Mavens and their potential role in the diffusion of marketing information

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"Mavens and Their Potential Role in the Diffusion of Marketing Information"

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Abstract:
Small ruminants play an important social and economic role in the lives of many pastoralists who inhabit many parts of Northern Kenya. The area is poorly served by modern communication services although things are slowly changing as mobile telephone services are rolled into these areas. This possibility will likewise improve the chances of providing this population with up-to-date market intelligence which in turn should improve the returns from the sale of livestock in distant markets. To operationalise this, the use of the internet as well as SMS delivered market intelligence through the National Livestock Marketing Information System (NLMIS) was launched in 2007.

As a novel idea in the region, it was expected that information about its existence would pass through a series of intermediaries such as mavens. Based on a study of 250 pastoral households, this paper attempts to explore the concepts of mavens, opinion leadership and innovativeness in the marketing of small ruminants from the larger Marsabit and Isiolo Districts of Eastern Province, Kenya. It concludes that though the NLMIS is still relatively unknown, the presence of market mavens who in this data are indistinguishable from opinion leaders could catalyze the spread and eventual use of the system.

JEL: M31, Q13
Keywords: Market mavens, Opinion leaders, Innovativeness

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INTRODUCTION

Small ruminants (sheep and goats) play an important role in the livelihoods of many arid and semi arid dwellers. In Kenya, there were an estimated 27.7 million goats and 17.1 million sheep in 2009. Most of these small ruminants are found in the drier parts of the country, including Northern Kenya, Eastern and Rift Valley. Since small ruminants reproduce quickly and are relatively easy to manage, their keepers can easily spread the inherent risks, especially those located in drought prone regions such as Northern Kenya. Important to note is that this part of Kenya is the location where a pilot Index Based Livestock Insurance scheme is currently being tested for possible roll out, and will allow the benefits of insurance (to protect the pastoralists from climate related risks) to be harnessed by this segment. Small ruminant keepers are therefore among the targeted clientele. On the demand side, small ruminants are preferred to beef by about 55% of the population in Kenya (Juma *et al.,* 2010). The major outlets for these small stock include the larger towns such as Nairobi and Mombasa, after either being trucked or trekked to intermediate markets from these far flung rearing areas. From Marsabit, located about 540km from Isiolo, 46% of sheep and goats go from the producer straight to this terminal market with the remaining going through intermediate traders (Juma *et al.,* 2007). More often, pastoralists who are able to command numbers to fill a truck load are those who sell directly to the terminal market while those supplying less than this have to do with market intermediaries to reach this market. These traders reported that they received market information regularly. It is reported that in Kenya, producers share of the final retail price for red meat ranges between 47-52% (Aklilu, 2002). It is also noteworthy to keep in mind the livestock revolution intimated in a 1999 IFPRI report indicating a structural shift in developing- country diets towards animal derived protein (Delgado *et.al.* 1999).

Provision of marketing information or the improvement of the capacity to communicate the same can have a positive effect on market transactions by improving sales and identifying markets offering better prices (Kariuki & Kaitho, 2006). The theory of information and market signals, including available evidence on the relationship between market integration and economic development, suggest that greater access to information sources such as ICT's, can improve the living standards of the rural poor by enhancing the functioning of relevant markets (Eglleston *et al.,* 2002). This is because poor communication increases search and monitoring costs (Pingali *et al.,* 2005). The scale of operation in other studies has been shown to positively and significantly affect the decision to acquire information and to adopt agricultural technology (Abdulai *et al.,* 2008). It might therefore not be too far to assume that the same applies for market information acquisition since Kirimi et.al. (2011) show that marketing savvy farmers are able to negotiate prices and identify buyers and this plays an important role in their ability to obtain remunerative prices for their produce. Ouma *et.al.,* (2009) also show the importance of transaction cost related factors such as market information sources in the participation of farmers in markets. Looking carefully results of a study on the delivery of push-pull technologies in the control of *Striga* and stemborers in Kenya, preferred information delivery pathways appear to be those involving face-to-face interaction rather than inanimate channels such as radio and print media (see Murage *et.al.,*2011). Bellemare and Barrett (2006) also show that pastoralists make marketing decisions sequentially and not simultaneously, which effectively means that they most likely seek out market information before making the decision to enter into the market. In Benin, a study concluded that farmers are likely to opt to sell at the farmgate without a contract if they have good access to information through a public market information system-MIS (Chogou *et.al.*

