Abstract
Web 2.0, also referred to as social media, is the use of the World Wide Web to increase creativity, information sharing, and collaboration among users. Social media is driving the rethinking of many of the principles of economics. The use of social media within supply chains is lagging behind their usage for other operational functions, however supply chain management is evolving into supply chain management 2.0. The purpose of this article is to provide researches of the supply chain management a reference with the main concepts of social media: social profiles, social applications, brand outposts and communities, and the social ecosystem.

Keywords: customer engagement; real time feedback; social media; supply chain management; supply chain management 2.0; Web 2.0.

JEL Classification: M31

Introduction
The term "supply chain management" entered the public domain when Keith Oliver, a consultant at Booz Allen Hamilton, used it in an interview for the Financial Times in 1982 (Wikipedia, 2012) and came into widespread use in the 1990s. Prior to that time businesses used terms such as “logistics” and “operations management” instead. According to the Council of Supply Chain Management Professionals (CSCMP), supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies. (Council of Supply Chain Management Professionals, 2012)

The evolution of supply chain management observes six major movements: Creation, Integration, Globalization, Specialization Phases One and Two, and Supply Chain Management 2.0 (SCM 2.0). The term SCM 2.0 has been coined to describe both the

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changes within the supply chain itself as well as the evolution of the processes, methods and tools that manage it in this new "era".

Web 2.0 is defined as a trend in the use of the World Wide Web that is meant to increase creativity, information sharing, and collaboration among users. At its core, the common attribute that Web 2.0 brings is to help navigate the vast amount of information available on the Web in order to find what is being sought. It is the notion of a usable pathway. SCM 2.0 follows this notion into supply chain operations. It is the pathway to SCM results, a combination of the processes, methodologies, tools and delivery options to guide companies to their results quickly as the complexity and speed of the supply chain increase due to the effects of global competition, rapid price fluctuations, surging oil prices, short product life cycles, expanded specialization, near-/far- and off-shoring, and talent scarcity. SCM 2.0 leverages proven solutions designed to rapidly deliver results with the agility to quickly manage future change for continuous flexibility, value and success.

According to Lambert (2008), the key supply chain processes are customer relationship management, customer service management, demand management style, order fulfillment, manufacturing flow management, supplier relationship management, product development and commercialization, and returns management. **Customer Relationship Management** concerns the relationship between the organization and its customers. Customer service is the source of customer information. It also provides the customer with real-time information on scheduling and product availability, through interfaces with the company's production and distribution operations. Successful organizations determine mutually satisfying goals for the organization and its customers, establish and maintain customer rapport, and produce positive feelings in the organization and the customers.

1. **Social Media And Customer Engagement**

1.1. **The Social Business Ecosystem**

The explosive growth of the Internet enabled customers to gain instant access to information via blogs, podcasts, Facebook, Twitter, YouTube, and a number of other social networking sites devoted to customers who shared their views of products through postings on web forums (Tybout and Calder, 2010). Social media combines two familiar words. People are social beings relying upon one’s ability to interact with and influence others in order to survive. In traditional sense, media includes such things as newspapers, magazines, and television. The word media also brings up impressions of how the news is delivered: via print, audio, video, and photographs. Each is an important medium used to engage an audience by telling a compelling story or sharing important news. Thus, social media are media for social interaction, using highly accessible and scalable communication techniques. Social media is the use of web-based and mobile technologies to turn communication into interactive dialogue. Andreas Kaplan and Michael Haenlein (2010) also define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the creation and exchange of user-generated content." Businesses also refer to social media as consumer-generated media (CGM). A common thread running through all definitions of social media is a blending of technology and social interaction for the co-creation of value. Social media
appeals to people across different generations because there are so many different types of social media engagement and there are a large number of social media sites that allow users to generate their own content related with shared experiences and conversations.

1.1.1. Social Profiles (Evans and McKee, 2010)

At the centre of the Social Web and the shared activities that define it, there are the online personas of participants. More than with prior anonymous discussion boards, it is an actual identity that is of value in a business concept, since it is generally the motivation of an individual to be noticed. As such that drives social participation in the first place. Though detailed personal information is (still) generally not available except to “trusted friends” or colleagues, the use of a real name or photo in one’s social profile is becoming common. Along with any optionally provided information, the result is a basis for understanding who it is that is actually participating.

