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ARTICLE

Factors limiting the flow of food innovation ideas from modern food retailers to local food suppliers in Tanzania

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ABSTRACT

This paper explores factors that constrain the flow of innovation ideas among downstream actors in the food value chain in Tanzania. Prior focus was on the improvement of products, but the influence of downstream actors has received little attention from the researchers in Africa. Qualitative method was deemed to be adequate and advantageous because the study was on understanding the challenges of innovation flow among downstream actors in the food value chain in Tanzania. Food suppliers were selected from international or local retailers using contact information of the processers provided on the packaging. The empirical findings of this study indicate that trade credit, government requirements, counterfeit products, consumers' preference and lack of skilled staff limit the flow of innovation in the food value chain in Tanzania.

KEYWORDS

Tanzania; food innovation; retailers; food processors; diffusion of innovation theory; down stream

Introduction

Most of the studies on innovation have been conducted in developed countries (Becheikh, 2013) and these studies focussed much on understanding the profile of food innovation on ethical foods (Baregheh et al., 2012), drivers and barriers in food innovation (Fortuin and Omta 2009; Nijhoff-Savvaki et al., 2012; Fortuin et al., 2014); food innovation and marketing performance (Colurcio et al., 2012;); and the impact of external integration on food innovation (Alcantara *et al.,* 2014; Lefebvre et al., 2015; Al-Belushi et al., 2015). Little is known about the flow of innovation ideas among the downstream actors in developing economies. Therefore this study intends to understand the factors that limit the flow of innovation among the downstream actors in Tanzania using a case study approach.

Food industry in Tanzania grew by 40% from 2010 to 2012 in terms of output value (Aikaeli et al., 2014). To continue with this rate of growth assurance of the market is very important. Following the rise of modern food distribution channels, which has been catapulted by the South African retailers in Africa, it is very important to understand how innovation flows between the downstream actors. Empirical evidence shows that South African retailers prefer to source food from their home country (Emongor, 2008; Johnson, 2011). For example, it is estimated that 80% of the food sold by modern retailers in Tanzania is imported (Ciuri, 2015). One of the reasons that is considered to limit the local food processors from accessing modern retail stores is the lack of innovations. In this regards, it is very important to understand how innovation ideas flow from retailers to local food processors.

Innovation is very important for competitiveness among food processors' (Gellynck et al., 2010). Food innovation is considered to occur in four areas: *product*, *process*, *organisation* and *marketing innovations*. However, most of these forms of innovations can either easily be copied in food business or easily disappear at the market due to consumers' changes and preferences. A firm requires to develop a continuous learning process and needs to become systematic in adapting to the changes in its external environment and in its internal capabilities to make it have a sustainable competitive advantage (Shanahan et al., 2008). However, continuous learning is very difficult for the firms in the developing economies due to financial constraints making the tendency of actors of learning from each other in the network and of learning from indirect actors in the market place the only easy option. This implies that in order to develop competitiveness through innovations in the case of Tanzania local food processors have to learn from retailers on what market demands.

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Nevertheless, studies which have been conducted on innovation in agribusiness in Africa focussed on the promotion of technology uptake by upstream actors. For example, Bacheikh (2013) who studied SMEs technology absorption capacity in Egypt and Adelowo et al. (2015) who studied the adoption of innovation for the incubated technological firms in Nigeria found that the need for product innovation forced entrepreneurs to learn new things. Other studies focussed on the foreign direct innovation and the spill of innovation in Africa. For example, Leseure (2008) found that diffusion of administrative innovation is yet to take place in Africa. Emodi and Madukwe (2010) found that in order to increase rice production innovation in Nigeria there must be a linkage among actors. Nandonde et al. (2015), in a study of uptake of innovation by downstream actors in Tanzania, found that food processors are more influenced by Government agencies than by modern food retailers.

According to Fortuin and Omta (2009), studies on factors that limit innovation at the company level receive little attention by the researchers. As Caiazza et al. (2014) argue, understanding the source, nature and dynamics of innovation in the agri-food system is a topic which is relevant to both researchers and practitioners. This paper intends to fill this knowledge gap by exploring factors that constrain the flow of innovation ideas among downstream actors in the food value chain in Tanzania. The prior focus was on the improvement of products, but the influence of downstream actors received little attention from researchers in the continent. Specifically, the current study examines the research questions: What are the sources of food innovation used by food processors? What factors limit the adoption of diffusion of food innovation among downstream actors?