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2009) which is a similar conclusion to what Okello (2010) finds in Kenya. In Uganda, farmers indicate that receiving Market Information Services (MIS) had a positive impact on their businesses, in terms of decision making and stabilizing incomes (Ferris *et.al.*, 2008).

Pastoralists seem to have good enough access to climate and price information, and that lack of information does not significantly limit marketed off-take as these informal networks are believed to generate and distribute reliable and timely information about livestock market conditions (Barrett *et al.*, 2004a). Important sources of this information are traders, friends and relatives. Traders usually have an advantage over producers in terms of market information access (Kariuki *et al.*, 2009). Pastoralists on the other hand have been known to hold on to their stocks even when prices improve, usually after the onset of rains (Seleka 2001; Barrett *et al.*, 2004b). If early warning systems do work, this information should have a way of reaching the pastoralists whether through the mass media or through their informal information networks. That way, they are forewarned and begin selling off excess stock if they place a premium on the avoidance of stock losses.

The National Livestock Marketing Information System (NLMIS)

Established in 2000, the Kenya Livestock Marketing Council (KLMC) is an organization whose mission is in part to disseminate accurate and timely market information to traders and producers with an aim of improving the living standards of livestock producing communities in Kenya. Launched in 2007, the National Livestock Marketing Information System (NLMIS) was designed to capture market prices and trade information as well as characteristics critical to the supply side of livestock marketing, and share the same with all players. It replaced the earlier Livestock Information Network Knowledge System (LINKS) which was a USAID funded initiative since 2003. It in turn developed during the GL-CRSP Livestock Early Warning System (LEWS) project established in 1997 (Kariuki et. al. 2009). Following the launch of the NLMIS, it has advanced and is able to collate and send information on prices for various grades and breeds of livestock from a number of markets. At the moment, this system relays information for camel, cattle, sheep and goats[1]. The SMS version can also be accessed by sending a message to the number 0733-333056 which then relays back details of the market and livestock which one intends to query. Similar initiatives have been rolled out in other countries including Tanzania, Ethiopia, Uganda and Mali. Its development is envisaged to assist in providing credible and timely livestock marketing information. Shortly after its launch, over 5,000 people were reached by the training and awareness creation activities which were carried out in Marsabit, Isiolo, Moyale, Garissa, Mandera, Wajir, Ijara, West Pokot, Baringo, Samburu, Narok, Kajiado, and Tana River districts (Kariuki et.al. 2009). Other initiatives designed to provide market information in Kenya through the use of ICT include National Farmers Information Service (NAFIS) and the Kenya Agricultural Commodity Exchange—KACE (Karugu, 2010), though these hardly deliver information about the prices of live stock. A pilot project to provide similar information on the fisheries sector—Enhanced Fish Market Information Service (EFMIS) was tried out in Kenya between 2009-2010 by the Kenya Marine and Fisheries Research Institute.

[1] One can check market related information collected through the system by linking to the site http://www.lmiske.net/

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For the NLMIS, traders were observed to have an advantage over producers in the acquisition of such market information. This potentially means that one of the sections of intended beneficiaries of this system (producers) might be lagging behind in benefiting from the NLMIS. To overcome this, marketplace experts could play a role in bridging any information gaps existing among livestock producers.