The profile is therefore the starting point of social interaction between the participant and the online application or other unknown party. The existence if a profile or equivalent is, in this case, what differentiates social platforms and applications from (online) interactive applications. In an interactive application – consider a typical web site – the interaction is between the application and the user: navigate to a help file, download a PDF, or place an item in a shopping cart. In each of these the primary activity occurs between a user and an application designed to facilitate a specific task. Identity – beyond basic security or commerce validation requirements – in this context is of relatively little importance. Because the individual participant is steering the entire process, and because this is typically a task oriented transaction.

In a social context, by comparison, the interaction occurs between the participants as much or more than it does between a specific participant and the application or platform. It is not just that someone is doing something as with a transaction site: on the social web, that person wants to be noticed (talked about) or joined with while doing it. The majority of the interactions involve profile-based connections or exchanges: extending and confirming a friend request, sharing a review, commenting.

The social profile provides two central social elements, both of which are essential:

- A tangible personal identifier around which a relationship can be formed
- A framework for accountability for one’s actions, postings, and roles taken in the relationship that forms

Taken together, the significance of the profile is its central role in establishing who is participating. The social profile sits at the centre of a strong community. The social graph includes the set of profiles that describe members of a social network and the interactions, activities, and relationships that connect specific profiles on the social Web. The social graph defines the way in which one profile is connected to another. Understanding the construction of the social graph in the context if the profiles (people) collecting around a brand is essential in creating an organic social presence for that brand.
1.1.2. Social Applications

Engagement is central to the effective use of social technology and the creation of social business. Unlike traditional media, social technologies push toward collaboration rather than exposure and impression. The four basic building blocks of “social engagement” are: consumption, curation, creation, and collaboration. These fundamental blocks lead to and support a ladder-type engagement model with customer collaboration – not simply content consumption – as the end point. As such they are useful in understanding various ways in which technologies and strategies can be combined to drive smart tactical, business-building processes in both marketing and operations.

![Figure no. 1: Structured Engagement](image)

Source: Adapted from Evans and McKee, 2010, p. 15

The basic process of engagement begins with content consumption and builds up to collaboration between participants in the creative process. This is the kind of activity that binds community members together. Taking off on this, there are specific social applications – forums, collaborative tools, contests, and games among them – that brands can implement to lead the participants through steps of engagement that drive business.

The social applications are not necessarily communities per se, they are more generally enablers of an activity or outcome that is useful to the members of a community with which an application is associated. Social applications are designed to facilitate accomplishing something in the context of a shared or collaborative goal. They are designed to be a part of a larger social framework – the ecosystem – in which their audience spends time.

The next step in the social engagement process is curation. Curation is the act of sorting and filtering, rating, reviewing, commenting on, tagging, or otherwise describing content. Curation makes content more useful to others. Consumers are often more candid in their reviews of products and services than marketers. The reviews of reviews help others interested in the specific product or service to sort out and make sense of specific reviews that they consider most helpful for their specific need. Reviews become truly valuable when they can be placed into the context, interests, and values of the person reading them.

Beyond curation is what is more generally recognized as “content creation”. Unlike curation which is a response to an event, creating requires that community members actually offer up something that they made themselves. Brands can encourage creating by providing tools, support, help, templates, samples, and similar. Driving the content creation is an underlying theme: people like to share what they are doing, talk (post) about the things that interest them, and generally be recognized for their own contributions within the larger community. Reputation management, a key element in encouraging social interaction, is based directly on the quantity and quality of the content created and shared by individual participants.
Finally, at the top if the set of the core social-business building blocks is collaboration. Collaboration is a key inflection point in the realization of a vibrant community and the port of entry for true social business. Collaboration occurs naturally between members of the community when given the chance. Blogging is a good example. A typical blog has a numerous examples of posts, reinterpreted by readers through comments that flow off to new conversations between the blogger and the readers. Bloggers often adapt their blogging thoughts based on the inputs from the audience. Back on the business context, taking collaboration into the internal workings of the organization is at the heart of the social business.

