

# Social media's role in intellectual capital's growth\*

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**Abstract.** Traditionally wealth has been seen as physical and financial resources. However, over the past several decades that value equation has been changed dramatically. Radical changes brought about by revolutions in technology, globalization, and communications have forced us to rethink how prosperity in societies is really generated. The most valuable asset of any society is its knowledge – resource with much greater value than any material goods or financial shares. In today's information age collecting, processing and exchanging knowledge is strongly leveraged by an easy access to the social media via World Wide Web. The rise of technologies such as the Internet and the emergence of a global society require new ways of thinking about the unprecedented opportunities and challenges societies encounter. This study sums up the current evidence of social media's role in intellectual capital (IC) generation. The key research dilemma of this theoretical study is to assess the extent to which social media can participate in intellectual capital growth and how can its potential be leveraged to exploit greater growth opportunities. The collective arguments of social media's benefits in generating IC are visible, however, the question remains is it a good source to drive sustainable intellectual capital expansion.

**Аннотация.** Традиционно благополучие рассматривалось как совокупность физических и финансовых ресурсов. Однако за последние десятилетия это уравнение претерпело кардинальные изменения. Радикальные перемены, вызванные революциями в технологиях, коммуникациях, а также глобализацией, подталкивают нас к переосмыслению того, как вырабатывается общественное благосостояние. Наиболее ценный ресурс любого общества – знание, значение которого выше материальных и финансовых ценностей. В наш век информации получение и обмен знаниями легко осуществляются с помощью быстрого доступа в социальные сети и Всемирную сеть. Развитие таких технологий, как Интернет и появление всемирного сообщества, требует новых взглядов на новые возможности и вызовы, которые стоят перед обществом. Данное исследование резюмирует современные взгляды на роль социальных медиа в создании интеллектуального капитала. Ключевая дилемма данного теоретического исследования состоит в оценке степени участия социальных СМИ в увеличении интеллектуального капитала и показывает, как этот потенциал может быть использован для создания дополнительных возможностей роста. Мы видим аргументы в поддержку преимуществ социальных медиа в создании интеллектуального капитала, однако остается открытым вопрос о том, являются ли они хорошим ресурсом для его устойчивого расширения.

**Key words:** Intellectual capital, social media, economic development.

## LITERATURE REVIEW

A general examination of academic research conducted since the emergence of social networking has revealed that current studies are mainly focusing on what social networking is, how social networks are structured and distributed and why social networks exist.

The specific phenomenon of social media's impact on intellectual capital's (IC) growth has yet to be thoroughly analyzed by academia and business

practitioners. As a particular study this subject had neither extensive research coverage nor a reliable scientific approach to measure the possible impact of social media on intellectual capital growth. In order to fully understand how social media in general can impact IC it is worth breaking down the components of this statement and analyse them independently against this study.

Intellectual capital itself has been the subject of academic and professional study for a long time. Despite wide studies conducted in this area a uni-

\* Роль социальных медиа в увеличении интеллектуального капитала.

versally accepted definition of Intellectual Capital is difficult to find. As noted by Guthrie (2001), the term IC is commonly used as a synonym for Intellectual Assets (IA), Intangible Assets (INA) or Knowledge Assets (KA). Edvinsson and Sullivan (1996) define IC as “knowledge that can be converted into value”. This is a very broad definition, which includes ideas, inventions, general knowledge, designs, software programs and publications. Consistent with the economic literature, some authors (Hunter *et al.*, 2005; Webster, 1999) categorize IC as a subset of Intangible Capital (INC). From this perspective, the term “intangible” refers to assets that do not exist physically, and “capital” relates to assets retained by the organization to contribute to future profits. James (1997) defines IC as “the difference between a company’s market value and its book value”.

When we consider the modern societies and the fundamentals, which they build their wealth on, it is a fact that general knowledge, ideas and innovation come to the forefront of all key aspects responsible for driving development. In his work Stewart (1991) refers to the “information age” economy and the “knowledge economy” as a revolution. Within this radical change, information replaces working capital, and intellectual assets replace physical ones. We are now in an era when natural resources and physical labor have largely been replaced by knowledge and communication as the fundamental sources of wealth. According to Sveiby (1998), we have entered a “New Economy” with “invisible” values.

For the last 10 years the sources of the aforementioned invisible values gained unique shape of social media networks. There is little doubt that nowadays social media plays an ever-more central role in peoples’ everyday lives (Rainie *et al.*, 2006). One of the first definitions of social media was developed by Boyd and Ellison (2008) using an activity-based approach to define what they call social network sites: “social network sites are web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site”.