Market mavens, opinion leaders and innovators

The psychology of market players has for a long time been seldom been addressed in agricultural research. For instance, most often, research ends at characterizing the physical and demographic character of adopter categories and other important players in technology adoption and dissemination. The psychological basis of these players is typically assumed to play a little if not insignificant role. Besides, in economics, man is considered a rational being and many of the theoretical underpinnings of economic analysis dictate the scope of analysis and some of the behavioural anomalies in behavior are often assumed away. For instance, the functioning of weak ties (Granovetter, 1983) is rarely examined in many of the studies on market information flow[2]. This is in spite of compelling evidence that psychology too determines people's behaviour including the gathering of new information and their willingness and ability to communicate this to others. Large social networks are therefore important in the transmission of information. A recent paper (Kontos *et.al.* 2011) illustrates this effect in the provision of information in the public health sector. Marketplace information experts such as market mavens, are defined as; '*individuals who have information about many kinds of products, places to shop, and other facets of markets, and are socially inclined to initiate discussions with acquaintances and respond to requests from their acquaintances for market information*. They are motivated by a sense of obligation to share this information (Walsh, Gwinner, & Swanson, 2004). These are neighborhood experts who have information ranging over a range of several topics as described by Feick and Price (1987). Over the recent past, this concept of mavens has been explored in the marketing literature (Abratt, Nel, & Nezer, 1995; Chelminski & Coulter, 2007; Clark, *et al.*, 2008; Clark & Goldsmith, 2005). They are defined as being distinct from opinion leaders in that, they are generalists rather than specialists in the kind of information they possess. These individuals rely on the power of weak ties, acting as effective diffusers of information as word of mouth is more than twice as effective as mass media in influencing consumers to for example, switch brands and therefore, the interest in this special category of people by marketing researchers. Slama & Williams (1990) however argue that mavens do provide information on durables, non durables and services. Conversely, opinion leaders are people who have expertise on a narrower range of topics and have been observed to have more expertise on durable commodities (e.g., automobiles) as opposed to mundane items which do not have status connotations. They are standard-setters who informally direct through negative, positive or neutral perceptions regarding new ideas, practices and technologies and direct which come to be accepted within the social system they operate. Opinion leaders who are superior to followers (but not excessively so) are more effective in transmitting knowledge, while excessive social distance is shown to reduce the effectiveness of diffusion (Feder & Savastano, 2006). Innovators on the other hand are persons who are first movers to the extent that they are the first to act upon new information. Innovators on the other hand are persons who are first movers to the extent that

[2] The argument is that people with few weak ties are deprived of information from distant parts of the social system and will be confined to views from close friends and provincial news.

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they are the first to act upon new information. These can be thought of in the same light as the innovators mentioned in many adoption studies[3]. One study has gone further to characterize communicative adopters as persons who are both opinion leaders and innovators (Venkatraman, 1989) while Dobre *et.al.* (2009) characterize these innovators as risk takers who are more likely to obtain information from mass media rather than from word of mouth. This is the group that marketers would wish to target since it is a segment that is likely to adopt a new product when first launched. These few examples provide evidence of the existence of such socially gifted people and therefore, their role in inducing change cannot be downplayed.

The objectives of the current work are several. It is intended to establish to presence of mavens among pastoralists and investigate if they have information relating to the NLMIS. This work is partly motivated by the fact that the vast Northern Kenya expanse is poorly served by media and other communication outlets and is equally cut from the rest of the country due to a poor road network. This means that for new information to filter into such communities it will most likely have to pass through informal networks, such as those which mavens are part of. To do this, we resort to test the maven scale and its application in the context of pastoral marketing information. Finally, we make a case for the use of the scale in market related studies under similar conditions.

