Social Media in the Workplace

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Section 1.   Introduction

Social media refers to the information and communication technology platforms designed for real-time social interaction, such as wikis, discussion forums and blogs. These platforms are available on public sites[1] such as Facebook and private sites such as Jive and Yammer. Some sites are more specialized in their objectives than others, eg., Linked-In's objective is to enable professionals to create and share profiles and to enable HR professionals to interact with them, while Facebook's objective is to enable information creation and interaction for more general audiences.   Hence, Facebook uses a large number of platforms, such as instant messaging, event planning and image-uploading.   In general, more narrow objectives usually result in the use of fewer platforms: for instance, Twitter only contains a microblog platform and YouTube contains platforms for image sharing and comments, while enterprise social network Yammer contains wikis, discussion forums, blogs, text and multi-media content sharing and more.[2]

The objective of this paper is to discover the social media platforms (SMPs) that are economically relevant to a business organization, the uses to which these platforms are put, and the reasons for their value.

Our approach is as follows. Given that social media generates information, we assume that the difference between social media platforms arises from just two factors: (a) The extent of control that may be exercised over the information flow, and, (b) The extent of collaboration on information flows possible among participants on the platform.

This leads to our hypothesis:

> A social media platform can be economically valuable to a business organization only if it generates information that either improves the reliability of existing information, or is new information.

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[1] Sites are defined as websites, i.e., locations on the web. Platforms are media that are available on sites. For example, a site such as Yammer contains discussion forums, wikis and other platforms.

[2] Most social media sites begin with a single platform and, over time, proceed to offer multiple platforms for interaction, with some convergence.   In addition, many non-social media sites contain elements of social media. For instance, a learning management system such as Moodle offers a place to store and exchange content, manage research projects and participate in discussion forums. Hence, classifying sites by specific platforms, as some recent research does, is perhaps less relevant as of 2011.   See, for example, A. Kaplan and M. Haenlein. 2010. Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons.* 53. 59-68. Kaplan and Haenlein classify social media in two ways: the richness of their media capabilities and the control of information they offer.

Our hypothesis is derived from the literature on strong and weak ties. We use the hypothesis to analyze which social media platforms are likely to generate information that is useful for various purposes.

Using a primary survey of 20 firms, we examine their use of social media for various business purposes and ask whether these uses match the theoretical conclusions. Some of the potentially useful business outcomes from social media include hiring and professional development, strategic planning, business development and marketing, project management, strategic planning, project ideation, product development and developing intellectual property, and sales of goods.

The paper is organized as follows. Section 2 derives the hypothesis, discusses the informational aspects of different social media platforms and relates these to their potential for influencing different types of business outcomes. Section 3 presents the findings of the survey and discusses its relation to the hypothesis. Section 4 provides a concluding discussion.

Section 2   The Informational Value of Social Media Platforms

Taking the perspective that information is economically relevant to a business organization if it affects reliability or is new, we pose the question: are social media platforms valuable because they offer some mixture of reliability-increasing and new information?

To analyze this, we assume the existence of two fundamental differentiations between social media platforms that affect reliability and newness: (1) The extent of control that may be exercised over the information flow. (2) The extent of collaboration possible among participants on that platform.

(1) The extent of control that may be exercised over the information flow may be important for some business purposes (Kaplan and Haenlein, 2009). For example, a microblog on Twitter or an advertisement on YouTube allows for significant control of information by its creator.   Once disseminated, the content may not be altered by anyone else.   By comparison, a wiki enables new information to be entered and old information to be altered without control.

A high level of information control is commercially important for some purposes. For example, an advertizer might want to present its message without allowing other participants to tweak the message.   A domain expert might, similarly, want to present her ideas in a format that allows readers to comment on, but not change the message.

However, for other purposes, such as project ideation or work that requires innovative thinking, controlling the information may lead to inferior outcomes. Instead, a platform with less potential for any one participant to control

information, such as a discussion forum or a project management platform, ought to be more useful.

(2) The extent of collaboration among participants on that platform.   An event-planning platform is an example of a platform that enables a high level of collaboration among its participants.   Participants can suggest ideas for events, poll members, divide the planning and the other work, invite guests and so on.

A collaborative platform takes the SMP to a different level, from merely enabling the sharing of information among participants to shaping content through collaboration.

