Issue placement affecting factors for Knowledge Management Systems initiaition

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Abstract: Lots of literature discusses Information System /Information Technology adoption or diffusion. However, few studies research the initiation stage of organisational innovation process. Without entering into agenda, organisational innovations issues are not legitimated for further organisational action. Therefore, this study explored factors affecting Knowledge Management Systems (KMSs) issue placement into organisational agenda, based on perspectives of issue selling and agenda building. The quantitatively testified results verified the impact of perceived issue salience and the relatedness between agenda placement of KMSs issue and KMSs adoption. For practical KMSs proponents in organisations, to facilitate KMSs adoption is first to understand how the innovational issue is perceived.

Keywords: agenda building; issues; issue selling; Knowledge Management Systems; KMS; organisational innovation.

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1 Motivation

According to Rogers (1995), even when it has obvious advantages to get a new idea adopted within organisations, it is often not easy. With the changes in the environment, organisations need innovations. The concern of how to trigger the innovation process in organisations becomes important.

However, most of the Information System (IS) innovation literature concentrate on the adoption of new technology or the diffusion of IS/IT (Information Technology). For example, Iacovou, Benbasat and Dexter (1995) talk about three factors affecting the Electronic Data Interchange adoption and integration of organisations. Ahire and Ravichandran (2001) describe the implementation process of Total Quality Management. Baskerville and Pries-Heje (2001) propose a multiple-theory analysis of IT diffusion case, using the different innovation diffusion models. Yao et al. (2004) examine Asynchronous Transfer Mode (ATM) technology adoption in universities. Little research concerns the initiation stage of innovation process in organisations.

About the early stage of organisational innovation, Wildemuth (1992) investigates a total of 43 adoptions of computer-related innovations in three large corporations and finds that an organisational identification of organisational problems and a search for innovations to meet these needs do not occur. Drejer, Olesen and Strandskov (2005) also point out the importance of strategic environmental scanning for issue management and organisational learning. Thus, to identify the innovation issue and to define its meaning to organisation for further action are imperative.

Quaddus and Xu (2005) directly define the IT-supported KM as Knowledge Management Systems (KMSs), referring to 'specialised information systems, which deal with the generation, preservation, and sharing of knowledge within and outside of the organisation'. With the strategic importance of knowledge (Zack, 1999; Kodama, 2005; Melton, Chen and Lin, 2006), it becomes necessary for organisations to involve in the management of knowledge with information systems (Choi, Jung and Sung, 2004). KMSs provide the necessary infrastructure for organisations to implement the knowledge management process (Sarvary, 1999). Accordingly, this study focuses on the issue of KMSs.

Dutton (1986) emphasises the significance of issue discussion on organisational agenda, and thinks that the issues are not legitimated until they are exposed on the agenda. The placement of innovation issues into agenda is a sign that shows not only that the innovation issues are attended but also that the innovation process is initiated within the organisation. Consequently, this study is motivated to focus on the beginning of the organisational innovation process, and examines the factors that affect the agenda placement of KMSs issue.

2 Literature review

2.1 Agenda building

Dansker et al. (1987) propose a model for issue management in the information planning processes, and describe that the issues shall be sorted according to their probability of occurrence and the degree of impact upon the organisation. The issues of high probability of occurrence and of high impact upon the organisation are classified as strategic issues for further organisational response. Naturally, the issue will be noted only when it is of importance and may occur.

Camillus and Datta (1991) suggest an integrated planning systems framework that combines the areas of issues management and strategic planning into a formal system. The framework helps organisations to ensure the consistence of their strategic plan and the major developments in the socio-political environment. The model is based on periodic view and responds to the issues of strong signals only (Bronn and Bronn, 2002).

Both the research of Dansker et al. (1987) and Camillus and Datta (1991) acknowledge the importance of issue characteristics. However, the appearance of issue is not always as natural and of strong signal as we might think. Dutton (1986) admits the existences of social and political forces that influence the issue placement into organisational agenda. She defines agenda building as 'the process, through which strategic issues gain decision-makers' attention. In Dutton's view, strategic issue gains force through the combined effect of perceived attributes of an issue (issue salience) and the political foundation of an issue (issue sponsorship), while the size and variety of items already on the agenda (agenda structure) mediate the impact of issue salience and issue sponsorship.

As a result, the placement of the issue into agenda is not only affected by the attributes of issues, but also the issue sponsorship and agenda structures.

