

# Factors Affecting Marketing Knowledge Sharing (MKS): The Case of Iranian Food and Auto Industries

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## INTRODUCTION

Knowledge is one of the most cited topics in management literature in recent years. Innovations and Knowledge Management (KM) play key roles in managing and increasing competitive advantages of organizations (Porter, 2001). Knowledge is an organization's only enduring source of advantage in an increasingly competitive world (Birkinshaw, Holm, Thilenius, and Arvidsson 2000). Knowledge Sharing (KS) plays a critical role in KM because KM improves and strengthens by being shared with others. Although there is huge body of knowledge available on KM, but enough information is not available about KS and studies about Marketing Knowledge Sharing (MKS) are scarce. The main reason for searching for effect factors in MKS is this statement from Drucker: every company has only two functions: Innovation and Marketing. Marketing is a boundary spanning function in a company and relates a company with his customers, competitors and other market elements. Marketing knowledge is a new area in marketing and there have been nascent developments in this stage. In this paper, the authors try to explore factors affecting MKS at a personal and micro level in two selected industries in Iran (including food and home appliance). These two industries are highly competitive in Iran. The authors investigate what personal factors affect KS.

## LITERATURE REVIEW

### MARKETING KNOWLEDGE

In organizational context, knowledge as a whole consists of sub-knowledge. These sub-knowledges based on porter value chain are: Infrastructure Knowledge, HRM Knowledge, Technology Development Knowledge, Logistics Knowledge (inbound and outbound), Operations Knowledge, Marketing and Sales Knowledge and Service Knowledge. One of the most important sub-knowledge is Marketing Knowledge. Peter Drucker says, "Because its purpose is to create a customer, the business has two - and only two - functions: marketing and innovation. Marketing and innovation create value, all the rest are costs." (Drucker, 1977, p.90). Some researchers have used the term 'marketing knowledge' without clear definition (Glazer, 1991; Menon and Varadarajan, 1992; Madhavan and Grover, 1998; Menon and Varadarajan, 1992). Tsai and Shih (2004) claim that Marketing Knowledge Management encompasses the generation, dissemination and storage of marketing knowledge. Marketing knowledge dissemination is equal to marketing knowledge-sharing concept because knowledge dissemination describes the process by which knowledge from different sources is shared and thus stimulates new knowledge or understanding (Tsai and Shih, 2004). Glazer (1991) said that marketing knowledge to be a strategic asset for organizations. Marketing knowledge is the know-how required when marketing activities are executed, and includes marketing research, channel operation, promotion, product design, and marketing information systems, and so on (Tseng, 2006). Rossiter (2001) distinguishes four forms of marketing knowledge: marketing concepts, structural frameworks, strategic principles and research principles. There has been no clear statement about the forms that marketing knowledge can take, or its content. To define marketing knowledge, we should refer to the meaning of marketing. The essential purpose of marketing is to satisfy customer profitability. Marketing tries to discover customer needs, wants, competitor strategies, and tactics at the same time as Day (1994) emphasized on need to learn about customer and competitor. Ohmae (1983) concept of 3Cs is a good base for marketing knowledge categorization. The Customer, Competitor and Company are the three 3Cs. The Company designed 4Ps and STP (Segmentation, Targeting and Positioning) based on gathering information on customer and competitor. Knowledge about customer needs, wants, factors affecting their loyalty, satisfaction and knowledge (first C) about competitors (identifying them), and their strategies and plans (second C) are base for designing 4Ps and STP strategies by company (third C). Then the company works to find a good fit between customers, competitors and itself. There are different views on marketing knowledge components, which are summarized in Table 1.