METHODOLOGY

Description of study area

Data was collected from pastoralists in Marsabit and Isiolo counties. Marsabit and Isiolo counties are vast districts with difficult terrain that lie in Eastern province of Kenya. Marsabit occupies the extreme part of Northern Kenya and is a vast district with an area of 66,000 sq.km (11.2% of the country) and borders southern Ethiopia to the north Moyale to the North west, Wajir to the East, Samburu to the south west and siolo towards the south. Most of the district is generally extensive plain lying between 530-760 masl. To the west lies Lake Turkana and within the district also lies the expansive dry saline lake bed, Chalbi desert. With the exception of a few pockets of wet area such as on the top of mountains such as Mt Marsabit and Mt Kulal, most of the district is classified as semi-desert or desert and only 3% of this landmass will allow crop cultivation. Rainfall in the lowest places averages 200mm while it goes to about 800mm in the higher elevations such as Mt. Marsabit, where crops grown include maize and beans. Some have resorted to growing of miraa. As a consequence of this moisture deficit, it is estimated that eighty percent of the inhabitants rely directly on livestock as their source of livelihood. As an illustration of the quality of the road network, hiring a truck from Dukana to Nairobi would set one back roughly 60,000 shillings while one doing this from North Horr would cost 50,000 shillings while this figure is 40,000 shillings from Marsabit town. The journey from Dukana would require 2-3 days, a trip which stresses the animals to the extent that a lot of weight is lost At least four truck loads are ferried each day to Kariobangi from Marsabit, with most of these stock coming from Chalbi (Maikona and North Horr). CCP is the most prevalent scourge for small stock in Marsabit and veterinary drugs are sold in kiosks while in some places, these are sold from the homes of some traders. CCCP is endemic in Marsabit. There are also problems of helminthes and entroxymea, bloat and LSD.

[3] One can refer to the seminal work by Ryan & Gross, 1943 which sought to identify early adopters of hybrid corn in Iowa from other adopter categories

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Isiolo on the other hand is bordered by ten districts namely; Marsabit and Moyale to the North, Wajir in the East and Garissa to the South East. Tana River, Mwingi, Nyambene and Meru Central to the South, Laikipia to the South West and Samburu to the West. The district covers an area of 25,605 sq.km receiving an average rainfall of 580mm that is erratic and unreliable and just like Marsabit, can hardly support perennial agricultural crops and thus, 70% of the inhabitants resort to livestock keeping. With a population of 117,000 people, with a variable spatial distribution, the highest density of 29 persons can be found in Central division while the lowest of 1 person per square kilometer can be found in Merti division.

At the time, KMC was purchasing sheep for 80 shillings per kg liveweight to satisfy the Saudi Arabian and Mauritian market while prices in nairobi ranged between 3000-3500 per 35kg live weight. . In many of the areas in marsabit, some selling places had been secured through the assistance of FHI/USAid.

Data source

Visits were made to the District Livestock Production Officers (DLPOs)—and their assistants—and where not available, provincial administration officials in Isiolo Central, Garba Tulla, Marsabit, Kalacha, El-Gade, North Horr, Gass, and Loiyangalani during the month of June 2010. Here, it gave the researchers a chance to familiarize themselves with the study area and also make an introduction of the study objectives to the population. It was also designed to assist in the choice of divisions likely to have a good number of pastoral inhabitants keeping small ruminants and from which data would be collected. From this visit, it was also possible to choose data sites that would be accessible (i.e. with relatively good access by a motor vehicle). From the selection of these enumeration areas, two enumerators in each study location were chosen with the help of the DLPOs and their assistants as well as locals in the respective areas. In July, a total 24 enumerators were given a run through the questionnaire before they could attempt data collection. Actual fieldwork took place from 5th July to 28th July 2010. Two hundred and fifty pastoral households keeping small ruminants in the larger Marsabit[4] and Isiolo[5] Districts in Kenya were interviewed using an instrument featuring the market maven scales developed by Feick and Price (1987) but adapted to this study of small ruminants by making necessary amendments to the original items[6]. Each item was administered on a 7-point strongly disagree to strongly agree likert scale which ranges from 6 to 42. To distinguish market mavenism (MM) from opinion leadership (OL), the question '*How often do you provide other people with specific information on prices and available markets for sheep and goats'* was constructed as a measure of opinion leadership. In addition to the opinion leadership question, two innovativeness measures (IN) were designed and were measured by the two questions '*When new prices for sheep and goats emerge in the market, you (sell much later than most people=1..you are among the first to sell sheep and goats=5)* and '*When a new livestock drug first appears in the market, you (buy much later than most people=1..you are among the first to buy these drugs =5)'*. All these questions, it was hoped, captured the specificity needed to distinguish between these constructs.

