent or evidence for the application of the social supply chain as a retail model will vary significantly in practice on current UK high streets. Within this study we focus on specific examples of retailers who have already constructed a social supply chain retail model around their business - that is - those independent retailers who Portas (2011) has identified as having a crafting innovative model.

Earlier discussions of supply chains and retail models largely assume a constant supply of consumers as a function of traditional retail supply chain management activities being focussed upon the high street (Barnes & Lea-Greenwood, 2006). Traditional retail marketing practice could then concentrate on attempting to present differentiated choices to the consumer within these locational constraints (Roberts, 2003). The key assumption of traditional retail marketing is that the consumer must inevitably visit a high street, shopping mall or retail park to perform their acts of consumption. The presence of a wider set of choices for retail, either in a physical location or through local and international ecommerce sites, introduces a wider set of challenges to high street retailers and opportunities for manufacturers and producers. On the high street, in light of new virtual competitors, the balancing strategy of the social supply chain must necessarily include consider how to obtain a regular supply of consumers - footfall - to the physically fixed locations in the high street. However, the balancing strategy does not necessarily require a simple one to one relationship as a varying number of consumers are required for any single service or event. Understanding the nature of this relationship and its optimum ratio sets out the expectations for maintaining high street activities. Tactics to favourably alter the balancing strategy of the social supply chain on the high street can be identified in the offering of specialised events, performances, chance discoveries and explorations that entice consumers to visit the high street. A more specific example of retailing that systematically introduces facets of exploration into the high street experience is found with the TK Maxx (in the UK) and TJ Maxx (in the US), two retail chains where the absence of a regular stocklist restricts conventional ecommerce practices - despite the existence of online sites for both of these chains.

The UK Government's Portas Review (Portas, 2011) and the subsequent government-sponsored project by Mary Portas represents a failure to commercially invigorate the high street from the point of view of the social supply chain (Neville, 2014). The project attempted to revive a traditional, and potentially imagined, vision of the high street. The Portas project was presented as a solution to the current decline in UK high street turnover but it was one that effectively ignored the ever-presence of ecommerce alternatives and the widespread

integration of social media organising that already informally brings new ways of combining socialising and shopping into the physical high street (Phillips & Young, 2009). Theorising the social supply chain - and particularly its balancing strategy - necessarily requires inclusive consideration of the individual and personal digital interactions and communications that are in a constantly shifting but integral relationship with physically fixed locations.

Independently originated but commonly shared motivations for achieving local success in high street reconstruction, rehabilitation or reinvigoration can be regularly observed across the UK (Future High Street Summit, 2014). These solutions are premised on the common issues affecting the high street but particularly the concentration of property ownership within the high street (Dixon, 2009) and the reluctance by most local authorities (in the UK) with town planning responsibility to restrict the proliferation of any single type of retail outlets, in particular shops such as betting shops, fast food takeaways and charity shops (Fransoo & Wouters, 2000). Faced with common issues the results of retail regeneration projects are generally very similar and draw upon a small set of solutions to respond to the challenge of physically fixed retailing. These recurring responses to the challenge of high street retailing in the UK also echo the constraints of the current financial situation which in turn reflects political sentiment, including the current UK Prime Minister's 'Big Society' agenda (North, 2011). Current responses to poor high street turnover reflect an underlying critique - that is further drawn out throughout this paper - that argues that existing supply chain management perspectives - in literature and in practice - concerning retailing have been built upon assumptions of a simple and linear supply chain that always efficiently progresses from the original supplier to a final ever-present consumer.

In light of these considerations for the social supply chain, this paper is organised as follows; Section two situates the changing relationship of supply chain operations for retail businesses on the high street in the UK. In particular, considerations about the demise of the high street and ecommerce are presented here. Section three presents a comprehensive literature review that outlines the conceptual foundation of the social supply chain. A theoretical model is then presented that associates the actions of co-creation, co-supply and co-production with the strategies of the social supply chain. Section four presents a series of carefully identified cases that illustrate how the social supply chain as a retail model is already emerging in different forms within contemporary high street retail practices. The series of industry case studies are presented as acts of co-production, co-supply and co-consumption in a social supply chain with these actions being specific responses to the strategic need for delivery and balancing within the social supply chain. The case studies focus on consumer and retailer activities that can be identified as being aspects of current social supply chains. Case studies are identified by authors such as Eisenhardt (1989) and Yin (2009) as excellent guides for conducting research in broader business contexts and their mutual invocation has been taken up in this paper. Section five discusses the implications of acknowledging and exploiting the social supply chain for UK high street retailing. In Section six the methodology and case studies are discussed. The paper concludes with a summation and consideration of the implications of the social supply chain in the future city for supply chain management research and practice. Ultimately, the aim of this work is to enable the development of new retail models that are formed from awareness

and exploitation of the social supply chain. The models that can evolve will enable a response to the competition and challenges of both shopping malls and online retailing while also directly contributing to the shape, experience and sociality of future cities.