The first forms of web-based interactions gave the possibility to communicate information over the Internet by creating web site and filling them with content. It was very much static one-way communication with limited interactivity between sender and receiver (Naik, Shivalingaiah, 2008). O’Reilly (2007) analyzed what social media added to the ini-

tial shape of the World Wide Web and described it as the “harnessing of collective intelligence” since hyperlinking connects anything that is posted to the web. When Kaplan *et al.* (2010) discussed the current state of social media environment, more emphasis was put on its collaborative and participatory character as “a platform where by content and applications are no longer created and published by individuals, but instead are continuously modified by all users in a participatory and collaborative fashion”.

Today social media’s benefits are not only understood as storage of document where users can exchange their own content. Nowadays it’s seen as community-like platforms where individuals can come together and engage on various different matters. Majority of research around social media’s benefits was conducted on the micro economical scale. In the research (Clearswift 2007a; Matuszak 2007) social media have been credited with the ability to expand social contacts, accelerate business processes, improve customer relations and morale, motivation and job satisfaction among business staff. (MessageLabs, 2007b).

Up till now we do not have a clear understanding how and on what scale intellectual capital can benefit from social media. Taking into account what social media has to offer future research should be conducted aiming to measure its impact in intellectual capital.

## METHODOLOGY

This theoretical study is intended to examine the way in which social media can impact intellectual capital growth. Approaching this issue it is important to note that, as an Internet-based phenomenon, social media has virtually no boundaries on how it can be used, shaped and utilized.

As the subject had yet little empirical study around this phenomenon, the study firstly focuses on analyzing the exact meaning of intellectual capital. To understand the ways in which intellectual capital can be created it is important to understand its main sources. In order to connect the process of intellectual capital development via social media it is vital to recognize how social media had developed during the information age and what exactly does it offer to its users.

The main objective of characterizing the use of information and communication technologies in a symbiotic relationship between human action and technological capability was to analyze what kind of social media’s capabilities correlate to intellectual capital growth. The research is based on current dis-

coveries of the aspects propagating intellectual capital development in relation to social media's features.

As the examined study object is very dynamic the author is aware that the presented paper is not exhaustive of all possible conditions under which social media use can facilitate or inhibit intellectual capital creation and innovation, and hopes that this examination can inspire researchers of social media to venture further into new theory-building.

## ORIGINS AND IMPORTANCE OF INTELLECTUAL CAPITAL

Land, labor and capital were the traditional resource inputs of industrial economies from which wealth could be created. In accounting terms these resource inputs were treated as tangible items (International Accounting Standard No 16). In post-industrial enterprises other kinds of resource inputs have become the sources of value creation. Increasingly, however, the real value of all kinds of entities is being recognized on the basis of both intangible and tangible assets.

In recent times intellectual capital (IC) has been a subject of interest especially in the business world. The constantly changing environment has stimulated stiff competition in almost every sector surrounding human activities. Developing intellectual capital management as the organizational *modus operandi* became the current recipe for success. According to Nermien Al-Ali (2003) traditionally business resources were formerly comprised of 80 percent of tangible and capital resources, with intangible assets only making up around 20 percent. Nonetheless due to the fast-paced technology development now this proportion changed dramatically with intangible assets reaching 80 percent of resources.

It is important to define what exactly is intellectual capital. Can we analyze it only on a micro economical level or is it a broader phenomenon?

Over time people representing different backgrounds have developed the discipline of intellectual capital. Because everyone was analyzing it from a different perspective there is no standard definition and each of the perspectives they developed is true for its specific user need. It would be highly inaccurate and ineffective to claim that only one definition is correct and therefore the others are wrong.

In the past capital could be viewed in purely physical terms — as factories, machinery, and money. But in the new ideas economy it is the brainpower that has become the most important factor in economic life. This is what we call the age of intellectual capital, which we can define as the collective

ideas, imagination, and know-how of an organization or entity. Intellectual capital is also often characterized as intangible, elusive, mobile and hard to pin down. Its subtle nature has clear implications for organizations as well as those who try to determine their worth or forecast their performance (The Management Club, 2012).

More detailed definition of intellectual capital describes it as knowledge, applied experience and professional skills that provide for a competitive edge in the "market". A more dynamic view on this says that intellectual capital is knowledge that can be converted into value or profit. It is the value embedded in peoples' ideas. This definition takes into account individuals who make up organizations, the structural dimensions of entities, and all of the existing relationships of business establishments (Chatzkel, 2010).