A high level of collaboration is commercially important for some purposes, such as event planning and project management.

Note that information control and collaboration may sometimes move in different directions. A blog is a platform with a high level of information control and low scope for collaboration.   Event planning is a highly collaborative activity with low levels of information control.   Thus, these are examples of SMPs in which information control and collaboration are inversely related.

However, information control and collaboration may also move in the same direction.   Consider a professional profile platform such as found on the website, Linked-In.   The platform enables its owner to allow her contacts to recommend her for some work done in an assignment.   The level of information control exercised by the owner is low. Participants upload their recommendations, but do not collaborate with each other.   Thus, the platform on Linked-In is an example of a platform with low information control and low levels of collaboration.

By contrast, consider a discussion forum in which the participants are students enrolled for a class and discuss a topic provided by the moderator.   Suppose that the moderator approves every entry prior to allowing its posting to ensure that the content is relevant.   This is an example of a platform with a high level of collaboration and high level of information control.

The combination of control and collaboration enables different platforms to generate different kinds of information.   To analyze the usefulness of such information, we turn to the literature on ties.   Granovetter (1973) makes a distinction between strong and weak ties.   Strong ties are those which embody high levels of trust, and are usually the outcome of investment in time, intimacy, reciprocity and intensity in building the tie.   Such ties appear to be important in social media, too. Gilbert and Karahalios (2009)[3] show that social media

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[3] E. Gilbert and K. Karahalios. 2009. Predicting Tie Strength with Social Media. Proceeding sof the CHI Conference. http://www.chi2009.org/ accessed March 23, 2011

interactions tend to confirm that the stronger the a priori tie between persons, the higher the investment in building up the connection.

Granovetter's argument is that a large, non-redundant network of weak ties can be more advantageous than a closed, tightly-knit network of embedded ties. This is because it enables access to new and valuable sources of information – despite the lower levels of confidence in the information due to the weaker nature of the ties that generate them.[4]

Research demonstrates that strong ties may also be useful for some purposes. For example, Dossani and Kumar (2011)[5] showed that fund-raising by entrepreneurs leverages strong ties during the firm's early stages. This is because information asymmetries about the firm's future are higher in early stages. Strong ties, such as family and close business associates, are more likely to trust the entrepreneur's projections about the firm's future than weaker ties, such as established venture capital firms. Thus, the reliability of information is important. On the other hand, later-stage fund-raising (when information asymmetries about the firm's future are lower) relied more heavily on weak ties, as it brought in new sources of funds and new sources of expertise in helping run the firm.

In general the academic literature has shown that participants in social networks tend to use multiple networks and ties of different strengths for different purposes, enabling the benefits of cross-network diversification and complementarity, and improved governance (Uzzi, 1999; Reuf, 2002).[6]

We conclude, from the above discussion on ties, that: (1) A social media platform generates information that is valuable if it fulfills one or more of the following conditions: (a) It improves the reliability of information. (b) It improves access to new information; (2) Both strong ties and weak ties can be useful. Strong ties offer access to reliable information. Weak ties offer access to a wider network of information and, through, the pooling of information, may lead to an acceptable level of reliability.

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[4] M. Granovetter. 1973. The Strength of Weak Ties. *American Journal of Sociology.* 78. 1360-80. Granovetter distinguished between strong and weak ties. Strong ties are those which embody high levels of trust, and are usually the outcome of investment in time, intimacy, reciprocity and intensity in building the tie. Granovetter's argument is that a large, non-redundant network of weak ties is more advantageous than a closed, tightly-knit network of embedded ties. This is because it enables access to new and valuable sources of information – despite the lower levels of confidence in the information due to the weaker nature of the ties that generate them.
[5] R. Dossani & A. Kumar. 2011f. Network Associations & Professional Growth among Engineers from India & China in Silicon Valley. *American Behavioral Scientist.*
[6] M. Reuf. 2002. Strong Ties, Weak Ties and Islands: Structural and Cultural Predictors of Organizational Innovation. *Industrial & Corporate Change.* 11(3). 427-49. B. Uzzi. 1999. Embeddedness in the Making of Financial Capital: How Social Relations and Networks Benefit Firms Seeking Financing. *American Sociological Review.* 64. 481–505.