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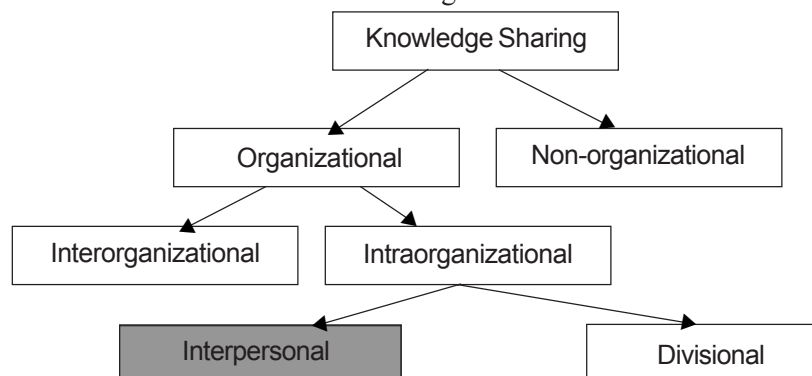
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**Table1: Summary of Marketing Knowledge Of Building Blocks**

| Marketing Knowledge- Building Blocks                                                                                  | Source                                  |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| Organized and structured information regarding markets, customers, competitors and trends.                            | Tsai, M.T and Shih, C.M (2004)          |
| Customer knowledge (retailer), consumer knowledge (market research)and market knowledge (third-party data providers). | Shaw, Subramaniam,Tan, and Welge (2001) |
| Awareness of factors, control of factors, and application of knowledge in new markets.                                | Lorenzon et.al (2005)                   |
| Product development management (PDM), supply chainManagement (SCM) and customer relationship management (CRM).        | Srivastava (1999)                       |
| Customer knowledge process, marketing-R&D interface and competitor knowledge.                                         | Li and Calantone (1998)                 |
| Knowledge on customers, competitors, and markets.                                                                     | Deshpande(1999)                         |

## KNOWLEDGE SHARING (KS)

Knowledge originates and is circulated within organizations (Nonaka and Takeuchi, 1995), becoming integrated with internal processes, norms, and practices (Davenport and Prussak, 1998). Knowledge is the source of power but knowledge sharing is source of mega power because sharing of knowledge results in knowledge synergy, which ultimately produces great benefits. Performance in various parts of the organization can be enhanced when people communicate information, effective practices, insights, experiences, tastes, lessons learned, as well as common and uncommon sense (Liao et.al, 2003). According to Bock and Kim (2002), Knowledge Sharing is the most important part of KM. The ultimate goal of sharing employees' knowledge is its transfer of organizational assets and resources (Dawson, 2001). Knowledge Sharing is different from knowledge distribution, knowledge dissemination, and knowledge transfer. The knowledge sharer is not only willing to disseminate his/her knowledge; but he/she is also ready to help the recipient understand and learn the content of the target knowledge (Liu, 2005). KS is the voluntary dissemination of acquired skills and experiences to the rest of organization (Davenport, 1997; Ipe, 2003). Lee (2001) has defined knowledge sharing as "activities of transferring or disseminating knowledge from one person, group, or organization to another" (p. 324). Major and Cordey-Hayes (2002, p. 411) see a transfer of knowledge as a conveyance of knowledge from one place, person, ownership, etc., to another. It involves two or more parties and there has to be a source and a destination. KS in some definitions is defined as dissemination of knowledge and experiences across the units of an organization (Moorman and Miller, 1998). KS is important in Knowledge Management because individual knowledge will not have much impact on the organization unless it is made available to other persons (Nonaka and Takeuchi, 1995). Knowledge in organizations is an accumulated and integrated object. Knowledge Sharing has many benefits such as: faster response to customer requirements, lower cost in operation (Sher and Lee, 2004), market orientation (Weerawarden and O'Cass, 2004), innovation, financial and market performance (Law and Ngai, 2007). KS has two sides: organizational and non-organizational. KS is not only implemented in the organizational context but also in daily life. People share their knowledge and experience with each other but in this paper, we do not pay attention to non-organizational KS. KS in organizations is a critical topic for managers and academics. Organizations can be viewed as a multi level object. Levels of implementation of KS can be divided into two main categories: Intra-Organizational and Inter-organizational. KS at Intra-Organizational level divided into two subcategories: first level is individual and persons (such as: samieh and wahba, 2007; Liao et.al, 2004; Kishore et.al, 2006; Cabrera et.al, 2006; Kwok and gao, 2005) that work in an organization. Second level is department/division that makes up the number of employees. We can see this classification in Figure 1.