[4] For Marsabit, data came from Maikona, Korr, Laisamis, North Horr, Gas, Kargi and Loiyangalani divisions
[5] In Isiolo, data came from Isiolo East, Isiolo Central, Merti, Garba Tulla, Kinna and Sericho divisions
[6] The actual instrument used in this study is available from the authors on request.

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Data analysis

Basic statistics were derived from this data and the Cronbach's alpha used to confirm the reliability of the scales and factor analysis used to examine their dimensionality. Simple correlations were also produced to investigate the relationships among the scales and between some important economic variables used in this study.

RESULTS AND DISCUSSION

Respondents had a mean age of 46.7 years and owned 7.2 cows, 2.7 heifers, 1.5 bulls with the nearest market being 158 km away on average. The data shows an average holding of 24.7 and 34.6 sheep and goats per pastoral household[7]. The respective standard deviations were 28.9 and 44.1 respectively. A chi square test (for equal proportions) indicates that for all scales save for the IN item (on the speed with which individuals buy livestock drugs), the proportions of members falling within the responses are not equal. To confirm the internal consistency of the scales used the analysis used Cronbach's alpha whose results are as shown on table 1 below for the maven scale items. The Maven scale items returned a Cronbach's alpha coefficient[8] (0.78) which is within an acceptable range[9]. Since there was only one OL item, this coefficient could not be computed but for the two IN scale items, the coefficient was calculated as 0.6, which though not poor, is questionable (Gliem and Gliem, 2003)[10]. Next, factor analysis was then used to identify if each of these scales were uni-dimensional and results are presented on table 2 below. Results from factor analsysis show that all (MM, OL and IN) responses were able to reveal only 2 dimensions (rather than the expected three representing the three constructs), where the MM items and the OL item were of the same dimension while the two IN items were of a second dimension. This effectively means that MM and OL as measured in this instrument could not be distinguished apart, and that these two constructs are distinct from the IN construct. Since reasonable consistency with the MM scale is confirmed, and that it is uni-dimensional, the scale is summed and correlations calculated between this scale and Tropical Livestock Units (TLUs) to explore their association since following Abdullai et.al. (2008) we expected that there will be a positive relation between mavenism and TLUs. This is so since flock sizes are a meaningful wealth measure among pastoralists, and in this paper, TLUs were used to investigate how mavenism relates to this wealth measure. TLUs have a mean of 22.5 and a standard deviation 25.4 while the summated maven scale returns a mean 30 and a standard deviation 7.4 (figure 1.a&b). However, since the MM scale is in the ordinal scale, the mode (36) is a more appropriate central tendency measure (figure 1a). The figure (1b) shows that stock ownership is quite varied with a lump (skewed) on the left hand side.

A significant (P=0.05) but modest spearman rank correlation coefficient (-0.298) was estimated and led to the inference that TLUs and mavenism move in different directions. The same conclusion is made about the number of small ruminants held and mavenism which returned a negative correlation (-0.15). The same goes for the correlation between OL and TLUs which was low (-0.05) but was not statistically significant. To explore this further, the data was split into

[7] Most of the statistics relating to the interviewees and other general descriptives are to be found in accompanying MSc (Moi University) work by the second author (Rutto J.K).
[8] Here, we use the raw coefficient since all items in this scale are scaled in the same way
[9] A study using the same scale returned an alpha coefficient of 0.747 (Puspa & Kühl, 2006)
[10] This might have been caused by the few number (2) of items in this particular scale

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three groups by grouping these respondents by the IN item. One group was called the low innovativeness (those scoring sell or buy later than most), the second group was called the moderate innovativeness group (those who sell and buy at the same time as others) while the third group was termed as the high innovativeness group (those buying or selling before most). For innovativeness in the sale of sheep and goats, these groups comprised 22.7%, 28.5% and 48.8%, respectively. On innovativeness in the purchase of livestock drugs, correspondingly, 33.8%, 23% and 43.2% of respondents fell in the low, moderate and high IN groups respectively.