Irrespectively of how precisely we define intellectual capital, being a relatively new concept it covers some already known and studied theories (Lindley 2000, Mortensen 2000).

On occasion in the current literature IC is considered as education and training (E&T), personal experiences or attitudes. In this case very often intellectual capital is linked to Human Capital (HC) and described as a set of soft skills which are essentially possessed by individuals (Tome, 2004). In a subsequent conception IC is seen as property rights, patents, research and development (R&D) and innovation, which is often associated and derived from businesses activities (Carlton, Perloff, 2000). In all analyzed notions, IC is seen as an important and often underestimated production factor and an asset class (like physical capital, energy, land), which organizations and other entities have to mix, in order to have success. Consequently intellectual capital is now being seen as a tremendous tool of wealth production and economic development not only for business entities but for national economies as well.

While examining intellectual capital as a foundation of economic development it is studied mainly on the human resources side. To give detail on this theory much useful thought and many interesting concepts have been developed to explain the importance, which education, training and skills have in modern societies, and in the development process in particular. One of the theories is the Human Capital Theory (Blaug, 1976), which analyses the abilities and skills of any individual — especially the skills acquired through investment in education and training — that enhance potential income earning. Studies of advantages of human capital being the source of economic development (Heckman,

Lalonde and Smith, 1999) consider “labor” as not a standardized concept, and look at all forms of IC as the main differentiator for steady and long-term wealth creation.

Taking into account the dynamic development of the world economy, the current value of an organization or state economy is not only a simple sum of tangible and intangible assets (Edvinsson, Malone, 1997). The intellectual capital element is currently used to name the assets which are not recorded anywhere in “in the books” but play an important part as a potential generator of future value. The Economics Institute of Washington, D.C., in its study on human intellectual capital, concluded that the economic value of the nation’s productivity depends more upon employee skills and knowledge and business problem solving aptitude than it does upon the market value of the firm’s commercial output. It is hard not to agree with this conclusion. In the technology era, intellectual capital will be the primary resource and driver of our information economy (Di Stefano, Kalbaugh, 1999).

While past economies depended on use of land, natural resources, equipment and capital for the creation of value, our information economy will depend on application of knowledge. As mentioned in the initial remarks, knowledge is very important source for people, firms and countries. Managing knowledge and intellectual capital creates new source of competitive advantage. The fortunes and values of firms can increase or decrease depending on how well they create, capture, and leverage their knowledge.

In the current global environment intellectual capital encompasses the models, strategies, unique approaches and mental methodologies organizations use to create, compete, understand, and replicate (Bell Chip, 1997).

As we mentioned before, the most important intellectual capital source is knowledge. Based on this, not only companies but also whole nations build and develop their current and future wealth. Pure knowledge being the source of growth originates from all forms of information. When this information is put into meaningful context it can be translated to knowledge, which is then used as the main intangible asset propelling growth. In the next section we will examine how the current technology age is shaping the global information exchange and what are the sources of fast and reliable information transfers.

## **SOCIAL MEDIA’S EVOLUTION**

History is littered with stories of technologies changing cultures and cultures changing technolo-

gies. Social media is a prime example of both. The recent rise of social media is part of a cultural revolution and touches all aspects of our lives. As a continuously evolving phenomenon social media are often described as various forms of electronic communication (as web sites for social networking and micro blogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos) (BITS, 2011). Its success lies in the simple fact that it allowed users to expand and enhance something people did anyway – socialize. Humans are naturally social beings. From the beginning of time they formed groups based on everything from survival needs to common interests to spreading information. Social media has given people the ability to break down geographic and physical barriers and connect on a seamless, 24/7 sharing platform.

The earliest roots of social media can be traced to the first email that was sent in 1971 across the ARPANET (Advanced Research Projects Agency Network), the world’s first set of connected computers that would become the root of today’s Internet (Social Media Week, 2012). That initial email, and the millions sent in the years after, gave people the first experience with connecting digitally and in real-time, opening up a completely new way to connect with friends, family, colleagues and beyond.

The next advancement came around 1977 with the rise of Internet forums (Social Media Week, 2012). That development utilized web applications to manage user-generated content allowing users to share, post and comment on particular topics. This gave the ability to have more group exchange and interaction.

From those modest beginnings social media developed and formed its present state through different forms of virtual interaction. It can be said that late 2009 and 2010 were the years when social media truly gained respect across the globe. Twitter became a place for breaking news as it began alerting the world to major news events before media giants, and propelled political and cultural revolutions in the Middle East and other countries.