**Fig 1: Hierarchy of KS**

Interorganizational KS occurred in strategic alliances and joint ventures (such as: chen, 2006; Conell and Voola, 2007). In KS studies, a researcher should define and determine the level of KS. In this paper, researchers work on interpersonal level of KS (shaded rectangular). As Law and Ngai(2007) claimed, KS exists at different levels of an organization (personal, team, organization as a whole). KS at the personal level is critical for organizations because an organization is made up by persons and people (Lukas, Hult and Ferrell, 1996). Knowledge is transferred not only from individual to individual but also involves “individual to a team or group, team or group to individual, or team or group to team or group” (Bender and Fish, 2000, p. 130). Interpersonal (employee-to-employee) Knowledge Sharing is based on other types of organizational knowledge sharing. Organizations face the challenge of finding ways to encourage employees to share their knowledge with one another (cabera, et.al, 2004).

## FACTORS AFFECTING MARKETING KNOWLEDGE SHARING (MKS)

Although there are many conceptual and experimental studies on Knowledge Sharing in management literature, but little knowledge is available in the field of Marketing Knowledge Sharing. Because of lack of experimental work on Marketing Knowledge Sharing, we use knowledge sharing as a basis. Cabera et.al (2004) found that personal factors (self-efficacy, organizational commitment, agreeableness, conscientiousness, openness to experience), environmental factors (perceived support, extrinsic rewards, intrinsic rewards, job autonomy) and system factors (availability and quality) affect MKS. Kyriakidou (2004) in his conference report believed that factors such as: senior management leadership and support, business orientation, team culture, system of rewards and recognition are important in Knowledge Sharing. Lack of motivation or reluctance to share knowledge (Hendriks, 1999) and fear of negative consequences, which may result from sharing knowledge, such as losing one’s job (Davenport et al., 1998), have been found to discourage knowledge sharing. Conversely, favorable attitudes towards knowledge sharing have been found to have a positive impact on knowledge-sharing behavior.

**Table 2: Review of Past Works On Knowledge Sharing**

| Level                | Items                                                                                                                                                                                                                                                   |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Organization (Macro) | Reward system (Osterloh and Frey, 2000 ; ), Culture, Structure, IT (Kim and Lee, 2004; Matusik and Hill, 1998; Trussler, 1998; Kim and Lee, 2006), organizational Commitment (Lin, 2007), Strategy (Taylor, 2004), Organizational Support (King, 2006). |
| Group (Meso)         | Cohesion, efficacy (Ali and Hasan, 2006 ;) supervisor role (MacNeil, 2004),                                                                                                                                                                             |
| Person (Micro)       | Trust (Cross et al., 2001; Hansen, 2002; Lin, 2007 ), employee characteristics (Bock and Kim, 2002; Connelly and Kelloway, 2003; Ryu et al., 2003),                                                                                                     |

## THE RESEARCH MODEL

Researches based on comprehensive study of Behavioral intention, investigated Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975), Theory of Planned Behavior (TPB) (Ajzen, 1991) and Technology Acceptance Model (TAM)(Davis, 1989). Behavioral intention measures how hard an individual is willing to try, or the strength of intended effort to perform a behavior (Ajzen, 1991). Behavioral intention does not perfectly correlate with the actual behavior but can be used as a predictor of actual behavior. Knowledge transfer requires the willingness of a group or individual to work with others and share knowledge to their mutual benefits (Ikhsan Rowland, 2006).

## SELF-EFFICACY

Self-Efficacy was first coined by Bandura (1977). Bandura (1986) defined self-efficacy as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned, not with the skills one has, but with judgments of what one can do with whatever skills one possesses” (p. 391). Self-efficacy tries to measure individual perceptions about doing specific task. On the other hand, Self-efficacy deals with virtual and subjective world and not physical and real world. Stajkovic and Luthan (1998) and Salgado and Moscoso (2000) used meta-analysis and found that there is a positive relationship between self-efficacy and some organizational variables. Self-efficacy is a measure of a person’s ability to do specific task before he /she really does it. Self-efficacy has a close relationship with ease of use and usefulness (two factors that are used in technology acceptance model (TAM)). Perceived ease of use refers to the “degree to which a person believes that using a particular system would be free of effort.” This follows from the definition of “ease”: “freedom from difficulty or great effort” (Davis, 1989). Davis believes that being an equal, an application perceived to be easier to use than another is more likely to be accepted by users. Beliefs about ease of use and usefulness were posited directly to

intention (Venkatesh and Davis, 1996). Cabera et.al (2006) reported impact of role breadth self-efficacy on Knowledge Sharing. MKS self-efficacy is a person's belief about the degree of sharing his/her marketing knowledge successfully with others. Kalman (1999) showed that self-efficacy impacts Knowledge Sharing. Marketing Knowledge Sharing self-efficacy can affect actual knowledge sharing, perceived benefits of Knowledge Sharing and attitude towards Knowledge Sharing. We expect negative impact of Marketing Knowledge Sharing self-efficacy on perceived risks of Knowledge Sharing.