2. The demise of bricks and mortar retailing: its impact on the UK high street

Internet usage has steadily increased over the past few years with the 78% of the UK population having access to the Internet in 2013 (Dutton et al., 2013). From the same annual 'Internet in Britain' study conducted by the Oxford Internet Institute there is demonstrable evidence that buying and using services online such as paying bills, online grocery shopping or comparing products prior to buying has continued to grow exponentially. The report highlights major challenges to bricks and mortar retailers and sets out the parameters of transformation to shopping habits within the UK (Dutton et al., 2013). Total ecommerce sales reached $US 1 trillion dollars in 2012; this was a 21% increase from the previous year and it was predicted to grow further in the next 12 months by 18.3% to reach $US 1.298 trillion worldwide (eMarketer, 2013). In their recent report exploring this situation, the British Council of Shopping Centres (BCSC 2012) also evidenced how shopping habits are changing. The BCSC claim that 25% of total UK sales will be online transactions by 2020 and that this growth will largely be driven by m(obile)-commerce. The same BCSC report also recognises the changing perceptions of retail with 'shoppers' now becoming 'visitors' to retail spaces with a heightened expectation that they will be there to enjoy an experience. 'Bricks and mortar' spaces – and especially those stripped down to the most utilitarian functionality in the name of supply chain efficiencies - have to adapt (BCSC, 2012). Social media has played a major role in setting the pace of this change by giving shoppers more knowledge and control over their choices in relation to purchases. Retailers then must compete with "invisible" competitors located anywhere in the world or "embedded" within apps or other services (such as, for example, *GroupOn* or *Kickstarter*). Changing shopping habits are having a wide-ranging impact on many conventional shopping environments including shopping centres, retail parks and local high streets. The high street is reportedly in abject decline across the UK with consumer shopping behaviour moving towards a preference for 'click and flick' rather than 'brick'. This shift in consumers' core behaviour coupled with increasing council rates and commercial rents has doubled the impact of a declining high street. There are many initiatives that attempt to redress this contraction of traditional retail activity including the Mary Portas Pilots and the Rochdale Borough High Street Foundation who are using empty spaces as food-growing hotspots (spacehive.com/incredibleediblerochdale). Despite the recognition of the range of threats there has been little sustained success found in any of the solutions that have been put forward and the UK high street continues to experience a general perceptible decline.

3. Supply chain management literature and shaping the Social Supply Chain

A systematic review of supply chain literature in relation to concepts of the social is incorporated into this paper. The keywords "social", "supply chain" and "supply chain management" were used to identify relevant literature. The primary purpose of this association was to review,

appraise and appreciate contemporary opinion and discourse in the SCM discipline that supports this current study. The review was also undertaken to identify any gaps in existing literature as well as potential future research opportunities. Incongruously what emerged was a lack of literature and published research relating to the 'social' in social media. The 'social' literature that was predominate in the body of supply chain literature related to corporate social responsibility with only three papers found in *Supply Chain Management: An International Journal* that used the keyword "social". All of these papers explore prior literature and the 'social' is studied exclusively within the context of 'social sustainability'. Capo-Vicedo et al (2011) use the term 'social' to refer to social network analysis and use it as a means to build an organisational model of supply chain management in terms of knowledge management. In contrast, Miemczyk and Johnsen (2012) the term 'social' as a methodological and phenomenological way to extend the research agenda around sustainability. They argue it is important not to limit Supply Chain Management studies within this evolving field therefore argue that the broadening out of studies beyond direct suppliers is necessary and must incorporate ethical sourcing and green supply chains as well as other new concepts connected to sustainability. In a similar manner, Ashby et al. (2012) break down the literature around Sustainable Supply Chain Management (SSCM) and argue for the need to examine the concept in a holistic manner that includes both the social and environmental dimension of sustainability. The conclusion from this examination of previous literature is that the term 'social' has previously been applied in a narrower manner than its application in this paper.

There are numerous definitions that can be applied to the many different contexts of the supply chain. Metzer et al. (2011: 4) states that "supply chain management is the management of entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer". This definition distills a large array of complex activities down to their key components. Supply Chain Management (SCM), however, is a moniker for what are complex and multifarious processes, logistics, transportation, operations management and materials and distribution managements, marketing, procurements and information systems that are viewed as forming part of any supply chain strategy (Jain et al., 2010). The terminology associated with SCM (Tan 2001) include supplier integration, buyer-supplier partnerships, supply chain synchronisation and integrated logistics. This rhetoric suggests the presence of cohesive relationships but in practice the reality is one of antagonism and distrust that cause conflict in the distribution channel, a well discussed area within the literature (Simatuang and Sridharan 2002). Burgess (2006) conducted a review of prior supply chain management literature and a number of key findings emerged. A persistent claim regarding SCM literature is that the body of research is claimed by many disciplines and consequently there is a lack of clarity in the definition of key terms despite a primary contextualisation within the manufacturing sector (Burgess, 2006). From this manufacturing viewpoint it is the quality of products that is the theoretical differentiator but a power shift in recent theory towards the customers has slowly emerged and with it a recognition that this is a critical success factor to gain competitive advantage (Jain et al., 2010). This steady movement towards to a more social perspective is the theoretical thread extended by this paper.

Traditionally, the important drivers of SCM are cost, time, quality and flexibility with the ultimate utopian vision that if SCM 'could only' harmonise these factors in reacting to market situations maximum advantage could be obtained (New and Payne, 1995). This theme also persists with the view that SCM can reduce the 'time-to-market' by being adaptable and agile by harnessing the capabilities of entire organisations that span the globe. However, ubiquitous disruptive technologies are troubling traditional supply chain management thinking and its manufacturing roots (Malik et al, 2011). Managing customer expectation and reducing costs has slowly superseded manufacturing as the key drivers in contemporary SCM strategies (New and Payne, 2011). The current model of supply chain management for high street retailing simplifies a complex and bifurcated set of activities that are part of a global network of systems and is not equipped to deal with the changes brought by 'always on' connectivity. The future, spurred by the digital economy, changing consumer habits, the re-emphasis on the local and shifting environmental issues is exposing the rigidness of supply chain management in current retail models as being largely unsuitable. Information sharing has always been a key component of the supply chain, and web based information is just an additional communication channel that enables accurate data collection along a chain that directly relate to sales generation (Simatuang and Sridharan 2002). Kembro et al (2014, 609) similarly note the importance of information sharing in the supply chain context, for example, in terms of content and structure (what to share with whom) and appliances (how to share). They consider information sharing as a key element of supply chain infrastructure. Lastly, they note that most, if not all, empirical literature in the field converge towards the conclusion that "one size does not fit all".