How are newness and reliability related to the levels of information control and collaboration?   Consider first the reliability of information. This can be improved by both increasing the level of information control and by greater collaboration, though in complex ways. First, if the level of information control is high, then the reliability of information can be high. For example, the blog postings by officials of a professional network on professional topics are likely to be of higher reliability than individual members' postings (though not necessarily more valuable, as value depends on the purpose to which the information is applied).   This is because officials are subject to codes of conduct of their association, or their postings are vetted before going public.   Hence, high information control is a result of top-down governance.

A second way to improve reliability is by excluding those who provide unreliable information.   Ebay, though not a social media site per se, is a good example of how reliable participants and unreliable participants are identified through ranking of transactional experiences by fellow participants. This enables reliability of information despite low control on the information supplied. A variant of this is found in many social media sites.

Wikipedia follows a process that allows for editing by a large pool of volunteer-editors thus providing governance over the reliability of information. Wikipedia illustrates another way to improve the reliability of information: by pooling the information of many contributors, the quality of information improves, somewhat in the way that performing the same experiment many times is likely to yield an average close to the true mean. Note that this happens despite low control of information.   We shall term this type of governance as the 'pooled-governance' effect: adding contributors and editors into the pool of information providers and governors increases the reliability of information.

A third way is when the participants in the platform share strong ties.   Given their ties, they are unlikely to misrepresent the reliability of information shared. This makes the resulting information more reliable.   For instance, a strategic planning group of strongly tied employees may use a wiki to develop their strategic plan. Note that the benefit of strong ties arises regardless of the level of information control.   Instead, reliability is a feature of the pre-existing relationships between collaborators.

Turning to newness, we may similarly ask how the newness of information is related to the level of information control and collaboration.   This, too, can happen in more than one way through social media platforms. The first is when such platforms are accessible by many participants.   Each participant provides her own ideas, some of which adds new information to the existing pool of information. A typical example is a discussion forum that enables anyone to provide ideas. Despite the risk that such platforms will contain sufficiently useless information to make the information generated useless as a result, in some cases, this may work out. Starbucks, for example, claims that a program to seek customer recommendations

on its Facebook page incorporating the 'Like' feature led to recommendations that were used to create seasonal flavors in 4Q2010 and that increased sales by 30%. Another example: Linked-in offers a platform that enables professional profiles to be discoverable by recruiters using recommendations and searching job tags. Note that newness here is driven by adding new participants to the pool of contributors and keeping information controls low. There need be no collaboration between contributors necessary to bring in new information. This is purely the effect of adding participants.

Creating a collaborative platform of users with weak ties is a second way to generate new information. The communities platform offered by Yammer is an example of a platform that enables large-firm employees to work with vendors to resolve supply-chain related operating problems, by posting recommendations on what is, in effect, a 'virtual whiteboard'.

Unlike the previous case, where new information arose from contributors who may not need to know each other at the time of posting the information and may never collaborate, in the case of creating a collaborative platform of weak-tie participants, the intent is to collaborate to create outcomes. Each participant is expected to add new information by virtue of the weak tie. Collaboration for processing the information is expected to, in turn, generate further new information. Thus, this way of generating new information is through weak-tie collaboration.

The sources of benefits of social media are summarized in the following table.

Table 1.   The Value of Social Media

	Accessing Reliable Information			Accessing New Information	
Reason ➔	Top-down Governance	Pooled Governance	Strong-tie Participation	Weak-tie Participation	Weak-tie Collaboration
Example	CEO's Blog to Staff	Wikipedia, Discussion Forum	Event Planner	Facebook Like, Linked-In Profile	Yammer Community
Info. Control/ Collaboration	High/Low	Low/High	Low/High	Low/Low	Low/High

Turning now to the different corporate uses, as the above table indicates, different uses will map on to different social media platforms. This is illustrated in the table below.

Table 2.   Corporate Functions and Typical Social Media Platform

	Example of SM Platform	Informational Advantage
Human Resources:		
Recruitment - sourcing	Linked-In	Newness due to weak-tie participation
Job recommendations	Messages	Reliability due to top-down governance
Projects:		
Building project teams	Discussion Forum	Newness due to weak-tie participation

Project management	Private Wiki	Reliability due to pooled governance; newness due to weak-tie collaboration
Problem solving	Private Wiki	Reliability due to pooled governance; newness due to weak-tie collaboration
Ideation	Virtual Whiteboard	Newness due to weak-tie participation
Strategic planning	Private Wiki	Reliability due to strong-tie participation
Supply-chain Mgmt	Yammer Community	Reliability due to pooled governance; newness due to weak-tie collaboration
Marketing & BusDev		
Promotion/Awareness	Blog, YouTube	Reliability due to top-down governance
Competition Analysis	Facebook Ads	Newness due to weak-tie participation
Alliance Building	Professional Association Forums	Reliability due to top-down governance; newness due to weak-tie participation

We now turn to the data analysis.