## **PERCEIVED BENEFITS**

Perceived benefits are desirable outcomes of a specific action before doing it. Employees before MKS analyze future benefits and then decide to share or not to share their MK. These perceived benefits can influence employees' intention to share MKS. We divided these perceived benefits into two: Economic benefits and Social benefits. Coleman (1988) categorized benefits of three broad categories that resonate with the intellectual streams most often used to explain social action: economics, social psychology, and sociology. Economic benefits are direct or indirect benefits that are monetary and fiscally such as: higher salary, monetary rewards, higher position in organizational chart and .... Social benefits are benefits that stem from emotions and feelings such as: status, more friends, and social respect. Knowledge Sharing is most likely to occur when employees perceive that incentives exceed costs (Kelly and Thibaut 1978). According to expectancy theory (Vroom, 1964), intentions to perform a certain action are in part determined by consequence expectations. The more positive outcomes are perceived by a person to be associated with a given action, the more inclined the person will be to perform that action. Carbera et.al(2006) showed that rewards have a moderate direct effect on knowledge sharing. When decision makers perceive clear overall organizational benefits of knowledge sharing, they are more likely to encourage knowledge sharing culture in the organization (Kaser and Miles, 2002). Organizational reward influences the behavior and performance of an organization's members (Huber, 1991; Maltz and Kohli, 2000). Bock and Kim (2002) claimed expected rewards and expected association will positively affect attitude towards knowledge sharing. Perceived benefits can be divided into two classes: economic and social. Economic perceived benefits include: financial reward and job promotion. Social perceived benefits include: High cognition, reputation and finding new friends. These perceived benefits can positively impact knowledge sharing. We predict that perceived benefits of MKS will positively impact MKS directly and indirectly via attitude towards MKS.

## **PERCEIVED RISKS**

Knowledge is power and sharing it means sharing power. Sharing marketing can be viewed as a risky task, because as Liao et.al (2003) mentioned, for individuals in a highly competitive environment, knowledge sharing means that an individual's knowledge is disseminated to others who might be his/her competitors now or in the future. Sharing marketing knowledge is beneficiary for organizations usually but not for employees. Employees usually regard their unique knowledge as power to secure their positions in the organization (Ba et al., 2001; Zack, 1999). Hence sharing their knowledge could be viewed as a risky job. Perceived risks can be divided into two classes: economic and social. Economic perceived risks include: job loss, knowledge advantage. Social perceived benefits include: Co-worker jealousy, losing friends. These perceived risks can impact knowledge sharing in a negative way. We predict that perceived risks of MKS will negatively affect MKS directly and indirectly via attitude towards MKS.

## **ATTITUDE**

It is believed that an individual's attitude towards a certain behavior can influence their intention to perform such sharing behavior and further affect actual work performance (Ajzen and Fishbein, 1980). Fishbein and Ajzen (1972) said that there are almost 500 different operations designed to measure attitude, yet this number increased. There is a general agreement that attitude represents a summary evaluation of a psychological object captured in such attribute dimensions as good-bad, harmful-beneficial, pleasant-unpleasant, and likable-dislikable (Ajzen & Fishbein 2000, Petty et al 1997). It is obvious that there is no consensus about definition and measuring attitude. Attitude towards Knowledge Sharing is the degree of one's positive feelings about sharing one's knowledge (Samieh and Wahba, 2007). Kwok and Gao (2005) found that attitude towards Knowledge Sharing is function of channel richness and absorptive capacity and extrinsic motivation did not impact attitude. Cabera and Cabera (2005) and Bock and Kim (2002) proposed that positive attitudes towards knowledge sharing will be positively related to intentions to share

knowledge and, consequently, to knowledge sharing behaviors. Yang's (2006) research showed that attitudes impact knowledge sharing. We predict that attitudes towards MKS have a direct positive impact on MKS.