Table 1: Cronbach's alpha coefficients for the maven scale items

Item	Mean	Standard deviation	Correlation with total	Cronbach Coefficient Alpha with Deleted Variable
Like introducing brands to friends?	5.09091	1.72336	0.440473	0.780125
Like helping by providing new information?	5.66234	1.21881	0.714619	0.728124
People ask you for information?	5.11255	1.80226	0.655717	0.723797
Could tell someone where to get best buy?	5.58874	1.28863	0.468671	0.771888
Friends think of you as a source of information?	4.67965	1.76474	0.615410	0.735193
The description of mavens fits you?	4.61905	1.82313	0.423990	0.786900
Raw alpha = 0.787569				
Standardized alpha = 0.799797				

Table 2: Factor loadings from all scale (MM, OL and IN) items

Item	Factor 1	Factor 2	Final Communality Estimates: Total = 4.749024
Like introducing brands to friends?	0.59	-0.10	0.35942739
Like helping by providing new information?	0.83	0.04	0.68756457
People ask you for information?	0.80	0.18	0.67240284
Could tell someone where to get best buy?	0.62	-0.10	0.39197101
Friends think of you as a source of information?	0.76	-0.04	0.58686127
The description of mavens fits you?	0.57	-0.32	0.42747047
How often do you provide information?	0.47	0.08	0.22897387
When new prices emerge in market, how fast do you react?	0.02	0.84	0.70202617
When new drugs emerge in market how fast do you react?	0.13	0.82	0.69232619
Variance explained by each factor	3.2062604	1.5427634	