Section 3   Data Analysis

Data was collected from 20 Silicon Valley based firms between December 2010 and March 2011. With the exception of 2 firms, all are technology firms. The data was collected through a questionnaire and, usually, a telephone or face-to-face interview. Sample selection was not random, but was based on the researcher's contacts. Hence, it is a potentially biased sample and its findings should, therefore, be viewed as tentative.

The questionnaire asked firms to comment on the purposes for which different social media platforms were used and whether the results matched expectations. We asked respondents to distinguish between internal (or private) and external SMPs. An internal SMP (ISMP) is accessible only by the firm's employees and, in some cases, registered vendors.[7]   An external SMP (ESMP) is, of course, intended to be more widely accessible.

The reasons for making this distinction are the different levels of access. ISMP participants will usually be linked by at least weak ties, whereas those participating in ESMPs may include those without prior ties.   As shown in Table 2, this enables the generation of more reliable information. Further, the information exchanged over an ISMP can more easily be kept confidential.   Therefore, ISMPs will presumably be used to process such information, for instance, using a discussion forum for project management or strategic planning.   A similar platform in the public domain is more likely to be used to obtain consumers' views on the firm's products, for example.   Thus, differences in the access to a platform in the internal and external domains.

In our survey, we found that about a quarter of the companies surveyed do not want their employees to spend too much time on external social media as these platforms

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[7] The maintenance of the internal SMP may be outsourced or the SMP may be provided an maintained by an external provider, of course. In practice, this was widely done.

might be used for personal purposes, such as job-hunting. However, they are more willing to let employees use similar ISMPs.   Hence, if both ESMPs and ISMPs can be put to the same use, such firms prefer ISMPs.

Table 3 summarizes the firms' profile. As indicated earlier, most firms are in the information and communications technology space. The sample is evenly distributed among firms of different sizes, as measured by number of employees and revenue (columns 1 and 3 below).

Table 3:   Profile of firms surveyed:

# of Employees in Sampled Firm	Sector	Annual Revenue of Sampled Firm	Official SM Policy Exists?
0-50 – 25% (Small)	Software/ Services – 70%	<$10m – 30%	Small firm = 0%
51-200 – 35% (Medium)	ICT Hardware – 15%	$10-100m – 30%	Medium firm = 15%
5001+ - 40% (Large)	Other – 15%	>$500 m – 40%	Large firm = 70%

As the above table shows, primarily, it is the larger firms that articulate a formal social media policy.   As an example, see: http://www.scribd.com/doc/33461366/Cisco-Social-Media-Policy-Guidelines-and-FAQs. The typical social media policy asks employees to always identify themselves when making comments as employees and indicate whether they are authorized to speak on behalf of their firm or are speaking on their own behalf.

Like most social media users, firms use a variety of platforms.   Our survey indicated that the social media platforms most used for both internal and external business functions are forums, blogs/pre-authored content (including multimedia content such as advertizing) and wikis.   Hence, we shall focus on these platforms in the analysis below.

We first discuss internal social media platforms. Table 4 provides information on the usage of internal social media.

Table 4: Usage of internal social media platforms (ISMPs)

ISMP exists?	Usefulness of ISMP(Rank)	Overall impact of ISMP
Yes, inhouse = 35%	Forums = 3	Significantly positive = 54%
Yes, outsourced = 40%	Pre-authored content = 3.2	Moderately positive = 31%
No = 55%	Wikis = 1.84	Neutral = 15%

Note: the rank in column 3 is an average rank. Firms were asked to provide a rank between 1 and 5, where 1 indicates the highest value and 5 the lowest. The rank of 3 indicates a neutral rank. This ranking system is used in subsequent tables, as well.