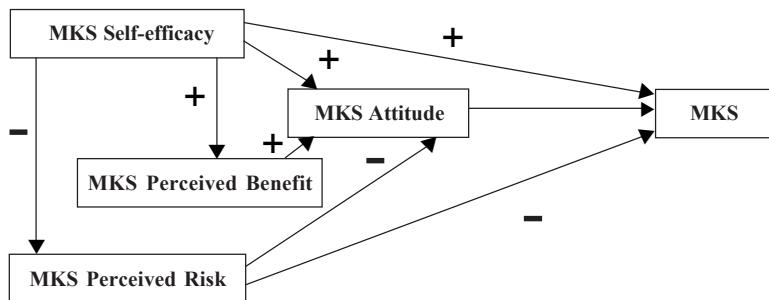


Figure 2: The Hypothesized Structural Model.

## METHODOLOGY

### DATA COLLECTION

Researchers selected two highly competitive industries: Food (nine companies) and automotive (three companies). The target sample was marketing employees of marketing department of selected companies. A questionnaire was used for gathering data based on direct referring for the marketing department. Questionnaires had been distributed by helping marketing managers and supervisors. The questionnaires were collected back after one week. 170 questionnaires were sent and 150 questionnaires were received (response rate = 0.88) and 137 questionnaires were usable for analysis. For measuring latent variables, we use 5-points likert scale.

### DATA ANALYSIS

Data analysis techniques used in this research are Structural Equation Modeling (SEM). SEM is used by researchers in many different fields including: sociology, marketing, and physiology. There are softwares for testing SEM such as: AMOS (Arbuckle, 1999), LISREL (Joreskog&Sorbom, 1993), M-Plus (Muthen&Muthen, 1998) and EQS (Bentler, 2000). In this study, we used AMOS 6.0 to analyse data.

## RESULTS

Analysis of Demographic Variables showed that 137 usable questionnaires were almost equally responded by two industries. Age of respondents indicated that majority of the sample are between 26-35 years. 76% of the participants have less than 10 years of experience. 72% of the participants are men and only 28% respondents are women. Almost 70% of the participants have higher education degree. Summary of Demographic Variables are presented in Table 3.

Table 3 : Summary of Demographic Variables

| Demographic Variable | Answers        | Frequency | Valid Percent |
|----------------------|----------------|-----------|---------------|
| Industry             | Food           | 61        | 44.5          |
|                      | Automotive     | 76        | 55.5          |
| Age                  | <=25           | 19        | 14.8          |
|                      | 26-35          | 78        | 60.9          |
|                      | 36-45          | 17        | 13.3          |
|                      | 46-55          | 10        | 7.8           |
|                      | >=56           | 4         | 3.1           |
|                      | Missing        | 9         | ---           |
| Experience           | <=5            | 52        | 40.0          |
|                      | 6-10           | 47        | 36.2          |
|                      | 11-15          | 19        | 14.6          |
|                      | 16-20          | 10        | 7.7           |
|                      | >=21           | 2         | 1.5           |
|                      | Missing        | 7         | ---           |
| Gender               | Man            | 97        | 71.9          |
|                      | Woman          | 38        | 28.1          |
|                      | Missing        | 2         | ---           |
| Education            | Below Bachelor | 30        | 22.9          |
|                      | Bachelor       | 76        | 58.0          |
|                      | Above Bachelor | 25        | 19.1          |
|                      | Missing        | 6         | ---           |



In Table 4, we summarized the correlation between research variables. Pearson Correlation Coefficients showed that there are positive relationships between MKS and self-efficacy, attitude towards MKS, perceived benefits of MKS and negative relationship between MKS and perceived risks of MKS.

**Tables 4: Correlation Between Variables**

| Variables        | Mean  | S.D  | 1         | 2         | 3         | 4     | 5 |
|------------------|-------|------|-----------|-----------|-----------|-------|---|
| 1- MKS           | 3.88. | 0.69 |           |           |           |       |   |
| 2- Self-Efficacy | 3.97  | 0.65 | .532(**)  |           |           |       |   |
| 3- Attitude      | 3.94  | 0.7  | .538(**)  | .543(**)  |           |       |   |
| 4- Risk          | 2.53  | 0.87 | -.284(**) | -.294(**) | -.535(**) |       |   |
| 5- Benefit       | 3.1   | 0.72 | .229(**)  | .229(**)  | .229(**)  | -.149 |   |

\*\* Correlation is significant at the 0.01 level (2-tailed).