2.2 Issue selling of issue sponsor(s)

According to Howell and Higgins (1990), to overcome the indifference and resistance during technological change, innovation champion has to identify the idea as his or her own, to promote the idea actively, and to risk his or her position and prestige to ensure the innovation's success. In the initiation of the innovation process, the idea needs to be sponsored. Dutton and Ashford (1993) develop insights on issue selling as a process that is central in explaining how top management are influenced. Issue selling is individuals' behaviours that are directed toward affecting others' attention to and understanding of issues to influence the identification phase of organisational decision-making. They portray an organisation as a pluralistic marketplace of ideas, where issues are 'sold' via the persuasive efforts of middle-level managers. Issue sellers are 'players' who use a repertoire of moves to sell issues. The issues are bought until it appears on the agenda (Dutton, O'Neill and Lawrence, 2001).

The agenda placement of the issue represents its legitimisation within organisation. The issue is viewed as 'organisational issue' and signals to organisational members the sorts of concerns that have currency in the organisation (Dutton and Ashford, 1993). The concern whether different selling tactics of issue sponsor(s) are related to the entrance of issues into agenda would be verified in this study.

2.3 The strategic importance of knowledge management systems issue

Business organisations take knowledge as the most valuable and strategic resource because they are realising that to remain competitive they must explicitly manage their intellectual resources and capabilities (Zack, 1999). By having superior intellectual resources, business organisations understand the way to better exploit and develop their resources than their competitors. Consequently, it is of strategic importance for the organisations to manage their knowledge.

To add value with knowledge management, Organisations need support of IT to facilitate the generation, preservation, and sharing of knowledge. In the study of Davenport, De Long and Beers (1998), they examine 31 knowledge management projects and find that the use of IT facilitate these projects. Marwick (2001) selects information technologies that contribute to knowledge management solutions using Nonaka's model of organisational knowledge creation as a framework, as shown in Figure 1.

Figure 1 Examples of Information Technology supporting or enhancing knowledge conversion

SOCIALISATION **(Tacit to Tacit)** -E-meetings -Synchronous collaboration	**EXTERNALISATION** **(Tacit to Explicit)** -Answering questions -Annotation
INTERNALISATION **(Tacit to Explicit)** -Visualization -Browsable video/audio of presentation	**COMBINATION** **(Explicit to Explicit)** -Text Search -Document categorization

Source: Adopted from Marwick (2001)

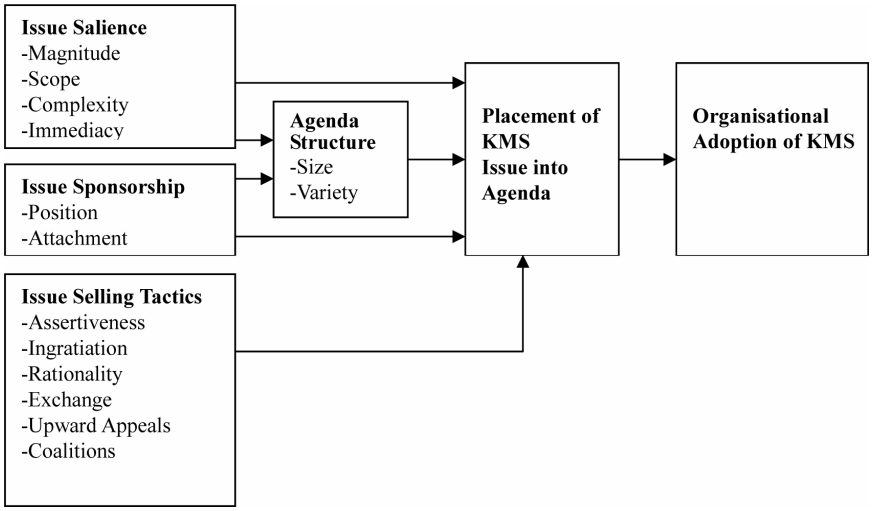
Alavi and Leidner (2001) also clearly point the support of IT in KM process. Alavi and Leidner (2001) develop another systematic IT-supported KM framework grounded in the sociology of knowledge and is based on the view of organisations as social collectives and 'knowledge systems'. They also illustrate a variety of IT tools that may be drawn upon for support of different KM processes in organisations and summarise the potential role of IT in facilitating each of the four processes. Quaddus and Xu (2005) directly define the IT-supported KM as KMSs. Therefore, in this study, we define that the issues related to the applications of information technologies in organisations to help knowledge definition, acquisition, storage, sharing and transferring, use, and evaluation of individuals or groups are classified as KMSs issue.