This paper acknowledges the significance of 'context' within the discussion of the high street. In particular transformational context of the supply chain and supply chain management in more recent decades in terms of practice the adoption of innovative technologies, engineering approaches and strategic directions. Hallmark perspective changes in SCM have occurred regularly. In the 1950s standardised shipping containers and the worldwide transportation of goods radically altered the global economy (Levinson 2006). Since then many disruptive innovations have continued to shape and re-model supply chain management with a ripple effect in altering consumers' habits. A breadth of literature is emerging exploring the shifting relationship of production and consumption between produced, supplier and consumer. Bruns (2012) for example calls for further understanding of participatory community processes and the potential problems emerging when drawn into the commercial world. Evans and Wurster as early as 1997 called for a better understanding of the dramatic operating changes that new technologies had released into the business world. Notable points of significant change have included Electronic Data Exchange (EDI), tracking systems and real-time data on parcel delivery (since the mid 1980s). Along with the obvious impact of the exponential growth of computer hardware capacity and capability, concepts such as continuous replenishment systems have deconstructed the value chain to an order-driven regime (Raghunathan, S. and. Yeh, A. 2001). For example, *Tesco*'s continuous replenishment system went live in 2001 and enabled a reduction in the cost of lead time, maintaining of constant stock levels, consistent speed of delivery and a certainty of supply that both met and set customers expectations (*The Grocer*, 2001). Amazon's business model based on innovations in ordering and fulfillment again

disrupted the marketplace with orders being placed with Amazon and goods being shipped directly from publishers and manufacturers eliminating the need for any intermediary warehousing. Smaller high street retailers and independents were (and are) unable to compete solely on price, convenience or service levels against these large-scale and efficient operations that already exploit certain benefits of highly integrated information systems.

4. Identifying the social supply chain

Authors including Sanchez et. al (2011) see the "Internet of Things (IoT) as an essential part of any future Internet." Connected autonomous devices will outnumber conventional desktop computers and mobile devices "by orders of magnitude". For the moment, however, direct interactions between humans still dominates business and social activities. Co-operative and prosumption activities as they relate to city dwelling and consumption and production practices (Botsman and Rogers, 2011) are important influences on the urban supply chain. Rifkin (2011) describes a "Third Industrial Revolution", in which anyone can be their own manufacturer as well as their own internet site and power company. The generative capacity found in connecting multitudes of sellers and buyers within a virtual space is achieved through the use of networked technologies and is "almost free" (Zittrain, 2009). These changes signpost potential for retailers and customers by substituting expensive consolidated intermediaries with a distributed virtual network of small, independent and individual sellers and buyers. Moving away from the aggregation trend in supply chain management eliminates the cost of transaction at every stage of an item's movement along a supply chain. The arts and craft retail site *Etsy* has created a global craft bazaar that enables scaling laterally rather than hierarchically, and markets goods collectively rather than using a top-down "fan" supply chain. Lateral scaling in the "Third Industrial Revolution" shifts from traditional supply chain strategies to a shared operation of networked and distributed individuals as well as small and medium sized enterprises. The rapid decline in transaction costs brought about by the network enablers of the "Third Industrial Revolution" brings a form of distributed capitalism that is of sufficient significane to alter the way supply chain strategies can be operationalised.

Interest in the High Street and future cities fall across a range of disciplines as well as governmental policy and commercial positions. This intersecting combination of interests is also sometimes contradictory. These tensions operate at both operational and strategic levels to reflect the competitive nature of the retail environment and the need for this commercial environment to also provide social and governmental functions. Table 1 below was developed by Schaffers et. al (2011) and systematises theses relationships, tensions and perspectives for future Internets and cities.

	Future Internet Research	Cities and Urban Development	User-Driven Innovation Ecosystems
Actors	Researchers ICT companies National and EU actors	City policy actors Citizen platforms Business associations	Living Lab managers, citizens, governments, enterprises, researchers as co-creators
Priorities	Future Internet technical challenges (e.g. routing, scaling, mobility)	Urban development Essential infrastructures Business creation	User-driven open innovation Engagement of citizens
Resources	Experimental facilities Pilot environments Technologies	Urban policy framework Organisational assets Development plans	Living lab facilities: methodologies & tools, physical infrastructures
Policies	Creation of advanced and testbed facilities Federated cooperation Experimental research	City policies to stimulate innovation, business and urban development Innovative procurement	User-driven innovation projects Open, collaborative innovation

Table 1: Three perspectives shaping the landscape of future Internet and city development (adapted from Schaffers et. al., 2011)

As populations continue to converge in cities, the continued pressure for innovative and efficient methods for sourcing as well as producing consumer items will continue. The advantages garnered from digital network connectivity provide many opportunities to take advantage of 'co-' (connected, congested or cooperative) engagement.

5. The social supply chain as a new retail model

The current state of retailing is reshaping the high street. In recent decades consumers have increasingly driven to out-of-town parks and shopping centres persuaded by value, convenience, and choice not available on the high street (Guy, 2000). Many high streets have stood vacant, neglected and misunderstood by consumers, town planners, investors and retailers (Wade, 2014). At the same time the high street's success is claimed to depend on the health of the local economy and its ability to attract footfall (Deloitte, 2013). Despite this claim there are also many examples of neglected high streets in more affluent areas such as Altrincham in Greater Manchester. Other factors that have shaped the current state of the UK high street include the recession of the early 2010s, loss of consumer confidence, lack of access to car parking and unfriendly cycling and walking routes into the high street (BIS, 2011). Changing demographics within local communities as well as a generally aging and more mobile population has contributed to the overall narrative surrounding the demise of the high street (BIS, 2011). In a manner similar to the contrasts that exist between the high street and out-of-town shops that goes beyond a simple comparison of prices, it is the experiential elements of the physical high street and the innovative practices of online shopping that are the points of contrast. These are the features that distinguish one retail experience from the other (Deloitte, 2013). In the high street, an important question is what motivations and incentives are