Looking back, since the first sent e-mail, much has evolved. The World Wide Web is currently not simply a place to make a declaration, but in fact it is a multi-layered medium that intersects with nearly every aspect of our lives. It is a place where people build alliances, raise awareness and forge momentum for future innovation.

The main reason and explanation of this fast growth of social media significance can be pointed

towards a broad cultural evolution. Majorities of societies changed dramatically in the last decade. People no longer stay at one job for their careers, instead they move much more frequently. The need to stay connected and build new networks with each of these new changes is very prominent. Social media meets that particular need and fits perfectly with the new culture.

The discussed phenomenon also touches on a clear shift of power. Societies in general are currently much more actively involved and participatory in events happening all around the world. Everyone wants his/her voices to be heard, and social media provides a platform for that. It levels the communication playing field so that any consumer or commentator has the ability to speak up and others can respond if it resonates with them. It can be said that the current social media's popularity benefited from its organic adaptation to the cultural and social shift taking place in the late 20<sup>th</sup> and 21<sup>st</sup> century.

As a technological revolution, computers and services that enable online social interaction are essentially the production of 40 years of technology evolution and fulfillment of a long-held vision of what computers and digital technology could do. When the Internet became available to the public, among the first commercial services were those that hosted interest groups. The web's growth in reach and capability, and as a medium for interaction, set the stage for the explosive growth of social media. The speed in which social media was adopted is astonishing, outpacing any other media technology known in the modern world.

To put this particular phenomenon in context it is worth pointing that it took commercial television 13 years to reach 50 million households, and Internet service providers 3 years to sign their 50 millionth subscriber. It took Facebook just 1 year to get 50 million users, while in case of Twitter it took just 9 months. In May 2012, Facebook logged its 900 millionth user (McKinsey Global Institute, 2012). It is estimated that currently 80 percent of the world's online population use social networks on a regular basis. In the United States, the share of total online time spent on social networking platforms more than doubled from January 2008 to January 2011, from 7 percent to 15 percent. Moreover, social technologies are replacing other web applications and practices like use of e-mail and instant messaging (comScore Media Metrix, 2011). This modern technology shift of power suggests social media's almost primal appeal. It is fundamental human behavior to seek identity and "connectedness" through affilia-

tions with other individuals and groups that share their characteristics, interests, or beliefs. Social technology taps into well-known, basic sociological patterns and behaviors — sharing information with members of the family or community, telling stories, comparing experiences and social status with others, embracing stories by people with whom we desire to build relations, forming groups, and defining relationships to others. Social technologies have given these basic behaviors the speed and scale of the Internet. With virtually zero cost, people can now interact daily with a very large group of people, across geographical and time zones.

Today, as we all know, social media has exploded in popularity, as Facebook inevitably closes in on one billion consumers and Twitter tops 200 million. It has been said that social media is the great equalizer, leading to democratization of media (Social Media Week, 2012). In many ways that is true. Social media gave consumers a platform for their voices, thoughts and ideas to be heard and shared. We can definitely expect that social media will continue to expand into the mainstream channel and not only companies but also governments will start putting even more emphasis on its importance. As technologies and tools will advance, the future can see social media being incorporated into all areas of peoples' lives.

## **SOCIAL MEDIA AS LEVERAGE FOR INTELLECTUAL CAPITAL**

In the wake of intense global and domestic competition, firms are increasingly turning to innovation to compete (Holsapple, Singh, 2001). In the previous paragraph we have discussed the recent rise of a new generation of information and communication technologies including social media which play a vital part in fostering innovation and intellectual capital creation (Faraj *et al.*, 2011). By intellectual capital creation, we can understand the outcome of the integration of dispersed knowledge into novel recombination (Grant, 1996). When applied to online collectives, intellectual capital creation can occur in a variety of ways, ranging from generation of helpful suggestions within an online support group to remixing videos to offering improvements to an article on Wikipedia.

Today's knowledge society is totally shaped by the information revolution and advanced by communication technologies. At the dawn of this new age, the concept of intellectual capital has been used for the first time to explain the importance in the modern economy of intellectual resources such

as information, knowledge, and experience. Many authors have explained the importance of intellectual capital, comparing it to technological advances developing in the past (Sarrocco, 2011). Since the beginning, developments of sciences and technology improvements have been always the precursors of change in society and the economy. In the past, discoveries such as steam engines or electricity contributed to the creation of new social and economic development, generating along the way original forms of business, working processes and products.

Nowadays we have completed the transition to a service economy and are on the way towards an information economy, where the primary source of wealth is considered to be information. This includes notably scientific knowledge, but also communication, entertainment, services, news, information sharing and working processes.