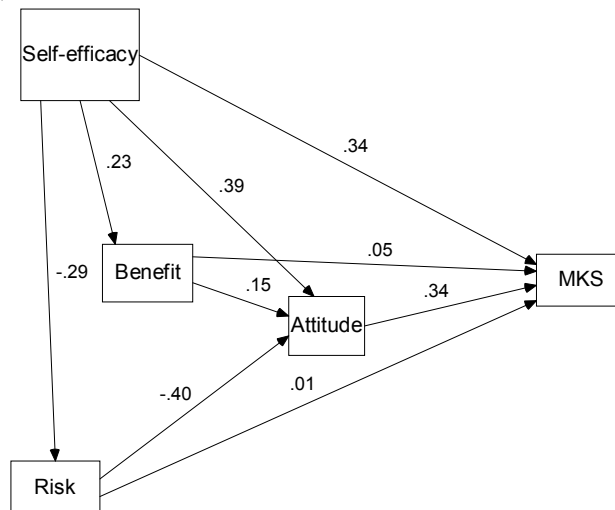
\* Correlation is significant at the 0.05 level (2-tailed).

We use CFA for attitude towards MKS (4 items), perceived benefits of MKS (5 items), perceived risks of MKS (4 items), MKS self-efficacy (5 items) and MKS (12 items). Result showed that four items have factor loading below 0.5(Martins, 2002) and omitted. Items deleted were SE1 from MKS self-efficacy, EB1 and SB3 from perceived benefits of MK and A1 from attitude towards MKS. Final CFA are indicated in Table 5.

**Table 5 : CFA Results**

| Items                                           | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|-------------------------------------------------|----------|----------|----------|----------|----------|
| MKS(cronbach alpha= 0.948)                      |          |          |          |          |          |
| CUK1                                            | .56      |          |          |          |          |
| CUK2                                            | .57      |          |          |          |          |
| COK1                                            | .56      |          |          |          |          |
| COK2                                            | .62      |          |          |          |          |
| SK                                              | .67      |          |          |          |          |
| TK                                              | .77      |          |          |          |          |
| PK                                              | .8       |          |          |          |          |
| PRIC                                            | .75      |          |          |          |          |
| PLA                                             | .68      |          |          |          |          |
| PROM                                            | .62      |          |          |          |          |
| PROD                                            | .62      |          |          |          |          |
| NPD                                             | .52      |          |          |          |          |
| MKS self-efficacy (cronbach alpha= 0.824)       |          |          |          |          |          |
| SE2                                             |          | 0.62     |          |          |          |
| SE3                                             |          | 0.73     |          |          |          |
| SE4                                             |          | 0.59     |          |          |          |
| SE5                                             |          | 0.59     |          |          |          |
| Attitude toward MKS (cronbach alpha= 0.871)     |          |          |          |          |          |
| A2                                              |          |          | 0.71     |          |          |
| A3                                              |          |          | 0.84     |          |          |
| A4                                              |          |          | 0.74     |          |          |
| Perceived Risk of MKS(cronbach alpha= 0.80)     |          |          |          |          |          |
| ER1                                             |          |          |          | 0.64     |          |
| ER2                                             |          |          |          | 0.63     |          |
| SR1                                             |          |          |          | 0.6      |          |
| SR2                                             |          |          |          | 0.65     |          |
| Perceived Benefits of MKS(cronbach alpha= 0.74) |          |          |          |          |          |
| EB2                                             |          |          |          |          | 0.51     |
| SB1                                             |          |          |          |          | .73      |
| SB2                                             |          |          |          |          | 0.63     |