being used to entice shoppers back to the physical location. Retail business models that take up the social supply chain perspective necessarily attend to the construction of a seamless environment for connecting with friends, engaging with the variability and uncertainty provided by independent shops and traditional markets, the provision of sustainable key logistics services and the removal of the many transportation challenges for shoppers, and their shopping, in and out of the future city. A further challenge for the physical high street is the extent to which consumer expectations have now been raised by digital retailing including 24/7 availability (to purchase), instant price comparisons, vast supplies of known stock, additional linked product suggestions from companies who know their customer's habit and the encouragement of consumer-to-consumer conversations in the form of reviews and suggestions (BIS, 2011). The challenge to physical retailing presented by ecommerce is compounded by the presence and significance of online social networking that, at least partially, removes the high street from its role within the social infrastructure of current and future cities. Meeting people and reconnecting with friends has increasingly become less the result of a chance encounter or a pre-arranged rendezvous on the high street. For the high street to remain a pivotal and relevant aspect of the retail experience there must be an alignment of the retail and social. Initiatives such as "Portas Towns" fail and the Government's Future HIgh Street Forum do not address these issues because they do not prioritise the integration of new ways of shopping and socialising (online and offline) with the physical high street. From the perspective of the social supply chain, retailing and sociality are integral.

Behind the scenes, business improvements drawn out of the application of the social supply chain assist physically located retailers to be competitive on the high street. In examining the intersection of delivery strategy and co-consumption actions of the social supply chain (see Figure 1), an integrated business service backend that clusters high street shops and offers the ability to select, and pay for a range of goods that are then collected together and immediately delivered back to a shopper's home - through the actions of other shoppers - draws out the logistical aspects of a new retail model. When coupled with an integrated backend services a co-consumption concierge service then contributes to the balancing strategy of a social supply chain. With the integration of systems relating to purchasing and delivery between multiple retailers a concierge service could chart a real time route for individual consumers between physical retailers. This innovation challenges the efficiency and philosophy of Amazon's recent experiments in predictive shopping offering the prospect of supplying goods before you buy them (Simpson 2014) - and consequently removing any element of discovery or exploration from the shopping experience. The linkage of personal data with a high street's own systems can enable retailers to collectively know about a needed birthday present, a pending holiday or party, the weekly food needs or suggested new food and drinks, or menu ideas. The digital co-consumption concierge then provides a shared itinerary for exploring with friends and family the available options that can be found on a high street. A key distinction for any digital assets created to support co-consumption-oriented high street retail models is the need to embed mechanisms for exploration, entertainment and discovery rather than 'merely' the more sterile process of ordering online. The intention of a co-consumption concierge is to create anticipation and excitement around actions that includes importantly, among other things, the opportunities

for face-to-face meetings with friends and family.

6 Social Supply Chain Case Studies

In this work a case study approach has been selected as a means of gaining in depth insight into new models of retail activity that employ a social supply chain perspective. The three case studies described here were selected from a range of potential cases spanning traditional strategies to innovative and technologically driven. The cases were selected after being identified as providing excellent examples of new ways for creating or supplying products and of interacting with customers; examples of the social supply chain in context. The case studies give a description and context specific snapshot into the creative ways that businesses and consumers are together engaging to take advantage of the increasing demands of urban living and living in a digitised world. Each case was also chosen because it provides a concrete illustration of the perspectives shaping the landscape of future internet and city development (see Table 1). The three cases illustrate differing levels of maturity in terms of digital adoption and integration, yet each project presents innovative ways of deploying a social supply chain. *Moss Cider*'s adoption of digital media is primarily done to build brand awareness and community (a website and Facebook presence) around their physical business activities. *Popupshop* integrates the digital world into a temporary shop front to combine virtual and physical worlds, and promotes social interactions both customer to customer and customer to virtual friendship group. Finally, the *Regional Twittersphere* builds virtual community around existing regional high streets. Each case study was examined using multiple methods including the researchers' own observations, interactions with key stakeholders as well as observational reviews of web and social media sites. As researchers, we are aware of the ethical implications and the on-going debate regarding what is the status of 'public' data on social media sites, and whether or not it can it be used without informed consent just because it is in the public domain (boyd and Crawford 2012). However, after considering the tweets that were selected for the final case study it was readily established that all of the material was sourced from corporate brands with one exception. This exemption came from a social media commentator who has almost four thousand personal followers and is a writer for the largest regional newspaper in the North West of the UK and which has 149,000 followers. The *Twitter* data used in this paper was also available on the newspaper's feed and website; the data was very much in the public domain in multiple ways and consequently considered unquestionably 'public'.

Each case was included in the study as the authors had involvement or stake in each of the projects. This ranged from being a local resident (*Moss Cider*, *Regional Twittersphere*) to being an adviser on the project (*Popupshop*). Drawing upon theories of insider research (Adler and Adler, 1994; Breen, 2007) this allowed the authors to understand the impact of the cases under study upon local communities and high streets (their own local communities) and to more clearly theorise the emergent phenomena. Insider researchers need to be aware of issues relating to confidentiality, anonymity and power dynamics although this is generally a key concern where the insider research is work-based. In this work, the researchers were peers in local communities rather than power holders within an organisation. The result is that this approach

has allowed for a deep understanding of each of the locations described and the initiatives under examination.