Literature review

Diffusion of innovation theory (DOI) is extensively used in marketing to explain the acceptance or rejection of an innovation. The DOI theory propounded by Rogers in 1962 holds that the diffusion of a new idea is the process by which an innovation is communicated through certain channels over a period of time among members of a social community (Rogers, 2003; Rogers, 1976). According to Rogers (1976), DOI theory enables one to explain the purchase of new products. The DOI theory is based on four dimensions which are innovation, communication channel, social system and time.

Communication is a means where by members of a chain may receive and share ideas to influence consumers' marketing decisions. The interest is on how members communicate the ideas. For example, are issues on communication shared among all the members? However, communication capabilities significantly affect how ideas pass through actors in the value chain (Fortuin et al., 2014). The ability of the receiver to transform that new idea into tangible things is one way of judging communication capabilities for communication exchanged among peers (Bilgicer et al., 2015). This interaction can be formal or informal ranging from social events, telephone calls to face to face meetings.

The studies of how communication flows among the peers were long done in marketing but most of the previous research focussed on the final consumers and new product innovations (Bass, 1969; Bilgicer et al., 2015). There remains a need to understand how communication is exchanged between peers in the value chain on diffusion of innovation. Peres et al. (2010) found that customers can influence the adoption through interactions with retailers. This implies that information has to reach a retailer who is acting as a gatekeeper and who has to decide to share it with the suppliers. Many companies sell their products through retail channels; which means that their success depends on communication between two different parties.

Empirical evidence and anecdotal experience show that for any communication to flow there is need for trust, which is very important among partners (Fortuin et al., 2014). In the value chain, actors would expect each partner to act fairly for the benefit of the other actors, such as in the exchange of marketing information or price and preference of the consumers. However, price has often been a secret between retailers and suppliers. As Chen and Sternquist (2006) observe, in developing economies there is lack of transparency among actors in the value chain for the sake of competition which, in turn, reduces trust and impedes communication.

Time is another dimension which is very important in the diffusion of any innovation. The concept of time can be categorised into three: Innovation decision, innovativeness and rate of innovation. An innovation decision is a process which involves an individual or a unit within an organisation in making decisions on either to accept or reject the idea. Innovativeness can be defined as the degree to which an individual is relatively early in adopting innovations compared to other members in a system. The rate of innovation is the relative speed of which an innovation is adopted within a social system.

The concept of diffusion assumes that the ability to innovate is from internal. This means an innovator would see the need to innovate and can decide to innovate or otherwise based on time. This can be possible in the free market economy where food innovation is monitored and led by private firms. However in Tanzania, innovation is not as dependent on the market needs; rather laws and regulations have greater powers of influencing decisions. This means that in some occasions an actor will have to wait for the approval from Government agencies for the introduction of new products even though the market is already awaiting consumption of the new product.

Furthermore, time must be considered not only in terms of diffusing ideas but also in terms of how it can be accelerated by understanding among members. Modern retailing is a new form of doing business in Tanzania; therefore, ultimately partners must take time to learn from each other the rules and terms of doing business. In Tanzania, there is lack of suitable databases to support decisions of actors in the value chain (Paas, 2009). This makes actors sceptical towards each other. For establishing relationships in the value chain, actors have to learn from one another, not just about new ideas but also and more practically to learn whether or not each other are reliable and reputable as a partner.

The DOI assumes that diffusion occurs within the boundary of social system (Rogers, 1976; Gatignon and Robertson, 1985). By recognising the impact of social system the theory embraces the importance of external pressure on the influence of innovation. Food policies in Tanzania are very fragile. In some situation decisions taken by the Government have an impact on food processors for example, the Government allowed the importation of meat chicken which was perceived as not healthy by the local food processor (The Citizen, 2013; The Citizen, 2014).

The national education system, industrial relations, technical and scientific institutions, government policies and cultural traditions are fundamental for innovation diffusion in any society. The centre of food innovation is changing from a single company to a chain (Gellynck et al. 2011). This indicates that a social system, which is not static, has major influence on the food innovation of a particular firm. On the other hand, the role of endpoint consumers has proven to be strong in influencing food innovation. This change in general from supply towards a demand-pull innovation is characterising global food business.

Methodology

The study employed a qualitative case study approach to explore changes of the flow of innovative ideas in food agri-processing in Tanzania. Qualitative method was chosen because modern food retailing in Tanzania, and Africa in general, is a new phenomenon which started in the mid of 1990s after the introduction of liberalisation policies. Qualitative method was deemed adequate and advantageous because the study focussed on understanding the challenges of innovation flow among downstream actors in the food value chain in Tanzania (Sinkovics et al., 2008).