It is hard not to agree that current development and well-being of entities both on a micro- as well as macroeconomical level depend very much on the flow and efficient usage of information. Considering that majority of information and vital data can be provided via the World Wide Web, or specifically from use of social media, this is and, undoubtedly, will be the unsurpassed source of all sorts of facts, figures, statistics and opinions.

For understanding the role of social media in intellectual capital creation and innovation, a dynamic approach may be particularly helpful, because social media technologies are infinitely extensible and can be used in an almost limitless set of different ways. Specific niche tools like applets or add-ons are being developed at previously unheard speeds. Users are downloading and reinventing these tools in ways not originally anticipated. New organizational forms, ranging from political campaigns to Internet trading, are being derived from the confluence of the technology capabilities provided and the actions users take. A more in-depth understanding of how innovation and intellectual capital creation can be fostered in such a context cannot rest on a static conception of individuals' use of technology, since social media can be continuously recombined and transformed into new objects in real time.

To try to examine the exact impact that social media can have on intellectual capital creation we can study the use of new technology in four different aspects.

As the first impacting factor we can examine the ability of targeted feedback given by online users. We can define this relevant feedback as the combination of technology capabilities and human actions in which individuals in an online social collec-

tive provide feedback on others' online content by both sharing their own comments on that content and rate the content through voting. The technological capabilities that support this approach are the various mechanisms by which users can record their views of particular content, such as by commenting a blog post or a YouTube video, or engaging via Facebook's "Like" button. Giving online feedback can also involve rating commentators and commenting on the comments of others. In comparison to traditional media, the online feedback sharing raises the speed and range in which reactions are shared. There is now little delay between the time that content is posted and the time when readers start commenting and discussing.

In result, feedback sharing can act as fostering aspect for intellectual capital creation and innovation. The reason for this is that feedback in any acceptable form becomes a self-perpetuating input such that more information and comments posted on the web spur more participants who issue further comments, some of which offer creative interpretations of the article and unexpected associative links. Different example might include advice-giving platforms where people offer constructive information regarding their opinion on a product or offer. This in fact is likely to drive new clients but what's more important it will also make author or owner of the service more aware of the strengths and weaknesses of their product, creating the motivation for new ideas to improve the service.

One of the mechanisms through which targeted feedback can foster intellectual capital creation and innovation is definitely responsiveness. It is most likely that participants in the online community will be drawn to highly trending content, attracting them to make further contributions. As a result broader pool of contributions will lead to a greater probability that some of these comments may be creative or may stimulate creative thought in others. Providing feedback on different online platforms brings attention not only to a topic but may also bring attention to the individual who posts content which is well-received by the community. Therefore, those who post creative content are more likely to receive wider approbation, thereby receiving more attention and increased reputation, extending a feedback cycle that encourages intellectual capital creation.

Subsequent impact factor that is particularly noticeable for fostering intellectual capital creation and innovation is what can be referred to as network correlating. We can define network correlating as online interaction with other people or

content that is influenced by the availability of others' digital connections. By this we mean the ease with which information or people can be connected through different forms across different venues and with which these connections are made known to others. Network correlating allows users to view another individual's social network interactions prior to their individual engagement.

Participants' intellectual capital creation in online communities appears to be to some extent affected by their view of others' connections and contributions. By reviewing other members' connections prior to deciding to participate in a community, individuals interested in innovative collaboration can more easily find the communities in which innovation is already occurring and can choose whether or not to participate in those communities. In that case any individual is able to examine the links connecting an online platform to determine its significance in respect of any present innovators before deciding to contribute. This way an individual is able to examine the whole spectrum of associations of other individuals or threads to determine the potential for innovation within a given community.

Network correlating may affect intellectual capital creation through a mechanism of allowing people to manage their connections and to inform people deliberately in order to enhance their opportunities to participate in community-based intellectual capital creation (Nahapiet and Ghoshal, 1998). The identification of experts is made easier by viewing whether one is linked to other experts or whether the individual participates in known expertise content forums. Network correlating may also foster intellectual capital creation through a process of developing a collective social identity (Ren, Kraut, Kiser, 2007). It may be that as individuals find networks in which they feel comfortable they are better prepared to share their innovative ideas and encourage others to share them as well.

Another aspect of social media that may have an affect on intellectual capital creation and innovation is what we can refer to as prompt engaging. We can characterize this as collaboration that is driven by a change in monitored content or by actions of tracked others. Today's social media platforms enable users to establish preset rules for when and on what purpose they want to be notified of changes in content or activity located in the field of their interest.