6.1 Moss Cider Press - the social supply chain and co-production

The *Moss Cider* project is a community based initiative founded by a Moss Side resident Dan Hasler who had the vision to grow an orchard on the site of a disused bus depot to make locally produced cider. Moss Side, an inner city area is located within two miles of Manchester's city centre, and has a long history of brewing dating back to 1890s but is not known for its apple orchards. The plan is a long-term one but what has already emerged is a vision to produce local cider on site, sourcing apples from across the city and relying on local volunteers in the processing activities, in effect, essentially establishing a local social supply chain. *Moss Cider* founders self-funded the purchase of an industrial apple press and were supported by Firmstart (www.firmstart.co.uk), who assist in the development of the economic and social base of the suburbs of Hulme and Moss Side by providing funds to develop local start-ups and regenerative networks. With all the key ingredients in place to begin juicing apples this non-for-profit business gained unexpected media coverage coupled with high levels of community interest. What was key in this business model was the synergy of people, social connectivity, innovative processes that integrated, not interfaced with consumers. With the nature of the product relying on a seasonal ingredient this has enabled an initial timeframe to work within. The *Moss Cider* Project have established a local social supply chain that has encouraged a diverse local base of suppliers - apple donors, the concept and product has been promoted by word of mouth and digitally amplified. The project relies on the voluntary and local community sector, the human factor. The *Moss Cider* supply chain commences with the donation of apples that will be converted into cider or apple juice, weighed with 50% of the wet weight returned back to the donor. This payment can be returned to the donor in a variety ways either by refundable brown glass crown-cap bottles or recyclable bag-in-boxes. Locals are encouraged to participate in the juicing process as well as the collection and distribution of the apples, apple juice and cider across the city. The pressing process is free, but the produced cider is not for resale. However as the project is building an interest in locally grown and produced cider grows there is a constant demand for the output. Initially *Moss Cider* was sold at local events and can now be found in a number of independent local wine merchants and bars. Essentially this non-for profit business model has adapted ethical sourcing practices, stimulated innovation within the local economy, encourages a positive contribution from local communities and has increased participation in local SMEs within its supply chain. The project is open for all who want to help or learn how to cider press and there is an interest in developing a local skill base as they encourage participation in the newly established orchard and green spaces metres away from one of the major transport arteries into Manchester. A genuine social supply chain that relies on human action as a key component of the supply chain process 'to create unique and individualized sources of customer value, leading to customer satisfaction' (Mentzer et al 2001:7)

Figure 2: An example of bringing the 'social' to the supply chain

The "glue" for this social project is a heavy reliance on social media. There was an initial need to tell the *Moss Cider* story and traditional media was used along with digital media to promote the concept and the need for raw materials, apples. Further into the the cider production process there is a need for volunteers to press and then bottle, label and package the cider. The final component of the supply chain is bringing the product to the marketplace or directly to the customer. The *Facebook* Fan page has become a crucial element in the whole process as it brings the 'social' to the supply chain. Figure 2 illustrates a small example of the way that *Facebook* has been used to request volunteers to help bottle and label a recent large cider batch with the incentive of a joining in and drinking some of the produce. There are many requests on the project's social media presence to come down, join in, help out or just to play.

6.2 High street presence for virtual brands - the social supply chain and co-creation

In a bid to integrate real and virtual ways of shopping and to create both a social and sustainable high street and supply chain, *Popupshop* proposed an innovative "pop-up shop" retail model. This model reverses the usual trend of high street brands moving from real to the virtual ("bricks and clicks" model) and instead proposes a physical, yet temporary, presence for pure-play virtual brands. The management of this supply chain becomes a key element for success. Initially the space managers must create the demand and residents are invited to

co-create their high street via a digital shopfront. QR codes in empty shop windows lead to a survey asking “what would you like to see here?”, or an interactive shop window (Fig. 3) encouraging consumers to share their suggestions. Integrating the survey with social media accounts increases social reach, and in turn the volume of input into the co-creation of a particular street. Each popup cluster in each high street delivers a unique blend of goods and brands. Supply then meets a customised, current and socially specified demand; a consumer-driven delivery strategy for innovation and co-creation (Russo-Spena and Mele, 2012) drawing on the ‘lead user’ and their ability to “anticipate the requirements of the broader market” (Von Hippel, 2009), in this case the requirements are expressions that the local community has of its high street.

Figure 3: Interactive shop window.

Co-creation of the high street reinforces the presence and value of social supply chain retail models. Based on the survey results, analytics and subsequent brand recommendations (respondents who suggested X also suggested Y), a customised high street of single channel virtual brands can be temporarily constructed. This integrates the virtual and the physical, and avoids many of the issues encountered by Portas and similar projects in attempts to recreate a bygone (imagined) model of the high street. The new popup shops employ a different approach to that of the traditional physical retail model. Each shop is a socially networked experience. The products in store are limited to one of each item in each size, colour (or similar). Customers can try sizes on, see and feel the quality of the goods and then order online in the physical store (with guidance if needed) for eventual home delivery. There is no need for large delivery vans to stock the shop. Supply is provided on demand and delivered directly to the consumer - reducing high street traffic flow. Virtual brands then extend their reach and build reputation (and profit) by overcoming actual and perceived barriers to online purchase of certain products (e.g. clothing, jewellery). By being more inclusive those who are not comfortable with online shopping have support, guidance and face-to-face interaction with shop curators and fellow customers to help them overcome any skills gaps and are given reassurances where trust or security are their significant concerns. Popupshops become managers of a personalised supply of goods to the

consumer; creating demand, facilitating purchases and managing the delivery options.

The instore physical experience is a social one, echoing a cafe format, where customers shop and catch up with friends then have their purchases delivered direct. Interactive screens, virtual mirrors and wifi connections allow the integrated use of digital social shopping sites, such as justbought.it and interaction with a global community through channels such as instagram and the hashtag #shallIbuyit?, with a traditional and 'real' social "shopping trip". This represents a reinvention of the high street, a blend of traditional and new ways of shopping. The supply chain is entirely managed by a third party from demand creation to delivery.

Shopping and consuming (again) become social activities through physical and virtual channels. Whilst for earlier generations of consumers it was about "keeping up with the Joneses", conspicuous consumption or showing that they had enough purchasing power to be equal in their peer group, current consumers generations are defined by "connecting with and getting to know the Joneses" (Botsman and Rogers, 2011).