The hypothesized model estimate is depicted in Fig 3. Root mean square error of approximation (RMSEA) is a goodness of fit measure. A value equal or higher than 0.1 indicates poor fit. A value less than .05 is taken to indicate a very good fit (Schumacher and Lomax, 1996). RMSEA for the hypothesized structural model is equal to 0.017(0.000, 0.228; PCLOSE=0.385), this indicates good fit. Schreiber et.al (2006) said that NFI (normed fit index), IFI (incremental fit index), TLI (Tucker-Lewis Index), CFI (comparative fit index) should be greater or at least equal to 0.95 for model acceptance. For hypothesized structural model; CFI=1.000; TLI=0.997; IFI=1.000; NFI=0.994; then we can say that our hypothesized structural model is well fitted with gathered data. Although these indices show good fitness, but it is possible to improve the model by omitting unnecessary paths. Figure 3 depicts that two paths include; benefit—>MKS and risk—>MKS should be deleted based on p-level. So we should go for the modified model.



**Fig 3 : Results For The Hypothesized Model**

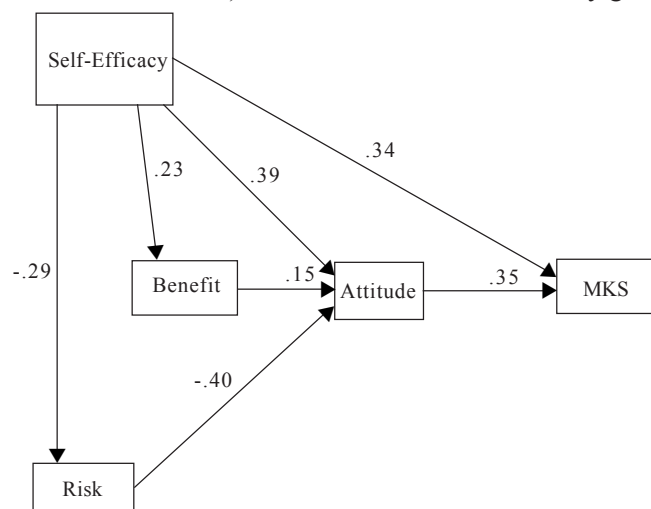
Chi-square=1.041; 1 CMIN=1.041;CMIN/D.F=1.041, RFI=0.939; CFI=1.000; TLI=0.997; IFI=1.000; NFI=0.994; RMSEA=0.017 (0.000, 0.228; PCLOSE=0.385)

We can see path standardized coefficient, critical ratio (C.R.) and p-level in table 6. This table indicates that only two paths are significant. This table tells us to modify the model and delete unnecessary paths from the initial model. It is obvious that B—>K and R—>K paths can be deleted.

**Table 6 : Hypothesized Structural Model**

| Paths in the theoretical model |   |    | Standardizedcoefficient | S.E. | C.R.   | P-level |
|--------------------------------|---|----|-------------------------|------|--------|---------|
| B                              | ← | SE | .229                    | .093 | 2.741  | .006    |
| R                              | ← | SE | -.294                   | .110 | -3.592 | .000    |
| A                              | ← | R  | -.399                   | .053 | -6.058 | .000    |
| A                              | ← | B  | .151                    | .063 | 2.334  | .020    |
| A                              | ← | SE | .393                    | .072 | 5.877  | .000    |
| K                              | ← | A  | .343                    | .091 | 3.697  | .000    |
| K                              | ← | SE | .336                    | .086 | 4.138  | .000    |
| K                              | ← | B  | .051                    | .068 | .711   | .477    |
| K                              | ← | R  | .007                    | .064 | .089   | .929    |

As said before, there are good reason for deleting benefit—> MKS and risk —>MKS paths because of High p-level. After deleting those paths, we run the modified model. Results show improvement in Goodness-of-fit indices. In modified and final model; CMIN/D.F=0.519, RFI=0.970; CFI=1.000; TLI=1.030; IFI=1.009; NFI=0.991; RMSEA=0.000 (0.000,0.112;PCLOSE=0.771), so we conclude there is a very good model.



**Fig 4. Results for Modified Model**

Chi-square=1.556; 1 CMIN=1.556;CMIN/D.F=0.519, RFI=0.970; CFI=1.000; TLI=1.030; IFI=1.009; NFI=0.991; RMSEA=0.000 (0.000, 0.112; PCLOSE=0.771)

In the modified model, all paths have p-level below 0.005 except benefit → Attitude (p-level<0.05).

Results in Table 7 indicate that there are now direct effects from benefit and risk to MKS. Attitude towards MKS is a mediator for effects of benefit and risk on MKS.