3 Research hypotheses

In agenda building, Dutton (1986) proposes three sets of tactics that could influence what issues comprise the strategic agenda, including changing issue salience, issue sponsorship, and agenda structures. Furthermore, issues enter agenda via the persuasive

efforts of managers (Dutton and Ashford, 1993). Therefore, this study examines the impact of issue salience, issue sponsorship, agenda structure, and the issue selling ways of issue sponsor(s) on the entrance of KMSs issue into agenda. The relatedness of agenda entrance of KMSs issue and the organisational adoption of KMSs is also examined. The conceptual research model of this study is shown in Figure 2.

Figure 2 The conceptual research model



3.1 Agenda placement of knowledge management systems issue and the organisational adoption of knowledge management systems

The entrance of issues into organisational agenda legitimises those issues within the organisation. Issues gain organisational resources after they are admitted. Rogers (1995) figures out that the organisational innovation process, which is initiated by the stage of agenda setting. Dutton (1986) describes that facilitating or constraining issues from reaching an organisation's agenda will have great impact on the initiating or preventing some change initiatives. Therefore, the first hypothesis (H1) is inferred.

H1: The placement of KMSs issue into organisational agenda is positively related to the adoption of KMSs.

3.2 Issue salience and agenda placement of knowledge management systems issue

Different issues attract different attention of decision-makers. The variety in an issue's salience draws different levels of interest and exposure to an issue, resulting in the admission of some issues into the strategic agenda and denial of others. Dutton (1986) proposes that the magnitude, abstractedness, complexity (simplicity), and immediacy of an issue affect levels of issue exposure and interest, resulting in its inclusion or exclusion from the strategic agenda.

First of all, issues vary in the magnitude or size of perceived effect on the organisation's strategic goals. Some issues may be perceived as minor and other issues may be perceived as far more important (Dutton, 1986). Sharma, Pablo and Vredenburg (1999) also find the environmental issues that are perceived helpful to organisational goals would be more actively responded. The more important an issue is, the more possibility it will have to enter agenda. Secondly, decision-makers face a range of issues in terms of their abstractness or concreteness. In the arena of public policy, Cobb and Elder (1972) argue that the more abstract a political issue is perceived, the wider potential visibility to the public and the more probable its inclusion on the congressional agenda (Dutton, 1986). When applied to the organisational context, the abstractness of a strategic issue is hypothesised to influence the inclusion possibility of an issue into agenda.

Thirdly, strategic issues that are too complex may have the same problems as the issues of high abstract. The degree that an issue can be understood describes to the complexity of the issue that refers to the different total concerns embedded and their level of technical sophistication (Dutton, 1986). For example, if the issue of KMSs is too technical defined, organisational members may feel resistance to understand the issue. However, for the attributes of different types of IS innovation (Swanson, 1994; Grover, 1997) and considering the possible duplication of abstractness and complexity, this study measures the influencing scope of KMSs issue, rather than its abstractness.

Finally, the time pressure associated with the issue may increase the level of managers' intention to put the strategic issues into agenda, increasing the possibility that the issue enter the agenda. With time pressure, decision-makers are compelled to take action quickly on issue types, and the situation intensifies people's willingness to expend resources on it (Dutton, 1986).

Different issues vary in how important, scope, complex, and immediate they are perceived to be. And the perceptions of different issue characteristics affect the possibility that issues are put into agenda. Therefore, the four hypotheses (*H2a*, *H2b*, *H2c* and *H2d*) are inferred.

H2a: The perceived magnitude of KMSs issue positively contributes to the placement of KMSs issue into agenda.

H2b: The perceived scope of KMSs issue positively contributes to the placement of KMSs issue into agenda.

H2c: The perceived complexity of KMSs issue negatively contributes to the placement of KMSs issue into agenda.

H2d: The perceived immediacy of KMSs issue positively contributes to the placement of KMSs issue into agenda.

3.3 Issue sponsorship and agenda placement of knowledge management systems issue

The opportunity to attach individuals to issues (and vice versa) could potentially influence the agenda-building process (Dutton, 1986). Sponsor(s) play an important role in building the organisation's agenda; they are people, who have a personal stake in making a strategic issue an agenda item. The issue sponsor(s) help to intensify interest or to gain the issue exposure, translating a concern into action by its placement into agenda (Dutton, 1986).

The impact of issue sponsor(s) varies in their degree of attachment to the issue and its strategic location (Dutton, 1986). The stronger an individual is personally committed to the issue, the higher chance the issue can enter the agenda only because the individual work harder to increase the awareness of the issue's existence. Issue sponsor(s) are also effective because of their strategic location (Dutton and Ashford, 1993; Dutton et al., 1997). Individuals, who gain greater power when they are central, non-substitutable and cope with uncertainty for the organisation in some way are possibly to be more successful in generating consensus that an issue is broadly recognised one and of high legitimate concern (Dutton, 1986).