6.3 The regional twittersphere - the social supply chain and co-consumption.

The case of the regional twittersphere reveals the growing commercial presence on Twitter in the inner city Manchester area. In this example we present the social and commercial networking potential that social media offers for business in this area. The use of social media by a cross-section of society alters the demands and expectation placed upon the supply chain not only because it disentangles the shopping experience from the physical limitations of the high street but also because it enables the consumer to socialise and immerse themselves in relationships with all aspects of the supply chain. The blurring distinction between leisure and work, sociality and formality means that consumers choice can now be accessed from conversations found in the twittersphere. This was spectacularly revealed with the NSA's ability to trace the connections of friends through *Facebook* and illustrates the exponential way in which a single connection can build from seven, onwards to 200 connections and then quickly spiral upwards to 40,000. In inner city Manchester, by exploring the volume of tweets and retweets over a given period we can see that the digital high street is supported by a diversity of connections ranging from tweets about football to health, crime and individual political comments by community activists. The data comes from the most mentioned topics mentioned within a 1% sample of all Tweets and harvested by the COSMOS project between the 25th Oct 2012 and 14th Jan 2013. The harvest incorporated the Tweets from 140 individual *Twitter* accounts and captured both the tweets and re-tweets, friends and mentions over an 8 week period. The top 50 most active accounts were identified from a sample of over 100,000 tweets and re-tweets. Figure 4 identifies that proportion of tweets sent out by the top 54 Tweeters from within the sample. The busiest 54 accounts and the subjects area of their messages were identified (Left-hand graph, Figure 4). The number of mentions for each of the top 54 tweeters were also identified by subject area (Right-hand graph, Figure 4).

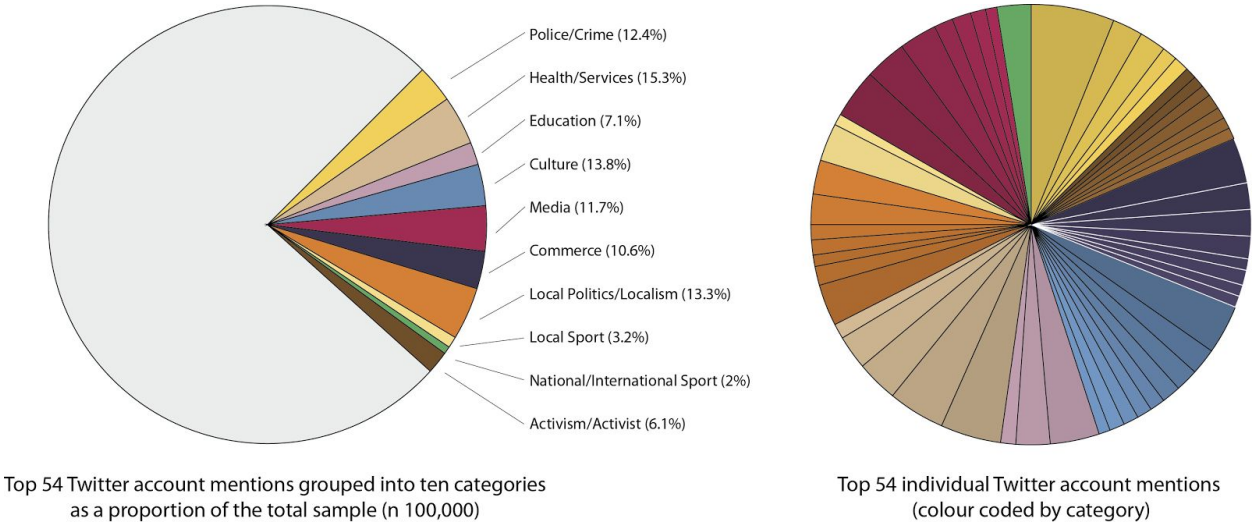

Figure 4: Mentions within the Manchester Twittersphere. Top 54 accounts by mentions and colour coded.

Digital conversations conducted in the twittersphere enabled a co-location of interests and agendas spanning the most intimate of conversations about where to meet up tonight with a group of friends, to what is being offered down the road at the local high street through to the latest updates on global events. The digital environment compresses experience for the individual tweeter; it is the place to go if you want to find out the most immediate events. For those who are less network active the value gleaned from digital interactions is relational and consequently smaller in scale. The twittersphere offers connected businesses a space to network and therefore extend the commercial value associated with supplier and consumer engagement from across the entire supply chain. For example, broadcasting across their consumer network allows business to offer discounts and incentives as well as to entice the local foot traffic to drop in for a chat. Figure 5 below shows an original tweet from Argos communicating the availability of the Playstation to an audience in a less conventional manner. The network value of this tweet is intensified when the same tweet is retweeted by well connected followers as well as through publication in a conventional newspaper.

Figure 5: Twitter conversation between Argos and a customer regarding the availability of a product.

Unlike the exclusively bricks and mortar high street the information that flows through the digital (or digitally enabled) high street quickly folds in on itself as individuals connect with each other and connectivity converges around topics of interest, sociality and overlapping consumption patterns all in an open and public domain. Businesses who are actively and positively connected to consumer are in a prime position to take advantage of direct engagement with customers and cab build a prosuming approach to supply chain integration. *Twitter* is one digital platform that enables businesses to apply a social supply chain approach to construct a seamless environment that can connect niche markets with friends (Figure 6). *Twitter* provides a key logistical function in the social supply chain as a rapid and immediate communications channel. This form of direct and succinct communication provides responsiveness across the supply chain by influencing choice and decision making and contributing to the informal and formal management of the flow of consumers towards specific consumption activities.