**Table 7 : Modified Model**

| Paths in the theoretical model | Standardized coefficient | S.E. | C.R.   | P-level |
|--------------------------------|--------------------------|------|--------|---------|
| B ← SE                         | .229                     | .093 | 2.741  | .006    |
| R ← SE                         | -.294                    | .110 | -3.592 | 0.000   |
| A ← B                          | .151                     | .063 | 2.334  | .020    |
| A ← R                          | -.399                    | .053 | -6.058 | 0.000   |
| A ← SE                         | .393                     | .072 | 5.877  | 0.000   |
| K ← A                          | .352                     | .079 | 4.366  | 0.000   |
| K ← SE                         | .340                     | .086 | 4.203  | 0.000   |

Tables 8 indicates direct, indirect and total effects of variables. MKS self-efficacy is an exogenous variable and other four variables are endogenous variables. Results in Table 7 show that attitude has the strongest direct effect on MKS (Standardized coefficient = 0.352) and then on MKS self-efficacy (Standardized coefficient = 0.34), other variables will not have a direct effect. Indirect effect of MKS self-efficacy is the highest. As for the total effect, MKS self-efficacy has the strongest total effect on MKS, then attitude; next is risk and the last is benefit.

**Table 8 : Direct, Indirect and Total Effects of Variables**

| Variable | Direct Effect |         |        |          | Indirect Effect |         |        |          | Total Effect |         |        |          |
|----------|---------------|---------|--------|----------|-----------------|---------|--------|----------|--------------|---------|--------|----------|
|          | SE            | Benefit | Risk   | Attitude | SE              | Benefit | Risk   | Attitude | SE           | Benefit | Risk   | Attitude |
| Benefit  | 0.229         | 0.000   | 0.000  | 0.000    | 0.000           | 0.000   | 0.000  | 0.000    | 0.229        | 0.000   | 0.000  | 0.000    |
| Risk     | -0.294        | 0.000   | 0.000  | 0.000    | 0.000           | 0.000   | 0.000  | 0.000    | -0.294       | 0.000   | 0.000  | 0.000    |
| Attitude | 0.393         | 0.151   | -0.399 | 0.000    | 0.152           | 0.000   | 0.000  | 0.000    | 0.545        | 0.151   | -0.399 | 0.000    |
| MKS      | 0.34          | 0.000   | 0.000  | 0.352    | 0.192           | 0.053   | -0.141 | 0.000    | 0.532        | 0.053   | -0.141 | 0.352    |

## CONCLUSION

The empirical findings of this research clearly provide insight for mediation role of attitude towards MKS for perceived risks and benefits of MKS. The SEM results support positive effect of self-efficacy, perceived benefits and attitude on MKS. Findings indicate that Self-efficacy positively impacts perceived benefits and negatively impacts perceived risks. This tells that more is the MKS self-efficacy; the more is positive perceived MKS benefits. Findings also show that perceived risks impacts MKS via attitude negatively. Outputs show that there is no direct effect from perceived benefits and perceived risks on MKS. Effect of perceived benefits on attitude is greater than perceived risks. Perceived benefits have total effect equal to 0.053 on MKS whereas perceived risks have total effect equal to -0.141 on MKS. This indicates that direct effect of perceived benefits on MKS is less than perceived risks, on the other hand; employees put more value on risk rather than benefit. Findings also indicate that MKS self-efficacy is the first predictor of MKS. Second is attitude, third is perceived risk and the last is benefit. Generally, although the hypothesized model shows well fit with gathered data but it is better to delete two paths from the initial model based on p-level. The modified model shows excellent fit with the data.

This study provides guidelines for managers of marketing department for increasing MKS on their department between employees. Research output indicates that for encouraging MKS, the most important factor is self-efficacy on MKS. Managers can enrich MKS in ways such as: creating enabling environment for successful MKS, introducing successful employee in MKS and providing social persuasion to employees. Designing a reward system that covers both economic and social reward is a good idea for increasing MKS. Research findings tell managers that for fostering MKS in their marketing department, they should focus on minimizing MKS related risks(economic and social) rather than MKS related benefits. On the other hand, employees should ensure safety due to sharing their marketing knowledge.

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