The effect of issue sponsor(s) on issue entering into agenda varies in their degree of attachment to an issue and its strategic location involvement. The two hypotheses (*H3a* and *H3b*) are inferred.

H3a: The perceived sponsor(s)' personal attachment of KMSs issue positively contributes to the placement of KMSs issue into agenda.

H3b: The position of issue sponsor(s) positively contributes to the placement of KMSs issue into agenda.

3.4 Agenda structure and agenda placement of knowledge management systems issue

The agenda structure represents organisational constraints that foster or block new issue entry (Dutton, 1986). Dutton (1986) describes that the size and variety of items already on the agenda (agenda structure) mediate the impact of the issue salience and the issue sponsorship. The more issues enter agenda, the more possible that KMS issue will be ignored. The size of the strategic agenda determines the capacity limits. Besides, agenda structure of greater variety will also allow more issues to be included in the agenda. The following hypotheses are inferred.

H4a: The size of the agenda mediates the effect of KMSs issue salience on the placement of KMSs issue into agenda.

H4b: The size of the agenda mediates the effect of sponsor(s) on the placement of KMSs issue into agenda.

H4c: The variety of the agenda mediates the effect of KMSs issue salience on the placement of KMSs issue into agenda.

H4d: The variety of the agenda mediates the effect of sponsor(s) on the placement of KMSs issue into agenda.

3.5 Issue selling and agenda placement of knowledge management systems issue

Dutton and Ashford (1993) view issue sellers as 'players', who use a repertoire of moves to sell issues (Dutton et al., 2001). To promote issues, issue sponsor(s) need to convince others in different ways. Issue sponsor(s) do not always have authority to make decisions; they have to influence others who even have higher authority.

Kipnis, Schmidt and Wilkinson (1980) empirically investigated the eight tactics used by people at work to influence their superiors, co-workers and subordinates. The eight

tactics include assertiveness, ingratiation, rationality, sanctions, exchange, upward appeals, blocking, and coalitions. Considering the possible counteraction brought by the selling tactics, only six tactics (including assertiveness, ingratiation, rationality, exchange, upward appeals, and coalitions) are assessed in this study. The six hypotheses (*H5a*, *H5b*, *H5c*, *H5d*, *H5e*, and *H5f*) are as follow:

H5a: The selling tactic of assertiveness positively contributes to the placement of KMSs issue into agenda.

H5b: The selling tactic of ingratiation positively contributes to the placement of KMSs issue into agenda.

H5c: The selling tactic of rationality positively contributes to the placement of KMSs issue into agenda.

H5d: The selling tactic of exchange positively contributes to the placement of KMSs issue into agenda.

H5e: The selling tactic of upward appeals positively contributes to the placement of KMSs issue into agenda.

H5f: The selling tactic of coalitions positively contributes to the placement of KMSs issue into agenda.

4 Research method

To test the model, the survey method was used. With adequate literature review, we found no measurement for issue salience. Therefore, the scale of issue salience was developed according to the definition of Dutton (1986). To assure the content validity, the content evaluation panel, comprising 13 managers and two professors, reviewed the measurement. A total of three items then were adapted; the question items are provided in Appendix A. The scale was measured on Likert's five-point scale.

The attachment of issue sponsor(s) was measured by the question that asked respondents the perception of issue sponsor(s)' effort and the location of issue sponsor(s) was measured by issue sponsor(s)' highest position. The size of agenda structure was measured the average issue number discussed in respondents' general meeting. The variety of agenda structure was measured by the degree of issue diversity in respondents' general meeting. The scales of six selling tactics were from Kipnis, Schmidt and Wilkinson (1980). Finally, the agenda entry of KMSs issue was measured the frequency of discussion on executive agenda either recently or in the past on Likert's five-point scale, and KMSs adoption was measured by the question whether the organisations adopted KMSs.

4.1 Data gathering

A total of 110 valid questionnaires were gathered from 231 questionnaires sent out in Taiwan. The data of the organisations of these respondents was shown in Table 1. However, among those respondents, 77 of them were top-level managers, 24 were middle-level managers, and nine were lower level managers. A variance test among these

three groups was analysed, and the results showed no significant differences among these groups (F-value=1.29; $p > 0.1$). Therefore, the further analysis was done.