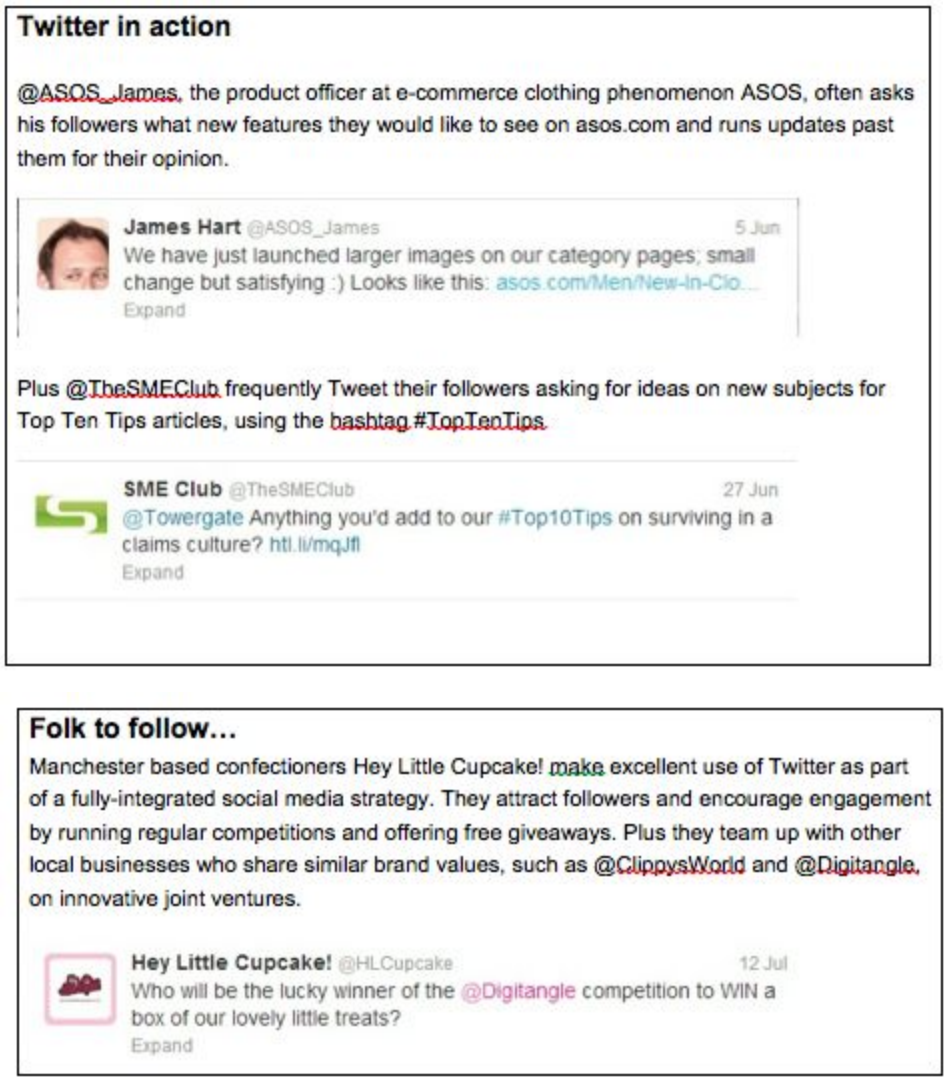

Figure 6: Twitter as locally embedded co-consumption

Enabling engagement across the entire retail supply chain impacts upon sourcing and distribution as well as widening audience reach. The examples above illustrate the inventive ways that many retailers are engaging with their consumer base. Retail offers and specials become two-way communications with consumers being asked to provide feedback relating to the products, opening up lines of communication and building commitment and brand loyalty in a way not previously possible outside the face-to-face environment. Prosumption at its best extends the positive experience of the digitally networked environment into physical spaces through word of mouth and trust building with potential future customers. For the business itself prosumption and co-consumption offer a Return On Investment (ROI) through the collection of valuable information from its client base and in relation to particular products as well as what and why particular experiences work within individual consumer interactions.

7. Discussion

The case studies discussed in Section 6 show how businesses are already adopting a social supply chain based approach to retail. Each case was chosen to provide a concrete illustration of the perspectives shaping the landscape of future internet and city development (see Table 1) and reveal the social supply chain strategies of delivery and balancing in practice. The three cases illustrate the varying levels of maturity that can be recognised in individual businesses in terms of digital adoption and integration. Yet, simultaneously, each project presents an example of the new ways of engaging with, and supplying, consumers. Each of the business cases show a changing relationship between traditional supply chain approaches to shopping and retail and the application of digital technology to current high street practices. The chosen case studies also reveal the different actions shaping the landscape of future internet and city development at operational and strategic levels (Table 1) and how they differ in the adoption of a social supply chain perspective. While there are existing studies regarding the social supply chain (Bunte, 2006; Salam, 2009; Hoejmose et al, 2012) we have argued for the benefits of a more nuanced and divergent use of the word 'social' within the supply chain. We have argued that a fuller systematic understanding of the 'social' enables a more appropriate building block for a supply chain strategy in the digital age through the integration of complex sociality and human action with the collective and systematic processes of business as they are now and how they will be in the future. In making this association we have indicated that the 'social supply chain' has two interrelated strategies concerning delivery and balance that are linked with the actions of co-creation, co-production and co-consumption. Each of the case studies assists in populating the social supply chain matrix (Figure 1) with tangible indicative examples.

	Delivery strategy	**Balancing strategy**
Co-creation actions - Virtual Brands Popup case	Residents determine the goods and brands that will be physically available on the High Street before they are delivered to the location	Earlier personal choices are extrapolated to other recommendations and incentives to physically return to the high street
Co-production actions - Moss Cider Project case	Residents deliver raw materials (apples) directly to the Project's location	Co-producers are also consumers. Specific value (pressing) is added by the Project
Co-consumption actions - Regional twittersphere case	Influential local Tweeters highlight locations, goods and services that match their interests and - by extension - the interests of their followers	The rate and pace of co-consumption for individual goods and services are managed through interactive social media exchanges

Table 2: The Social Supply Chain matrix (see Figure 1) with examples

Exploring a social supply chain strategy in relation to the generative capacity of connecting a multitude of sellers and buyers in virtual space and through the use of networked technologies is important because it offers to both producers and consumers supply and consumption opportunities that are almost unlimited and free (Zittrain, 2009). We therefore put the case for a more nuanced understanding of the 'social' in relation to the supply chain and contemporary business practice. We have drawn on theorists such as Rifkin (2011) and his description of The Third Industrial Revolution and how this is a change that is altering the type and nature of the transactions that when brought together in combination become a supply chain strategy. It is therefore important for many city based retail businesses now and in the future to apply lateral rather than hierarchical scaling with collaborative rather than top-down supply chain strategies. Digital tactics change the emphasis in the supply chain to network distributed and co-located operations that require retail businesses to apply strategies of supply balance and location.