Efficiently managed notification, such as grouping by all news related to a particular topic of interest can play a vital part in contributions to intellectual capital creation. In a study (Kane, Fishman,

Gallaugh, 2009) on the evolution of the autism article in Wikipedia, a group of participants were found to use events monitoring in the article's development. They used the tools to be informed immediately when changes were made to the article and to immediately highlight the changes to ensure that they did not dramatically change the existing article. This study showed that the group of participants would quickly review the change to the article and either allow the change to stand when it fits within the general direction of the article, or decline it on the basis of no added value. In this context, the ability to monitor specific content via social media fostered only incremental forms of innovation.

Prompt engaging can however lead to different results in discussion building. It may lead to less innovation because individuals pre-determine the changes they will be informed about, reducing the opportunity for unexpected combination and exchange of knowledge, a critical element of innovation (Kane, Alavi, 2007). On the other hand, prompt engaging may increase the possibility of innovation by drawing larger groups of individuals to important topics, fostering involvement of an increased diversity of perspectives on that topic, another critical element of innovation.

The last aspect of social media, which can have a direct impact on intellectual capital creation, can be identified as developing knowledge consolidation. This aspect refers to the speed and frequency, with which consolidation principles are created, broken down, experimented with and redesigned to facilitate intellectual capital creation and innovation. Social media allows standard consolidation framework to emerge and change at a speed and frequency that was virtually impossible to achieve previously. Unanticipated and previously unseen roles may emerge within a community that people choose to participate in. In this case social media give people the opportunity to fill a specific role not because it is an official assignment, but because they feel competent and interested to play that role at that particular moment in time. In a recent research on corporate wiki pages (Yates *et al.*, 2009), individuals were found to adopt a role in which they shaped and integrated other's contributions to the wiki. The willingness to adopt this role was not related to their job title, their responsibilities in the workplace, expertise, or their expectations for the wiki. Interviews indicated that contributors would adopt the role of shaping a new discussion or material when they saw connections between topics or found it difficult to find things in the wiki.

This aspect of developing knowledge consolidation is enabled technologically by the persistence and flexibility of digital interactions that are preserved in social media. While others have identified the importance of digital persistence in technology in general (Clark, Brennan, 1991), and social media in particular, it is important to note that one of the values of persistence is that it allows a group the freedom to evolve in unexpected ways as persistence provides a narrative for revisiting past identities and decisions, while informing future ones (Boland, Tenkasi, 1995). Social media preserves collaborative interactions over time, which allows joint groups to examine their history of interactions and adopt or discard specific practices. Individuals can also search and sort this preserved history, enabling them to observe the need for consolidation such as the need for a particular role (i.e. resolving a conflict or integrating a group) to be filled. The flexibility of the social media technologies leverages knowledge consolidation by making it easy to add new functionalities to social media technologies through flexible technology settings, third-party apps, or automated “bots” which allow individuals to quickly introduce and automatically enforce new routines.

Allowing effective knowledge consolidation, social media may foster intellectual capital creation by setting up a level playing field for dynamic knowledge exchange, encouraging innovative breakthroughs (Sheremata, 2000). Knowledge consolidation may in effect encourage reflective discussions, which create openness among the interacting participants, leading to productive and creative dialogue (Tsoukas, 2009).

## CONCLUSIONS

In the previous paragraphs we have discussed the potential, which social media brings when it comes to intellectual capital creation. We have established that an indispensable factor for intellectual capital and innovation growth is a broad and efficient access to information. In this paper, we have taken an approach to understand the relationship between social media, human actors and the intellectual capital they can create. By examining four main aspects of those relations we can somehow quantify the potential of social media and generally the new technology for innovation and welfare production.

The outlook for social media’s place in today’s technology world remains very optimistic. We can expect that technology, including social media, will

further develop its capabilities and broaden the range of its accessibility. Based on the presented assumption we can be sure that the potential impact brought by those developments will be positive across small communities as well as whole economies. Yet, to fully leverage social media’s potential and foster intellectual capital creation some key and pressing factors — like high degree of political stability, profound degree of economic and political integrity or evidence for high quality internet debate — have to accompany the social media hype.