1.1.3. Brand Outposts and Communities

Communities are built around things like passions, lifestyles, and causes, the things that people choose to spend their time with. Very often, a brand, product, or service by itself does not warrant a community of its own. For most businesses and organizations, the places where customers willingly spend their time – often engaged in conversation about the business or organization – is a social network or online community that is dedicated not to brands, products, or services, but rather to other people like themselves, with interests like their own. Fundamental to the brand outpost and its role in social business is that it is part of the larger community. Effective brand outposts are created where a target audience already exists, such as: Facebook Business Pages, Twitter, YouTube channels.

1.1.4. The Social Ecosystem

The social ecosystem provides three fundamental opportunities for understanding and leveraging the behaviors associated with collaborative interaction. These opportunities – the social graph, social applications, and social platforms (fig. nr. 2).

Figure no. 2: The Social Ecosystem
Source: Adapted from Evans and McKee, 2010, p. 103

The social graph provides a framework of understanding who is related to whom, who is influential, where to look for potential advocates, and what is happening right now. Social
applications are extensions to the core capabilities of the social platforms and software services that support social networks. They provide additional, specific functionality that makes the larger community and platforms useful to individual participants.

Social applications enable the extension of relationships between a brand, product, or service to the individual level by providing very specific, member-selected functionality. Finally, communities and other social platforms built around passions, life-styles, and causes provide gathering points for individuals interested in socializing and collaborating in pursuit of the specific activities they enjoy together.

1.1.5 Social Media and Customer Engagement

Retail is an area in which there was an opportunity for social marketing, and especially social location marketing, to be leveraged early and often. Social location marketing has the ability to impact the purchase decision cycle at all points – brand awareness, brand elevation, brand consideration and purchase. Social location sharing is specific to a location. It happens as someone becomes or is in the process of becoming a customer, visitor, or user. Retailers – especially those with brick and mortar stores – are acutely aware of the need to provide their visitors with a great experience to ensure that their visitors become customers. More important, retailers want those visitors turned customers to become repeat customers. They utilize online forums to connect with their customers, engage feedback, and create loyalty.

According to an internet survey by the Pew Research Center’s Internet and American Life Project (Hampton et al., 2011) Facebook is, by far, the most popular social networking site (SNS). Of those who use a SNS, almost all use Facebook (92%). Facebook is followed in popularity by MySpace (29%), LinkedIn (18%), Twitter (13%), and other social network services (10%). There is notable variation in the frequency of use of SNS. Facebook and Twitter are used much more frequently by their users than LinkedIn and MySpace. Some 52% of Facebook users and 33% of Twitter users engage with the platform daily, while only 7% of MySpace users and 6% of LinkedIn users do the same. By comparison, 62% of MySpace users, 40% of Twitter users, and 44% of LinkedIn users engage with their SNS less than once per month. Only 6% of Facebook users use this platform less than once per month.

The eight norms that guide consumers when they go shopping are:

- Freedom: Give me choice and the more the better
- Customization: Make it my own
- Scrutiny: I will check it out before I go to the store
- Integrity: Does this company deserve my money?
- Collaboration: Let me help you make your product or service better
- Entertainment: Make it fun
- Speed: Serve me now
- Innovation: Give me the latest

The impact of social networks on shopping habits is immense and already visible. Marketers follow customers into the social communities, hoping to be their friend and catch
their attention. In the blogosphere, customer review engines, consumer advocacy sites, and other non-traditional social spheres all interact to influence customer decisions. Thanks to social media, companies are turning their consumers into producers – that is “prosumers”.