The case studies discussed have also illustrated that the social supply chain has the potential to create a more efficient retail model for the high street and future cities. Rather than estimated quantities of raw materials or finished products being delivered into high streets and bringing with them pollution and traffic flow issues, new and detailed dialogues regarding demand are created between high street businesses, manufacturers and consumers - or prosumers - (Jenkins, 2006) and can be revealed. Nuanced understanding of the social supply chain brings greater knowledge and understanding for a more finely tuned value and supply chain with the potential to create more appealing and commercially sustainable high streets. In order to build and utilise a 'social supply chain' two interrelated strategies of delivery and balancing are required. These two strategies when coupled with social media link the actions of co-creation, co-production and co-consumption. The delivery strategy of the social supply chain is highlighted when it is applied to the movement of potentially unique items that have either been grown, made, crafted or are simply owned by individuals. The social supply chain as a delivery strategy, drawing on social media engagement, reduces barriers to entry when applied to locational or transportation barriers to entry are reduced (Sioshansi, 2013, p.266). Social supply chain strategies presented in the paper have included examples of retail businesses giving away something as an incentive, where the underlying requirement from the customer is that they will bring their own specialist product or skill to a specified location.

The first strategy presented explores a delivery strategy for the social supply chain that is found in the movement of potentially unique items that have been grown, made, crafted or simply owned by individuals and that are delivered by the actions of these individuals to permanently or temporarily fixed retail or storage locations. While traditional retail examples have existed in relation to supply and demand, the experience of a social supply chain in action is typified in the pop up shop or with *Moss Cider* where consumers bring their own apples for the production process. *Moss Cider* also presents a not-for-profit business model where an adapted ethical sourcing practice stimulates innovation within the local economy. The extended supply chain encourages a positive contribution from local communities and increased participation by local SMEs in their own supply chain. Co-production in this way removes a constrained, organisationally separated supply chain model and replaces it with a social supply chain tied to

a community with definite locational association.

The second strategy of the social supply chain presents the need for a balancing strategy with the delivery of consumers to fixed locations within the high street. The second case study presented the high street presence of virtual brands and where residents are invited to "co-create" their high street based on shared needs. Based on survey results, analytics and subsequent brand recommendations (respondents who suggested X also suggested Y), a customised high street of pure play virtual brands can be temporarily constructed. Integrating the virtual and the real these shops have a different approach to the traditional retail model. For example the shops can reinject interest and community priorities into the pop up shop experience through the co-creation (of the transient high street) and co-consumption of the products (by real and virtual co-shoppers).

Building on the examples of social supply chain actions outlined in Table 2 we can further generalise to present a framework for the social supply chain (Table 3).

	Delivery strategy	**Balancing strategy**
Co-creation actions	Consumers work with retailers to determine appropriate form of goods and services made available in the physical high street.	Analysis of preferences produces recommendations for additional products or services that extend the offer of retailers appropriately. Consumers interest and participation in the high street is more closely managed.
Co-production actions (This has been the primary focus of social supply chain discussions focusing on corporate social responsibility)	Consumers are involved in the delivery of goods and raw materials for production, upcycling, reuse or recycling. Consumers may also be involved in the production process in exchange for price reductions or free goods.	Co-production creates a vested interest among consumers to encourage return participation (not solely consumption)
Co-consumption actions (This has been the primary focus of social supply chain discussions focussing on social media)	Social media is the mechanism for creating a "social map" of the physical high street for like-minded consumers	The patterns of consumption-activity is managed through interactive social media exchanges (and can be analysed in this way)

Table 3: A Social Supply Chain framework

8. Conclusion - The social supply chain and future cities

In presenting three specially selected case studies as contemporary and lived examples we have illustrated how understandings of the social supply chain can aid businesses to construct a seamless environment that can bring leverage and opportunity in a digital age. The implication for business is that in understanding the social supply chain as an identifiably distinctive development in retail provides independent shops as well as traditional markets, with the potential to apply innovative leverage to reduce provisions of key logistics services as well as to aid the removal of transportation barriers for shoppers and retail items in and out of the future city. A current challenge for the physical high street is the extent to which consumer expectations have been raised by digital retailing. The challenge presented by e-commerce being further compounded by the presence and significance of online social networking which partially, removes the socialising purpose of the physical high street and its relationship to the infrastructure of the city. As the shopping experience shifts away from 'shoppers' to 'visitors', retail spaces must now provide an experience and a level of enjoyment when consumers visit a location. It is therefore necessary for future innovation and supply chain development to consider the significance of co-operative and prosumption activities as they relate to city dwelling and consumption and production practices.

All examples of social supply chain strategy in action have illustrated the importance of balance and locational emphasis to the businesses supply chain strategy on the high street. For research the observation and findings of this paper are significant in relating the operational use of day-to-day digital technology with the strategic needs to create sustainable physical retail environments as the locus for small business as well as community. Schaffers et. al., (2011) disentangles the significance of city living and the improvements the Internet can offer in term of city dwelling. While a number of theorists have explored the 'social' in terms of the use of social media being embedded into existing supply chains (Moore and Neely, 2011) or the 'social' considerations that are bundled within corporate social responsibility in supply chains (Perderson, 2009); we have explored in detail the advantages and leverage potential of digital network connectivity and the many opportunities being provided by networked operations or 'co' connected, congested or cooperative/ shared engagement. In particular the significance of strategy balancing between the physical and city retail opportunity and the digital has been presented; as well as the importance the balancing of strategies relating to demand and supply for residential living. It is therefore important that the supply chain strategy shifts to include the creative ways that businesses and consumers are engaging together to take advantage of the increasing density of urban living and/ or living in a digitised world.

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