## REFERENCES

- Bell Chip, R. (1997), “Intellectual Capital”, *Executive Excellence* **14** (1), Jan. 1997, p. 15.
- BITS Financial Services Roundtable, (2011), “Social Media Risks and Mitigation”, [online at: <http://www.bits.org/publications/security/BITSSocialMediaJun2011.pdf> accessed 17.10.2012].
- Blaug M. (1976), “The Empirical Status of Human Capital Theory”, *Journal of Economic Literature* vol **14** — N° 3 — September — p. 827–55.
- Boland, R.J., Tenkasi R. V. (1995), “Perspective Making and Perspective-Taking in Communities of Knowing”, *Organization Science* **6** (4), p. 350–372.
- Boyd, D., M., Ellison, N., B., (2008), “Social Network Sites: Definition, History & Scholarship”, *Journal of Computer-Mediated Communication* **13** (1), p. 210–230.
- Carlton, D.; Perloff, J. (2000), *Modern Industrial Organization — Third Edition* — Addison Wesley: USA.
- Chatzkel, J. (2011), “Definition of Terms: What is Intellectual Capital?”, [online at: <http://www.virtuailes.com/> accessed 29.10.2012].
- Clark, H.H., Brennan, S.E. (1991), “Grounding in communication”, in L.B. Resnick, J.M. Levine and S.D. Teasley, (eds) *Perspectives on Socially Shared Cognition*, American Psychological Association, Washington, DC., p. 127–149.
- ClearSwift (2007), “15 Common Mistakes in Web Security: Enterprise vulnerabilities that invite attack”, [online at: [http://i.i.com/cnwk.1d/html/itp/clearswift\\_15MistakesWebSecurity.pdf](http://i.i.com/cnwk.1d/html/itp/clearswift_15MistakesWebSecurity.pdf) accessed 10.10.2012].
- Di Stefano Paul J, Kalbaugh G. Edward, (1999), “Intellectual Capital”, *Rough Notes* **142** (7), Jul. 1999, p. 94–95.
- Edvinsson, L., Sullivan, P. (1996), “Developing a model for managing intellectual capital”, *European Management Journal* vol. **14**, n. 4, p. 356–364.
- Edvinsson, L.; Malone, M.; (1997), *Intellectual Capital: Realizing your Company’s True Value by Finding Its Hidden Roots*, New York: Harper Business.
- Faraj, S., Jarvenpaa, S. L., Majchrzak, A. (2011), “Knowledge collaboration in online communities”, *Organization Science September/October 2011* vol. **22** no. 5 1224–1239.
- Grant, R. M., (1996), “Toward a knowledge-based theory of the firm”, *Strategic Management Journal* **17**, p. 109–122.