![Figure no. 3: Retailers Online Engagement with Customers](http://www.facebook.com/kohls)

Prosumerism is more than extension of mass customization and customer centricity. It is what happens when producers and consumers both actively participate in the creation of goods and services in an ongoing way. The concept of prosumerism is not new. Marshal McLuhan introduced the idea in the early 1970s and Alvin Toffler introduced the term in the 1980s. (Tapscott, 2009) Prosumerism has become a tremendous force with the underlying message that technological advances enable the producer and the consumer to merge. Prosumerism is largely the manifestation of interest-based communities working together to solve a problem or improve a product or service. Today we have mass-collaboration and mass-communication technologies, such as blogs, wikis, and other Web 2.0 tools, that allow those groups to function and flourish.

### 1.1.6. Today’s Social Customer

To understand today’s social customer it is important to understand the demographic facts. The Baby Boom (1946-64) generation refers to people born after the war. The economy was very strong after the war, giving families the confidence to have lots of kids. By 1957 American families had an average of 3.7 children. (Tapscott, 2009) The Baby Boom became the TV Generation, it was the impact of the communication revolution led by the rise of television that shaped this generation more than anything else. In the 10 years following the boom, birth rates declined dramatically with 15 percent fewer babies born. Hence the name The Baby Bust (1965-1976). The Baby Bust term never caught on – instead, they are called Generation X, after the title of a novel by Douglas Coupland. The X
refers to a group that feels excluded from society and entered the labor force only to find that their older brothers and sisters had filled all the positions. Gen X-ers, now adults between the ages of 32 and 43, are among the best educated group in history. They are aggressive communicators who are extremely media-centered. The boomers started having children in greater numbers after 1978. The Net Generation (1977-97) is the echo of the Baby Boom, and is also known as Gen Y, or Millennials. By 1997, there were almost as many 5- to 9-year-olds in the U.S. (19,854,000) as there were 30- to 34-year-olds (920,775,000) (fig. nr. 4).

According to an internet survey published on June 16, 2011 and conducted between October 20 and November 28, 2010 by the Pew Research Center’s Internet and American Life Project (Hampton et al., 2011), the number of those using social networking sites (SNS) has nearly doubled since 2008 and the population of SNS users has gotten older. In this Pew Internet sample, 79% of American adults said they used the internet and nearly half of adults (47%), or 45% of internet users, say they use at least one of SNS. This is close to double the 26% of adults (34% of internet users) who used a SNS in 2008. Among other things, this means the average age of adult-SNS users has shifted from 33 in 2008 to 38 in 2010. Over half of all adult SNS users are now over the age of 35. Some 56% of SNS users now are female.

According to the Pew Research Center’s Internet and American Life Project Survey, characteristics of the Facebook users are (Goo, 2012):

- Facebook users are more trusting than others. A Facebook user who uses the site multiple times per day is 43% more likely than other internet users and more than three times as likely as non-internet users to feel that most people can be trusted.

- Facebook users have more close relationships. Someone who uses Facebook several times per day averages 9% more close, core ties in their overall social network compared with other internet users.
Facebook users are much more politically engaged. Compared with other internet users, and users of other social networking platforms, a Facebook user who uses the site multiple times per day is an additional two and half times more likely to attend a political rally or meeting, 57% more likely to persuade someone on their vote, and 43% more likely to have said they would vote.

Facebook users get more social support. A Facebook user who uses the site multiple times per day receives more emotional support and companionship offline (such as having someone help you when you are sick in bed.)

![Figure no. 5: Age Distribution of Social Networking Site Users in 2008 and 2010](image)

Source: Pew Research Center’s Internet & American Life Social Network Site survey conducted on landline and cell phone between October 20-November 28, 2010. N for full sample is 2,255 and margin of error is +/- 2.3 percentage points. N for social network site and Twitter users is 975 and margin of error is +/- 3.5 percentage points.

Each generation is exposed to a unique set of events that defines their place in history and shapes their outlook. Over the last 20 years, clearly the most significant change affecting youth is the rise of the computer, the Internet, and other digital technologies. When it comes to the Net Generation, compared with their boomer parents, time online is not time that could have been spent hanging out with their friends, playing soccer, learning the piano, or doing any od dozens of other things. More than anything, time online is time that would have probably been spent watching TV. At their age, their baby-boomer parents watched an average of 22.4 hours of television each week. (Tapscott, 2009) They were passive viewers; they took what they were given, and when the commercials came, they might have even watched them.