Table 1 Sample profile of respondents' organisations

Variables	*Category*	*Frequency*	*Percent*	*Variables*	*Category*	*Frequency*	*Percent*
No. of employees	50 below	18	16.4	Total	5 below	15	13.6
	51–100	14	12.7	Years Established	6–10 years	13	11.8
	101–500	26	23.6		11–15 years	15	13.6
	501–1,000	15	13.6		16–20 years	15	13.6
	1,001–5,000	21	19.1		21–25 years	11	10.0
	5,000 Above	16	14.5		26–30 years	8	7.3
Industry	Manufacturing	33	30.0		31–35 years	7	6.4
	Services	21	19.1		Above 36	26	23.6
	Trading/ Commerce	56	50.9	KMS Adoption	Adopted	35	31.8
					Not Adopted	75	68.2

5 Data analysis and results

5.1 Factor analysis of issue salience

To ensure the convergent validity of the constructs in developed issue salience measurement, factor analysis was first analysed with varimax rotation. The items with loadings less than 0.6 and with high cross loadings were eliminated (Hair et al., 1998) to ensure the convergent validity of the constructs. The result of factor loading was shown in Table 2 with composite reliability provided. The detail table of factor loading was provided in Appendix B. The results showed the commonly accepted loadings and reliability in IS literature (e.g. Susarla, Barua and Whinston, 2003).

Table 2 Factor loadings and Cronbach's α of issue salience

Constructs	*Items*	*Factor loading*	*Cronbach's α*	*Item(s) deleted*
Magnitude	Magnitude 3	0.83	0.92	None
	Magnitude 2	0.83		
	Magnitude 1	0.81		
Complexity	Complexity 2	0.86	0.82	None
	Complexity 1	0.78		
Immediacy	Immediacy 1	0.81	0.89	Immediacy 3
	Immediacy 2	0.75		
Scope	Scope 1	0.80	0.62	Scope 2
	Scope 3	0.75		

5.2 Construct validity of selling tactics and issue salience

To further ensure construct validity, factor analysis of the issue selling and the issue salience was analysed. With factor loadings less than the level of 0.5, the construct of assertive was not adopted for further analysis. Only hypotheses of H5b, H5c, H5d, H5e, and H5f were further testified. The result was shown in Table 3.

5.3 Discriminant analysis of knowledge management systems issue agenda placement and knowledge management systems adoption

To testify the relation between the agenda placement of KMSs issue and KMSs adoption, discriminant analysis was tested. Table 5 showed the discussion frequency of KMSs issue was significantly different between the organisations which adopted KMSs and the organisations which did not adopt KMSs. Therefore, *H1* was supported.

Table 3 Construct validity of issue salience and selling tactics

Factors / *items*	*Magn*	*Rati*	*Upwa*	*Exch*	*Comp*	*Coal*	*Ingra*	*Immed*	*Scope*
Magn 2	**0.819**	0.284	0.127	0.029	0.214	0.094	0.067	0.198	0.111
Magn 1	**0.792**	0.219	0.052	0.080	0.283	0.197	0.075	0.139	0.170
Magn 3	**0.780**	0.235	0.242	0.123	0.165	0.123	0.090	0.242	0.035
Ration 2	0.349	**0.718**	0.299	0.208	0.122	0.228	0.129	–0.021	0.098
Ration 3	0.217	**0.717**	0.289	0.242	0.223	0.245	0.155	0.091	0.069
Ration 1	0.192	**0.690**	0.288	0.137	0.178	0.265	0.115	0.208	0.107
Ration 4	0.306	**0.676**	0.188	0.082	0.086	0.305	0.210	0.224	0.126
Upward 2	0.101	0.194	**0.797**	0.219	–0.023	0.133	0.109	0.171	0.136
Upward 4	0.201	0.355	**0.689**	0.215	0.166	0.267	0.071	0.094	0.162
Upward 3	0.195	0.315	**0.680**	–0.069	0.337	0.202	0.178	0.091	–0.058
Exchan 2	–0.012	0.188	0.084	**0.906**	–0.065	0.105	0.029	0.071	0.114
Exchan 1	0.181	0.108	0.159	**0.875**	0.117	0.106	0.168	–0.037	0.023
Comple 2	0.227	0.155	0.120	0.053	**0.837**	0.066	0.013	0.261	0.050
Comple1	0.363	0.186	0.124	–0.003	**0.743**	0.117	0.191	0.136	0.205
Coalit 3	0.107	0.268	0.242	0.124	0.104	**0.826**	0.101	0.127	0.024
Coalit 1	0.258	0.347	0.183	0.149	0.076	**0.780**	0.066	0.088	0.101
Ingrat 3	0.054	0.033	0.192	0.256	0.008	0.102	**0.880**	0.032	0.070
Ingrat 1	0.146	0.404	0.035	–0.061	0.192	0.052	**0.767**	0.141	0.105
Immed 1	0.360	0.156	0.170	0.006	0.275	0.176	0.113	**0.747**	0.180
Immed 2	0.381	0.185	0.238	0.053	0.353	0.125	0.107	**0.670**	0.159
Scope 3	0.029	0.328	0.051	0.006	0.228	–0.008	0.090	0.333	**0.768**
Scope 1	0.452	–0.065	0.203	0.258	0.026	0.174	0.132	–0.029	**0.714**