- Guthrie, J. (2001), "The management, measurement and the reporting of intellectual capital", *Journal of Intellectual Capital*, vol. 2, n. 1, p. 27–41.
- Heckman, J., Lalonde, R.; Smith, J. (1999), "The Economics and Econometrics of Active Labour Market Programs" in Orley Ashenfelter, Robert Lalonde (eds), *Handbook of Labour Economics*, vol. 3A Chapter 31 — North Holland — p.1865–2097.
- Holsapple, C. W., Singh, M. (2001), "The knowledge chain model: Activities for competitiveness", *Expert Systems with Applications* 20 (1), p. 77–98.
- Hunter, L., Webster, E., Wyatt, A. (2005), "Measuring intangible capital: a review of current practice", *Australian Accounting Review* vol. 15, no. 2, p. 4–21.
- IAS 16 Accounting for Property (2012), "Plant and Equipment", [online at: <http://www.iasplus.com/en/standards/standard14> accessed 02.11.2012].
- James, D. (1997), "The troubled language of accounting gets tongue-tied over intangibles", *Business Review Weekly*, vol. October, p. 92–94.
- Kane, G. C., R. G. Fichman, J. Gallagher and J. Glaser, (2009), "Community Relations 2.0: With the rise of real-time social media, the rules about community outreach have changed", *Harvard Business Review* 87, 11, p. 45–50.
- Kane, G.C., M. Alavi. (2007), "Information Technology and Organizational Learning: An Investigation of Exploration and Exploitation Processes", *Organization Science* 18 (5) p. 796–812.
- Kaplan, A., M., Haenlein, M., (2010), "Users of the world, unite! The challenges and opportunities of Social Media, Business Horizons", [online at: <http://www.sciencedirect.com/science/article/pii/S0007681309001232> accessed 05.10.2012].
- Lindley, R. (2000), "Knowledge Based Economies: the European Employment Debate in a New Context", *Reports prepared for the Portuguese Presidency of the EU*, Lisbon, Portugal — p. 33–84.
- Matuszak, G., (2007), "Enterprise 2.0: Fad or Future? The Business Role for Social Software Platforms", [online at: [http://www.kpmg.de/media/20070501\\_ICE-Enterprise20\\_fertig.pdf](http://www.kpmg.de/media/20070501_ICE-Enterprise20_fertig.pdf) accessed 10.10.2012].
- McKinsey Global Institute, (2012), "The social economy: Unlocking value and productivity through social technologies", [online at: [http://www.mckinsey.com/insights/mgi/research/technology\\_and\\_innovation/the\\_social\\_economy](http://www.mckinsey.com/insights/mgi/research/technology_and_innovation/the_social_economy) accessed 01.11.2012].
- MessageLabs (2007), "Social Networking: A Brave New World or Revolution from Hell?" [online at: [http://i.zdnet.com/whitepapers/messagelabs\\_SocialNetworking.pdf](http://i.zdnet.com/whitepapers/messagelabs_SocialNetworking.pdf) accessed 11.10.2012].
- Mortensen, J (2000), "Intellectual Capital: Economic Theory and Analysis" in Buiges, P., Jacquemin, A., Marchipoint, F.J., Elgar, E., (eds), *Competitiveness and the Value of Intangible Assets*, UK: Cheltenham.
- Nahapiet, J., S. Ghoshal. (1998), "Social capital, intellectual capital, and the organizational advantage", *Academy of Management Review* 23 (2), p. 242–266.
- Naik, U., Shivalingaiah, D., (2008), "Comparative study of Web 1.0, Web 2.0 and Web 3.0." *Proceedings of the International Convention on Automation of Libraries in Education and Research Institutions*, India: CALIBER-2008, [online at: <http://ir.inflibnet.ac.in/dxml/handle/1944/1285> accessed 03.10.2012].
- Nermien, A. (2003), *Comprehensive intellectual management*, New Jersey: John Wiley.
- O'Reilly, T., (2007), "What is Web 2.0: Design patterns and business models for the next generation of software", *Communications & Strategies* No. 1 p. 17, First Quarter 2007, [online at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1008839](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1008839) accessed 03.10.2012].
- Rainie, L., Horrigan, J., Wellman, B., Boase, J., (2006), "The Strength of Internet Ties Pew Internet and American Life Project", [online at: <http://www.pewinternet.org/Reports/2006/The-Strength-of-Internet-Ties.aspx> accessed 01.10.2012].
- Ravit Lichtenberg (2010), "10 Ways Social Media Will Change in 2011", [online at: [http://readwrite.com/2010/12/15/10\\_ways\\_social\\_media\\_will\\_change\\_in\\_2011](http://readwrite.com/2010/12/15/10_ways_social_media_will_change_in_2011) accessed 03.10.2012].
- Ren, Y., R. Kraut, S. Kiseler. (2007), "Applying common identity and bond theory to design of online communities. Organization Studies", [online at: <http://oss.sagepub.com/content/28/3/377.abstract> accessed 02.10.2012].
- Sarracco, C (2011), "Intellectual Capital in the Information Society", [online at: <http://www.itu.int/osg/spu/visions/free/ITU-IntCapitalpaper.pdf> accessed 31.10.2012].
- Sheremata, W.A. (2000), "Centrifugal and centripetal forces in radical new product development under time pressure" *Academy of Management Review* 25 (2), p. 389–408.
- Social Media Week, (2012), "The Evolution of Social Media", [online at: <http://socialmediaweek.org/london/2012/09/06/guest-blog-post-the-evolution-of-social-media/#.UJ95xOSZSSp> accessed 30.10.2012].
- Stewart, T. A. (1991), "Brainpower", *Fortune Magazine* vol. June, [online at: [http://money.cnn.com/magazines/fortune/fortune\\_archive/1991/06/03/75096/index.htm](http://money.cnn.com/magazines/fortune/fortune_archive/1991/06/03/75096/index.htm) accessed 02.10.2012].
- Sveiby, K. E., (1998), "Intellectual Capital and Knowledge Management", [online at: <http://www.sveiby.com/articles/IntellectualCapital.html> accessed 01.10.2012].
- The Management Club, Intellectual Capital, (2012), [online at: <http://www.managementlab.org/> accessed 08.10.2012].
- Tome, E. (2004), "Intellectual capital, Social policy, Economic development and the world evolution", *Journal of Intellectual Capital*, vol. 5 Issue: 4, p.648–665.
- Tsoukas, H. (2009), "A Dialogical Approach to the Creation of New Knowledge in Organizations", *Organization Science* 20 (6), p. 941–957.
- Webster, E. (1999), *The Economics of Intangible Investment*, London: Edward Elgar Publishing.
- Yates, D., Wagner, C., Majchrzak, A., (2009), "Factors Affecting Shapers of Organizational Wikis", *Journal of the American Society for Information Science and Technology (JASIST)* 61 (3), p. 543–554.