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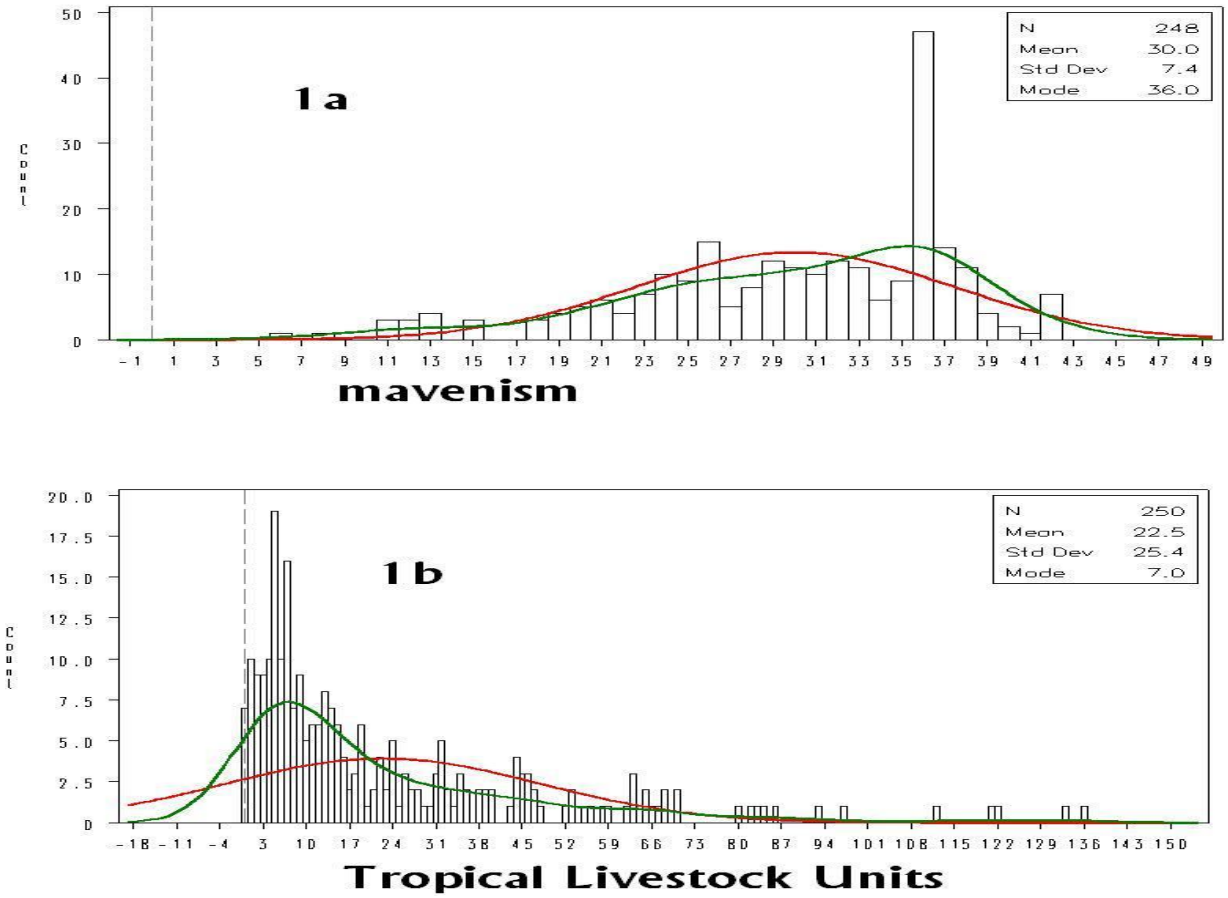

Figure 1) Distribution of (a) Market Maven scale and (b) Tropical Livestock Units

The correlation coefficients between these measures are as shown on Table 3. The results show that the correlation between the MM and OL is consistently much stronger for the moderately innovative group than all others groups. The moderate innovative group also happens to have larger TLUs than the other two groups. The correlation between MM and TLU is significant ($p<0.05$) and negative. The data indicates that the smaller the flock, the more MM score one has and the more he/ she can be considered an OL. Interestingly, for this group that sells (sheep and goats) and buys (livestock drugs) at the same time as others, the MM measure is slightly lower than for the other groups. Further inspection of the results indicates that the highly innovative class also happens to reflect larger values of mavenism (table 3) and this might be expected since mavens are those more likely to have knowledge of new information, they are probably the first to act upon such information. With the exception of the high IN class (wrt livestock drugs), people with the lowest innovativeness also appear to have smaller TLUs.

However, there appears to be no consistency in the way mavenism is distributed among classes. For instance, the correlation between MM and OL though higher for the moderately innovative group and own more stock, their MM score is relatively lower than for other groups. Still, we cannot explain the apparent smaller score of mavenism for the moderately innovative class. For

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the IN groups (classified by innovativeness with new sheep and goat prices), the correlation coefficients mavenism and TLUs are (ρ=-0.146; p=0.130) for the low IN group, (ρ=-0.239; p=0.045) for the moderate IN group and (ρ=-0.419; p=0.0004) for the high IN group. When classified by innovativeness in new livestock drugs purchase, the results are (ρ=-0.209; p=0.015); (ρ=-0.147;p=0.281) and (ρ=-0.201; p=0.149) for these respective groups. A Kruskal-Wallis test indicates that there is a statistically significant difference in mavenism among the IN-Livestock drugs classes ($\chi 2$ with two degrees of freedom = 22.19, p=0.0001). In terms of IN-new sheep and goat price classes however, the resulting Kruskal-Wallis test returns a chi square value of ($\chi 2$= 5.08, p=0.0787) indicating that the relationship in this case is not statistically significant at the 5% level. Generally, innovativeness is related to mavenism (i.e. it is likely that mavens are also highly innovative) although the low innovative group appears to have relatively a higher mavenism score than the moderately innovative group.