A little over half the firms sampled do not use an ISMP (Column 1 above). The larger firms are the primary users of ISMPs and most of them use both inhouse as well as outsourced providers. Of course, for most startups, an ISMP is arguably not needed since the employees all sit close to each other and can interact face-to-face rather

than over, say, Facebook.[8] 40% of the sampled firms use an outsourced provider. Among outsourced providers, Yammer is the most popular site.

The average number of hours per week spent per employee on ISMPs is 3.5 hours. Most firms that deploy ISMPs stated that there was no adverse effect on productivity of employees. 85% of respondents felt that internal social media had a positive overall impact on the firm's operations.

Among ISMPs, the above table shows that the most useful is the wiki. Both blogs and other authored content, and discussion forums averaged ranks worse than neutral. This suggests that the primary value of internal social media is for project management and planning, rather than internal recruitment, recommendations, awareness or ideation.

The following table provides the findings from the survey with regard to the benefits of internal social media.

Table 5: The Benefits of ISMPs

Economic Benefits of ISMPs	Expected value of ISMPs (Rank)	Gains from ISMPs (Rank)	Which ISMPs were most useful (Correlation with Column 1)		
			Forums	Pre-authored Content (Blogs, Multi-media)	Wikis
Human Resources mgmt:	4.2	3.8	27	28	NA
Promoting employee awareness	NA	2.8	31	80	42
Projects:					
Building project teams	3.0	2.7	24	42	46
Project management	2.2	2.3	16	51	51
Problem solving	2.8	2.6	26	50	32
Project Ideation	2.4	NA	NA	NA	NA
Strategic planning	3.5	3.1	37	60	NA
Supply-chain Mgmt	4.0	3.8	12	25	NA

The first column in Table 5 shows the list of corporate functions that we asked respondents to discuss with regard to the usefulness of internal social media. Respondents indicated that the highest gain was expected for project management, project ideation and problem solving. This is shown in Column 2. However,

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[8] There may be other differences between large and small firms in the value of different types of social media. A large manufacturer of IT products such as HP may use social media primarily to reinforce awareness of their product line. For such a firm, the value of YouTube is probably evident. However, for a small, competing IT firm, it may be equally important to participate in industry forums and associations (includins social media platforms) to build their supply-chain credibly through the improved governance benefits offered by the industry platform.

strategic planning, supply-chain management, building project teams and human resources management were all ranked at neutral or of low expected value.

Column 3 of Table 5 discusses the actual gain. Interestingly, actual gains were almost uniformly better than expected. However, only promoting employee awareness and project work (team-formation, management and problem-solving) exceeded the neutrality threshhold.

Columns 4-6 show the correlation between platforms and actual gains. Consistent with our theoretical discussion, pre-authored content was most valuable for building awareness. More suprisingly, such content, particularly blogs, were found to be valuable for a range of uses. In this regard, some respondents told us that the microblog, Twitter, was a useful site for project management and problem solving. Our findings show that the wiki is a useful platform for creating project teams, project management and problem-solving.

Turning now to external social media platforms, the following table provides a profile of their use. The average number of hours per employee per week using external social media sites is 3.5 hours, the same as for internal social media. Most firms that use external social media sites felt that there was no adverse effect on productivity of employees. 95% of respondents felt that external social media had a positive overall impact on the firm's operations (Column 5 below).

Table 6: Usage of external social media platforms (ESMPs)

Employee access to ESMP	Company use of ESMP	Usefulness of ESMP (Rank)	Top 3 ESMP sites used by the firm	Overall impact of ESMP
Unlimited = 72%	Yes = 90%	Forums = 2.7	Facebook	Significantly positive = 50%
Limited by time or for company's work = 28%	No = 10%	Pre-authored content = 2.2	Twitter	Moderately positive = 45%
		Wikis = 3.5	Linked-In	Neutral = 5%

All the sampled firms allow their employees to use external social media sites. Most firms do not restrict their employees. The respondents referred to the relatively modest use of such sites as evidence (as noted above, 3.5 hours per week by the average employee) that such open access in not misused. Almost all the sampled firms (90%) use external social media for their business. The most valuable platform is pre-authored content, followed by forums and wikis. Most firms use multiple sites. Facebook is the most popular, followed by Twitter and Linked-In. While the use of content communities such as YouTube is of less importance, blogs are an important platform within the above sites. This suggests, based on our discussion in Section 2 (see Table 2), that the primary use of ESMP is for building awareness of the firm.