The factor scores were used in further data analysis. The result of composite reliability in selling tactics was presented in Table 4.

Table 4 Composite reliability of selling tactics

Constructs	*Items*	*Cronbach's α*	*Constructs*	*Items*	*Cronbach's α*
Rationality	Ration2	0.93	Exchange	Exchange2	0.86
	Ration1			Exchange 1	
	Ration3		Coalitions	Coalition3	0.86
	Ration4			Coalition 1	
Upward	Upward2	0.84	Intratiation	Ingratiat 3	0.74
appeals	Upward3			Ingratiat 1	
	Upward4				

Table 5 Pearson correlation

Variables	*Items*	*Value*
Agenda placement of KMSs issue	Mean	4.17
	Standard deviation	1.07
KMSs adoption (N)	Adopted (Organisation No.)	35
	No. of Not Adopted (Organisation No.)	75
Chi-square value of discriminant analysis	193.579*** (p <= 0.000)	

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$ (n=110).

5.4 Results of stepwise regression analysis

5.4.1 Stepwise regression analysis on agenda size

The first regression analysis was analysed to test the effect of issue salience and sponsor(s) on agenda size. The R-square value was 0.06 and the F-value was 2.15 with p=0.054. The detail result was shown in Table 6.

Table 6 Stepwise regression analysis on agenda size

	Variables	*Standardised beta*	*t-Value*
Intercept	Intercept		5.32***
Issue salience	Magnitude	0.19	1.75
	Complexity	–0.15	–1.54
	Immediacy	0.21	2.12*
	Scope	–0.09	–0.99
Sponsor(s)	Attachment	–0.04	–0.27
	Location	0.05	0.32

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$ (n=110).

5.4.2 Stepwise regression analysis on agenda variety

The second regression analysis was analysed to test the effect of issue salience and sponsor(s) on agenda variety. The R-square value was 0.04 and the F-value was 0.28 ($p > 0.1$). Therefore, *H4c and H4d* were not supported.

5.4.3 Stepwise regression analysis on agenda placement of knowledge management systems issue

The third regression analysis was analysed to test the effect of issue salience, sponsor(s), agenda structure, and selling tactics on KMSs issue placement. The *R*-square value was 0.665, and the *F*-value was 17.627 ($p < 0.000$). The detail result was shown in Table 7.

The result in Table 7 demonstrated that issue salience affected the agenda entrance of KMSs issue; consequently, *H2a*, *H2b*, *H2c* and *H2d* were supported. The result also demonstrated that the attachment of issue sponsor(s) to an issue had significant impact on the KMSs issue placement. However, issue sponsor(s)' location, i.e. the position, did not show significant effect on KMSs issue placement. Therefore, *H3a* was supported, but *H3b* was not supported.

Furthermore, no selling tactics of issue sponsor(s) showed significant effect on KMSs issue placement. As a result, *H5b*, *H5c*, *H5d*, *H5e* and *H5f* were not supported. The agenda structure, including agenda size and agenda variety did not show significant effect on KMSs issue placement, either. Therefore, agenda size and agenda variety did not mediate the effect of issue salience and sponsor(s) on KMS issue placement into agenda. Hypotheses of H4a, H4b, H4c, and H4d were not supported.

Table 7 Regression analysis on agenda placement of KMSs issue

	Variables	*Standardised beta*	*t-Value*
Intercept	Intercept		5.77***
Issue salience	Magnitude	0.46	6.39***
	Complexity	0.28	4.63***
	Immediacy	0.21	3.25**
	Scope	0.12	2.07*
Sponsor(s)	Attachment	0.25	2.58*
	Location	0.03	0.28
Selling tactics	Rationality	0.13	1.87
	Upward appeals	0.05	0.77
	Exchange	0.10	1.74
	Coalition	0.08	1.19
	Ingratiation	0.07	1.25
Agenda structure	Size	0.02	0.36
	Variety	–0.02	–0.27

Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$ (n=110).