Table 3: Mean TLU sizes and correlations between mavenism and opinion leadership for three innovativeness classes

	Low	**Moderate**	**High**
Mean TLU†	16.52	28.71	26.06
	(17.01)	(27.93)	(31.93)
Mean MM score	30.42	28.38	31.04
Correlation between MM & OL$^{\varpi}$	.246	.518	.407
Sample proportion	.227	.285	.488
Mean TLU‡	19.55	37.30	16.02
	(20.98)	(35.48)	(17.74)
Mean MM score	30.09	26.66	32.86
Correlation between MM & OL$^{\varpi}$	.256	.454	.399
Sample proportion	.338	.230	.432

† Mean TLU according to classification by the speed of reaction to new sheep and goat prices
‡ Mean TLU according to classification by the speed of reaction to new livestock drugs
Figures in brackets are TLU standard deviations.
$^{\varpi}$: These correlation coefficients are all significant at 1%

Since less than 2% of the respondents had heard of the NLMIS, which was a measure in this study of how deep this information had made it into the communities studied. This low penetration among producers means that the NLMIS is mostly used by traders and other players, and not many pastoralists are currently using the system nor aware of its presence. Even in areas such as Kinna, which was among the places where the sensitization on the NLMIS was carried out in 2007, knowledge of its existence was still surprisingly very low. About 46% of the respondents had access to a cellphone with ownership dependent on district of residence or better still, penetration of the mobile network through which NLMIS transmits information[11]. Despite the few observations on knowledge about the NLMIS, Fisher's exact test leads to the conclusion that there is no statistically significant relationship between cellphone ownership and knowledge about the NLMIS. For instance, all districts of Marsabit County have over half of their respondents having no access to cellphones while Isiolo was the only County where over half of the respondents had access to cellphones. Cellphone ownership, notwithstanding, cannot

[11] χ^2 = 36.17, df=5, (p<0.01)

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reasonably be used as a basis for the low infiltration of the NLMIS generated information. One would expect to find the use of the system to be concentrated in areas where mobile cellphone connectivity is dense but this did not turn out to be the case. Further, the very limited spread of knowledge about the existence of the NLMIS (2%) also limits the analyses that can be applied to the data. For instance, we cannot run any meaningful correlations between mavenism and knowledge about the NLMIS since for practical purposes; it is virtually unknown among this population.

CONCLUSION

This is apparently the first study we know of which attempts to formally apply maven scale to study pastoral marketing behaviour. In the end, these tools appear to hold some promise in examining personality traits which have been studied in the marketing field. These tools can be borrowed and modified to suit the circumstances and applied in similar studies. Supplementary analysis reveals that the scales used are able to distinguish mavenism from innovativeness, although for opinion leadership, the single item used in this current study for this construct is thought to have led to the failure to differentiate between these mavenism and oprnion leadership. The hypothesized relationship between large TLUs and MM is not supported by this data meaning that pastoralists with large herds are not necessarily regarded as mavens. Rather, it appears as though smaller stock sizes are associated with mavenism—given the negative correlation between the two variables. Further study needs to be undertaken in order to identify a stable and easily measurable correlate of mavenism which can be used for direct targeting of the NLMIS messages. Tentatively, the mavens in this study who are indistinguishable from opinion leaders then are an appropriate class to reach with messages about the NLMIS in any sensitization exercise.

A second an important finding is that knowledge of the NLMIS has not been deep among pastoralists in the studied area. This means that more effort will need to be put up in sensitizing these communities further on the presence of the NLMIS and its associated benefits. It might also be necessary to provide precise details about the system. For instance, the NLMIS online web page does not provide a very important detail such as the number through which one can query to get market related information.

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