The following table provides the findings from the survey with regard to the benefits of external social media.

Table 7: The Benefits of ESMPs

Economic Benefits of External SM	Expected value of external SM (Rank)	Gains from external SM (Rank)	Which external SM platforms were most useful*		
			Forums	Authored Content (Blogs, Multi-media)	Wikis
Human Resources mgmt:	3.0	2.7	10	NA	12
Marketing & BusDev					
Promotion/Awareness	1.7	1.7	28	66	NA
Competition Analysis	2.6	3.4	NA	7	43
Strategic Alliances	3.3	3.2	NA	42	35
Supply-chain Mgmt	3.1	3.6	NA	NA	10

The first column in Table 7 shows the list of corporate functions that we asked respondents to discuss with regard to the usefulness of external social media. Respondents indicated that the highest gain was expected for promoting a good or service, or building awareness. Using social media to scan the competition and analyze their approaches to product development was the second highest targeted gain.   These findings are shown in Column 2. However, building strategic alliances, supply-chain management and human resources management were all ranked at neutral or of low expected value.

Column 3 of Table 7 presents the actual gain. The highest rank went to promotion and awareness building, in line with its expected benefits. Using external social media for human resources management delivered gains that were above the threshhold of neutrality. In our interviews, respondents noted that social media was useful for obtaining a fuller picture of an applicant's background, obtaining recommendations and searching for the right fit.

Columns 4-6 show the correlation between platforms and actual gains. Consistent with our theoretical discussion, and similar to the case of internal social media, pre-authored content was most valuable for building awareness.

Comparing internal and external social media, we find that firms are more likely to use external than ISMPs. 55% of the firms surveyed do not use any internal social media, while only 10% do not use external social media.   Our conversations with respondents indicated that this difference was because external social media was accepted as a way of building awareness about the firm's goods and services.   It may also, as we noted earlier, be a firm size effect.

While awareness (among employees and the public) is a common goal of internal and external social media platform usage, and pre-authored content is the most valuable social media platform, the wiki is the most important ISMP, used for building project teams, project management and problem solving.

The finding that for both media types, blogs and other pre-authored content are important is interesting.   Such platforms are the least collaborative of all the platforms we have studied. They are valuable to the corporation because they enable the corporate to offer authoritative (reliable) information.   Such information can be delivered in many ways that do not involve social media platforms, eg., an emailed newsletter in place of a blog. It is likely that what makes a blog valuable is the presence of social media platforms that accompany the blog, like discussion forums, or opportunities to tweet or 'like' the blog, that provide more value than just an emailed newletter. If so, this suggests that sites that offer multiple, complementary platforms are likely to be more valuable than sites that offer fewer or non-complementary platforms.

What does the above analysis allow us to conclude about the hypothesis presented in the introduction? The hypothesis stated that:

> A social media platform can be economically valuable to a business organization only if it generates information that either improves the reliability of existing information, or is new information.

The survey showed that two types of SMPs were valuable: (1) Pre-authored content carriers, whose value arose from their reliability and the ability to receive feedback (new information) in a non-collaborative form.   This was the case for both ISMPs and ESMPs.   (2) ISMPs for collaboration among participants with prior weak or strong ties, where the platform enabled the generation of new information with relatively high levels of reliability.

On the other hand, SMPs that enabled the exchange of already-trusted information among strong-tie participants, for instance, for strategic planning over ISMPs, were not found to be useful. Secondly, SMPs that offer to improve the reliability of information through pooled governance were not observed to be of value, perhaps because the effect on reliability is not enough.   More new information through non-collaborative, weak-tie participation was also not observed to be of value, such as supply-chain management over ESMPs. These findings suggest that without an informational component, the SMP is not useful, i.e., the ease of use enabled by technology is not (yet) sufficient to create a useful SMP.

These findings offer support for our hypothesis.   Our findings thus also indicate the limited uses of SMPs for business uses. This may reflect the state of technology or other factors that need further exploration.