6 Conclusion, discussion and implications

In this study, we attempted to answer the question what factors affected the placement of KMSs issue into agenda in the initiation stage of the organisational innovation process. The result showed that the frequency of discussion of KMSs issue on organisational agenda was related to the organisations' KMSs adoption. The examination also proved the significant impact of perceived issue salience and sponsor(s)' attachment on KMSs

issue agenda placement. However, no significant influence of the issue selling tactics on KMSs issue placement was indicated. This could be due to the mild selling attitudes of KMSs sponsor(s) toward KMSs. Further study on sponsor(s)' attitudes was suggested.

The entrance of organisational agenda legitimises the issues themselves. This gives issue the legitimacy for consequential action taken by organisations. Without the legitimacy, the issue can never gains force and foster the development of organisations. For knowledge management proponents who identify the organisational problems and eager to introduce KMSs to meet the organisation needs, they need to understand how to initiate the innovation process. As Kingdon (1984) has stated, 'We're talking here not about how issues get decided, nor about how decisions are implemented and what impacts they have, but rather how issues come to be issues in the first place.'

With limited resources, organisations need to well plan resources allocation for competition and survival. However, with the existence of social and political power, organisations' resource plans are affected. That may drive organisations into tracks. For proponents, who identify important opportunities and strengths brought by KMSs innovation, it is necessary for them to realise how to begin the innovation.

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References

Ahire, S.L. and Ravichandran, T. (2001) 'An innovation diffusion model of TQM implementation', *IEEE Transactions on Engineering Management*, Vol. 48, pp.445–464.

Alavi, M. and Leidner, D.E. (2001) 'Review: knowledge management and knowledge management systems: conceptual foundations and research issues', *MIS Quarterly*, Vol. 25, pp.107–136.

Baskerville, R. and Pries-Heje, J. (2001) 'A multiple-theory analysis of a diffusion of information technology case', *Information Systems Journal*, Vol. 11, pp.181–212.

Bronn, P.S. and Bronn, C. (2002) 'Issues management as a basis for strategic orientation', *Journal of Public Affairs*, Vol. 2, pp.247–258.

Camillus, J.C. and Datta, D.K. (1991) 'Managing strategic issues in a turbulent environment', *Long Range Planning*, Vol. 24, pp.67–74.

Choi, I., Jung, J. and Sung, M. (2004) 'A framework for the integration of knowledge management and business process management', *Int. J. Innovation and Learning*, Vol. 1, pp.399–408.

Cobb, R.W., Elder, C.D. (1972) 'Individual orientations in the study of political symbolism,' *Social Science Quarterly*, Vol. 53, pp.79–90.

Dansker, B., Hansen, J.S., Loftin, R. and Veldwisch, M.A. (1987) 'Issues management in the information planning process', *MIS Quarterly*, Vol. 11 pp.222–230.

Davenport, T.H., De Long, D.W. and Beers, M.C. (1998) 'Successful knowledge management projects', *Sloan Management Review*, Vol. 39, pp.43–57.

Drejer, A., Olesen, F. and Strandskov, J. (2005) 'Strategic scanning in a new competitive landscape: towards a learning approach', *Int. J. Innovation and Learning*, Vol. 2, pp.47–64.

Dutton, J.E. (1986) 'Understanding strategic agenda building and its implications for managing change', in L.R. Pondy, R.J.J. Boland and H. Thomas (Eds), (1988), *Managing Ambiguity and Change* (pp.127–144). Chichester, UK: John Wiley & Sons Ltd.

Dutton, J.E. and Ashford, S.J. (1993) 'Selling issues to top management', *Academy of Management Review*, Vol. 18, pp.397–428.

Dutton, J.E., Ashford, S.J., O'Neill, R., Hayes, E. and Wierba, E. (1997) 'Reading the wind: how middle managers assess the context for issue selling to top management', *Journal of Strategic Management*, Vol. 18, pp.407–423.

Dutton, J.E., O'Neill, R.M. and Lawrence, K.A. (2001) 'Moves that matters: issue selling and organizational change', *Academy of Management Journal*, Vol. 44, pp.716–736.

Grover, V. (1997) 'An extension of the tri-core model of information systems innovation', *European Journal of Information Systems*, Vol. 6, pp.232–2423.

Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C (1998) *Multivariate Data Analysis with Readings* (5th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Howell, J.M. and Higgins, C.A. (1990) 'Champions of technological innovation', *Administrative Science Quarterly*, Vol. 35, pp.317–341.