Net geners watch television less than their parents and they watch it differently. They spend a lot of time online researching products before they end up buying them in the stores. They were raised in a world of marketing and advertising, so they can detect a sales pitch. While they are not resistant to the power of advertising, they are more adept at filtering, fast-forwarding, and/or blocking unsolicited advertising than previous generations were. Companies are eager to understand them because they earn and spend a great deal of
money. In the United States, students earn almost $200 billion a year in part- or full-time jobs, and in 2006, they purchased $190 billion worth of goods. (Tapscott, 2009)

1.2. Social Media and the Supply Chain

The use of modern communications tools within supply chains is lagging behind their usage for other operational functions, such as human-resources strategies and marketing. Social media has been used mostly by business-to-consumer (B2C) to enable companies to promote their brands and market their products to consumers (Howells, 2011). From a business perspective, the early adopters are young professionals who already use these tools (such as Facebook, twitter, LinkedIn, and blogs) in their personal lives, and the focus has been largely on enhancing external communication, awareness, and thought leadership.

1.2.1 Benefits of Social Media in the Supply Chain

Early adopters of dedicated platforms for real-time communications within the supply chain are evolving solutions to improve communication and build a valuable knowledge repository. An article in CFO Magazine on “Social Media and the Coming Supply-Chain Revolution (Casemore, 2012)” outlines the five key benefits of social media in the supply chain:

- Creating Knowledge Networks

Organizations of all sizes are increasingly using Facebook and Twitter to rapidly capture and respond to customer feedback. It’s certainly possible, then, to use social media to get

![Figure no. 6: Sex Distribution of Social Networking Site Users in 2008 and 2010](image)
real-time feedback from the supply chain, both internally (inventory, warehousing, and procurement departments) and externally (suppliers and contractors).

- Balancing Speed and Contemplation

Effective decision-making usually requires a balance between speed and contemplation. The rapidity with which many social-media platforms can provide video, audio, and written communications across a vast network of suppliers, in real time, will turbo-charge decision-making in the supply chain. It will ensure that pertinent information is considered regardless of how fast a decision must be made.

- Portable Information Vaults

The continued increase in demand for information portability (i.e., availability over mobile devices) requires the ability to instantaneously access information. Social media is well positioned to offer the necessary platforms.

- Replacing Collaboration with Community

Given the risks inherent in global sourcing and the need for continual innovation in order to maintain a competitive advantage, supplier relationships must move beyond collaboration. The still-evolving demand for transparency in business requires ever-closer relationships with key suppliers. Building a community of suppliers where business-critical information, opportunities, and thoughts can be shared and built upon in real time will become the leading edge for many organizations. Social-media platforms are ripe to be the foundations for such communities.

- Building a Platform for Innovation

Creativity and innovation are the staples of any leading-edge organization. Engaging suppliers, such as through social media, is the best way to stimulate supply-chain innovation.

1.2.2 Social Customer Relationship Management

Companies are starting to embrace business-to-business (B2B) opportunities presented by engagement platforms. Customer relationship management (CRM) is a key supply chain process that concerns the relationship between the organization and its customers. Social CRM is gaining momentum as the next generation for CRM.

Traditional CRM strategy focused on management solutions for channels such as corporate websites, call centers, and brick and mortar locations. With Social CRM, these strategies now take into account the dynamics of the community-based environment that defines social media – an environment in which control of the relationship has shifted to the customer, who has the power to influence others in his or her social network.

A social media strategy is not the same as a Social CRM. Companies are building foundations for social media strategies, but Social CRM strategies are not yet fully realized. The operational components are somewhat more challenging and addressing them will bring the next level of social media maturity for many companies.
The IBM Institute for Business Value conducted a survey of more than 1,000 consumers worldwide to understand who is using social media, what sites they frequent and what drives them to engage with companies. They also asked 350 executives to tell them why they think customers are interacting with their organizations. The findings were published in a paper “From social media to Social CRM: What customers want” in February 2011 (Baird and Parasnis, 2011). According to this paper, if companies want to unlock the potential of social media to reinvent their customer relationships, they need to think about CRM in a new light while building a strategic and operational framework that provides both structure and flexibility. Figure 7 illustrates how companies can progress from 1) isolated social media projects to 2) social media programs that encompass multiple initiatives within a function to 3) a full-blown Social CRM strategy.