Section 4   Concluding Discussion

The objective of this paper was to identify the social media platforms that are economically relevant to a business organization, to discover the specific uses to which these platforms are put, and the reasons for their value. Beginning with the perspective that social media platforms are valuable because they offer some mixture of reliable and new information, we first argued that the value of a platform would be determined by the extent of control that may be exercised over the information flow and the extent of collaboration possible among participants on that platform. It was then argued, in a theoretical context, that reliable information could be generated through top-down governance of the flow of information, through pooled governance of open access to information, and by restricting information flow to persons with strong ties. Likewise, we showed that new information could be accessed by unrestricted access to the platform, and by enabling collaboration between persons with weak ties. From this theoretical discussion we were able to match different corporate objectives to ideal social media platforms.

This led to our hypothesis:

A social media platform can be economically valuable to a business organization only if it generates information that either improves the reliability of existing information, or is new information.

To validate the hypothesis, we surveyed 20 firms in Silicon Valley. We examined their use of social media for various business purposes and asked whether these uses match the theoretical conclusions. The potentially useful business outcomes from social media that were surveyed included hiring and professional development, strategic planning, business development and marketing, project management, strategic planning, project ideation, product development and developing intellectual property, and sales of goods.

We found that firms use a variety of platforms, both internal to the firm as well as public (external) social media platforms. Our survey indicated that the social media platforms most used for both internal and external business functions are forums, blogs/pre-authored content (including multimedia content such as advertizing) and wikis.

Our survey indicated that both internal and external social media platforms were viewed as positive contributions to a firm's business. About a quarter of the firms were concerned of overuse or misuse by employees, and restricted the use of external social media.

Internal social media was primarily used by larger firms. For internal social media, the most valuable platforms are the wiki and pre-authored content. The wiki is used primarily for project team building, project management and problem solving. Pre-

authored content, particularly in-company blogs, was important as it directly impacted employee awareness. Other business functions, such as in-house recruitment, supply-chain management and project ideation did not benefit from internal social media, although firms, on average, think that there is potential for the use of internal social media in these areas.

Turning to external social media, we found that it is more widely used for business than internal social media.   The most popular sites are, in order, Facebook, Twitter and Linked-In. Firms do not restrict employee access to external social media, although about a fourth of the firms sampled restrict the time that may be spent or impose restrictions on the purposes to which that time is put.

For external social media, the most valuable platform is the pre-authored content platform (blogs, videos) and it is used primarily for building awareness and promoting the firm's products and services. Recruitment was also found to benefit from external social media. Other outward facing business functions, such as understanding competition, supply-chain management and building strategic alliances did not benefit from external social media.

Comparing internal and external social media, we find that firms are more likely to use ESMPs than ISMPs. 55% of the firms surveyed do not use any internal social media, while only 10% do not use external social media.   Our conversations with respondents indicated that this difference was because external social media was accepted as a way of building awareness about the firm's goods and services.   It may also, as we noted earlier, be a firm size effect.

While awareness (among employees and the public) is a common goal of the usage of internal and external social media platforms, and pre-authored content the most valuable social media platform, the wiki is also an important ISMP, used for building project teams, project management and problem solving.

The finding that for both media types, blogs and other pre-authored content are important is interesting.   Such platforms are the least collaborative of all the platforms we have studied. They are valuable to the corporation because they offer authoritative information.   Such information can be delivered in many ways that do not involve social media platforms, eg., an emailed newsletter in place of a blog. It is likely that what makes a blog valuable is the presence of social media platforms that accompany the blog, like discussion forums, or opportunities to tweet or 'like' the blog, that provide more value than just an emailed newletter. If so, this suggests that sites that offer multiple, complementary platforms are likely to be more valuable than sites that offer fewer or non-complementary platforms.

In summary, the survey showed that two types of SMPs were valuable: (1) Pre-authored content carriers, whose value arose from its reliability and the ability to receive feedback (new information) in a non-collaborative form.   This was the case for both ISMPs and ESMPs.   (2) ISMPs for collaboration among participants with

prior weak or strong ties, where the platform enabled the generation of new information with relative high levels of reliability.

On the other hand, SMPs that did not generate: (1) More reliable information, such as SMPs used for collaboration between strong-tie participants, for instance, for strategic planning over ISMPs were not found to be useful. Similarly, SMPs that offer to improve the reliability of information through pooled governance were not observed to be of value. (2) More new information through non-collaborative, weak-tie participation were also not observed to be of value, such as supply-chain management over ESMPs.

Thus, these findings offer support for the hypothesis.   Our findings thus also indicate the limited uses of SMPs for business uses. This may reflect the state of technology or other factors that need further exploration.