Iacovou, C.L., Benbasat, I. and Dexter, A.S. (1995) 'Electronic data interchange and small organizations: adoption and impact of technology', *MIS Quarterly*, Vol. 19, pp.465–485.

Kingdon, J.W. (1984) *Agendas, Alternatives and Public Policies*. New York, NY: Parper Collins Publisher.

Kipnis, D., Schmidt, S.M. and Wilkinson, I. (1980) 'Intraorganizational influence tactics: exploration in getting one's way', *Journal of Applied Psychology*, Vol. 65, pp.440–452.

Kodama, M. (2005) 'Customer value creation through knowledge creation with customers: case studies of IT and multimedia businesses in Japan', *Int. J. Innovation and Learning*, Vol. 2, pp.357–385.

Marwick, A.D. (2001) 'Knowledge management technology', *IBM System Journal*, Vol. 40, pp.814–830.

Melton, C.E., Chen, J.C.H. and Lin, B. (2006) 'Organisational knowledge and learning: leveraging it to accelerate the creation of competitive advantages', *Int. J. Innovation and Learnin*g, Vol. 3, pp.254–266.

Quaddus, M. and Xu, J. (2005) 'Adoption and diffusion of knowledge management systems: field studies of factors and variables', *Knowledge-Based Systems,* Vol. 18, pp.107–115.

Rogers, E.M. (1995) *Diffusion of Innovation* (4th ed.). New York, NY: The Free Press.

Sarvary, M. (1999) 'Knowledge management and competition in the consulting industry', *California Management Review*, Vol. 41, pp.95–107.

Sharma, S., Pablo, A.L. and Vredenburg, H. (1999) 'Corporate environmental responsiveness strategies: the importance of issue interpretation and organizational context', *Journal of Applied Behavioral Science*, Vol. 35, pp.87–108.

Susarla, A., Barua, A. and Whinston, A.B. (2003) 'Understanding the service component of application service provision: an empirical analysis of satisfaction with ASP services', *MIS Quarterly*, Vol. 27, pp.91–124.

Swanson, B.E. (1994) 'Information systems innovation among organizations', *Management Science*, Vol. 40, pp.1069–1092.

Wildemuth, B.M. (1992) 'An empirically grounded model of the adoption of intellectual technology', *Journal of the American Society for Information Science*, Vol. 4, pp.210–224.

Yao, J.E., Lu, J., Chen, Q. and Xu, X. (2004) 'Significant predictors of information technology innovation adoption', *Int. J. Innovation and Learning*, Vol. 1, pp.177–191.

Zack, M.H. (1999) 'Developing a knowledge strategy', *California Management Review*, Vol. 41, pp.125–145.

Appendix A Question items

Issue Salience (on Likert's five point scale)	
MAGN 1	The KMSs issue helps to achieve the strategic goal of our organisation.
MAGN 2	The KMSs issue enhances the competition of our organisation.
MAGN 3	It is necessary to introduce KMSs in our organisation.
SCOPE 1	Most employees' job content will be changed when our organisation introduces KMSs.
SCOPE 3	We have to cooperate more tightly with other organisations if our organisation introduces KMSs.
COMPLE 1	The content of KMSs, including meaning, aim, and function, can be easily understood.
COMPLE 2	The involved technology in KMSs can be easily understood.
IMMED 1	It is immediate for our organisation to evaluate and discuss the issue of KMSs.
IMMED 2	The introduction of KMSs is immediate for our organisation.
Issue Sponsorship	
Attachment	The attachment degree of KMSs issue sponsor(s)
Position	The level of position of KMSs issue sponsor(s)
Agenda Structure	
Agenda Size	The average issue number in our general meeting
Agenda Variety	The variety degree of our discussion issues in general meeting
KMSs Issue Discussion	
Our organisation often discusses KMSs issue, no matter recently or in the past.	
KMSs Adoption	
Our organisation has adopted KMSs.	

Appendix B Factor loadings of issue salience

Items	*Factor 1*	*Factor 2*	*Factor 3*	*Factor 4*
MAGN 3	**0.834**	0.202	0.312	0.118
MAGNI 2	**0.826**	0.263	0.280	0.166
MAGNI 1	**0.812**	0.312	0.197	0.234
COMPLE 2	0.229	**0.857**	0.295	0.049
COMPLE 1	0.364	**0.779**	0.216	0.239
IMMED 1	0.355	0.267	**0.809**	0.188
IMMED 2	0.385	0.339	**0.753**	0.192
SCOPE 1	0.439	0.023	0.019	**0.804**
SCOPE 3	–0.017	0.270	0.426	**0.749**