Figure no. 7: Progression from Social Media Projects to a Social CRM Strategy

Source: IBM Institute for Business Value.

Social media programs often have a defined mission, set of guidelines, and some degree of analytics, governance and executive endorsement. A Social CRM strategy takes social media programs a step further, moving beyond the domain of a single function, such as marketing, to implement a cross-functional network of integrated communities with customer-facing responsibilities, such as customer care and sales. This integrated approach treats the customer holistically and facilitates sharing customer insights derived from unstructured data captured through multiple social touch points, as well as structured data from traditional channels. These insights enable companies to improve the customer...
experience and can result in the development of innovative new models for customer engagement.

The majority of companies believe social media’s potential to reinvent customer relationships is so promising that they are aggressively forging ahead with initiatives, despite concerns about ROI, negative brand exposure, or the lack of new strategies and support frameworks. This gold-rush mentality to stake a virtual claim in the blogosphere has resulted in the launch of social media programs that now need to be evaluated for their overall value to the customer.

Understanding why customers want to engage with a company via social media is the first step toward building the value proposition for a Social CRM strategy. Based on that insight, companies need to audit the full spectrum of their customer-facing social media initiatives. Many of these have sprung up as independent programs and may require collaboration and coordination across functions to fully assess their impact. Companies then will be better prepared to align these programs under an overarching, integrated Social CRM strategy that defines how to facilitate the social engagements customers’ value and those that also benefit the business through enhanced revenue and/or efficiencies. The implications for business are significant.

The shift to Social CRM is more than an adoption of new operational models or technologies; it is a philosophical, cultural shift. Social CRM is a strategy for stewardship of the customer relationship, not management. This transition is still in the early stages for many who are experiencing the growing pains of rapid change. The sooner companies embrace this fundamental precept – that the customer is now in control of the relationship – the sooner they can exploit this shift and unlock the full potential social media holds.

Conclusions

Social media is changing the way brands and consumers engage with each other. It is imperative for companies to evaluate and participate in a wide variety of communication vehicles, from television to print to web to social media, in order to reach current and prospective customers in all the ways they wish to interact with the company.

How can the power of the feedback loop be harnessed in the supply chain? (Hugos, 2011) The answer is beginning to appear. As companies link up using always-on communication networks to conduct business with each other, they begin to automatically collect useful data as a by-product of their interactions: electronic purchase orders, order status, order receipts, invoices, and payment status. It is no longer a huge administrative chore to regularly track performance in the areas of customer service, internal efficiency, demand flexibility, and product development.

Customers are starting to use supply chain “report cards” to grade the performance of their suppliers. The report cards are more accurate and more frequently produced than was previously possible. The opportunity exists for customers and suppliers to use this data to work together to meet mutually beneficial performance targets. Companies can select performance targets that will generate quantifiable benefits and profits to reward them for the effort needed to achieve the targets.

The feedback loop happens when people’s interactions with each other are in the form of a game whose object is to achieve the performance targets. If companies and people in a
supply chain have real-time access to the data they need then they will steer toward their
targets. If they are rewarded when they achieve their targets then they will learn to hit these
targets more often than not. The profit potential of negative feedback and the self-adjusting
supply chain is now unleashed. It is about creating, communicating, and capturing value. It
is about delivering products and services that are consistent with individual customer
preferences. The Internet and social media make this one-on-one engagement possible in a
unique and all-new way. The winners over the next 10 to 15 years will be companies that
use this new media to become good listeners, good engagers, and good closers. (Tybout and
Calder, 2010)

This article serves as a foundation exploring the key concepts in social media. There is an
opportunity to further the research and focus on the transformation of the supply chain into
Supply Chain Management 2.0 (SCM 2.0) describing both the changes within the supply
chain itself, as well as the evolution of the processes, methods and tools that manage it in
this new era.

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