Table 1 shows the seven selected companies which include Mzomo Services Limited, Darsh Industries Limited, Meat King, Monaban AgriFarming, Foot Loose, Basic Element Limited and Happy Sausage Limited. These

Table1. Profile for participated firms.

Criteria	Mzomo Services Limited	Darsh Industries Limited	Meat King	Monaban	Foot Loose	Basic Elements	Happy Sausage
Status	Family business	Family business	Family business	Family business	Family business	Partnership	Family business
Number of employees	23	200	25	400	20	45	43
Products	Value addition of beef and chicken meat	Tomatoes, fruit jams, spices, and maize flour	Beef, chicken, pork, fish and sausages	Maize flour, wheat flour, sunflower cooking oil and distributors of dried commodities	Maize flour, cooking oil, dried legumes	Maize flour	Beef, pork and sausages
Production capacity	20000 chicken per month	–	–	–	Not more than 30 per month	160 metric tons	–
Location	Morogoro	Arusha	Arusha	Arusha	Dar Es Salaam and Morogoro	Dar Es Salaam	Arusha
Year started	2005	1994	1996	2000	1996	2012	1997
Respondents	Owner	Production Manager	Owner	Family member	Owner	Marketing Manager	Financial Manager

companies produce/provide major staple foods which are consumed daily by most of the urban consumers in Tanzania. Processors of maize flour are Monaban AgriFarming, Foot Loose and Basic Elements. Foot Loose processes sunflower cooking oil, and Monaban processes wheat flour. Darsh Industries Limited is the processor of tomatoes sausages, paste, fruits jams and spices. While Mzomo Services Limited, Meat King and Happy Sausage are the processors of beef and meat chicken. Meat King and Happy sausage limited are producers of pork and beef sausages of different kinds.

A case study approach was employed to explore the challenges of the flow of innovation ideas among downstream actors in Tanzania with the perspectives of local food suppliers. As Yin (1994) argues, a case study approach allows rich insights of processes to be obtained. This study used seven cases to understand factors that limit the flow on innovation from retailers to local food processors. Flyvbjerg (2006) argues that for case study approach even one case can be used and what is important is in-depth of information from participants. Therefore, this study has been conducted in Tanzania by using seven cases of local food processors as shown in Table 1.

Food suppliers were selected after the researcher visited international or local retailers and read the contacts information of the processers on the packaging. A short database was then developed with telephone numbers. The technique is useful in a situation where there is no reliable database (Emongor, 2008). The researcher contacted suppliers via telephone calls to request for their participation in the study. Interviews were conducted at the food processors' premises. The semi-structured interview questionnaire was used for data collection. The questions that guided interview were: What innovation have you introduced in food production? What were the sources of the innovation you introduced in your food production? What factors limit food innovation at the downstream?

To analyse qualitative data, this study used thematic framework analysis. There are a number of ways of doing thematic framework analysis. The selection of style can be based on theory, text or on both theory and text (Attride-Stirling, 2001). Coding framework of thematic analysis is based on the established criteria. Framework analysis is based on the emerging patterns of the determined elements from the theory (Sinkovics et al., 2005). By using literature on diffusion of innovation theory, different parameters, which were relevant for the analysis of downstream innovation ideas in Tanzania, were identified as the guide of the framework. These parameters include Government policies, consumers' preference and experienced staff (Tepic et al., 2014; Koku, 1998).

A deductive approach is useful if the general aim of the thematic analysis is to test a previous theory in different situations, or to compare categories at different periods (Vaismoradi et al., 2013). As Sandelowski, (2010) argues, a study may begin with a theory about a target phenomenon or framework for data analysis but that does not mean it has to stay within this framework. Instead interpretation of the data is very important at the data analysis stage.

This study followed data analysis process in thematic analysis proposed by Braun and Clarke (2006). In thematic analysis, a researcher is mainly advised to consider both latent (developing themes) and manifest content (developing categories) before proceeding to the next stage of data analysis (Vaismoradi et al., 2013; Braun and Clarke, 2006). Coding enhances the transparency of the process of conducting a qualitative data analysis (Sinkovics et al., 2008). This paper categorised text into code sentences, codes, categories and themes. Table 2 shows example of developing themes from code sentences, codes and categories.

Findings

Sources and type of innovation to food suppliers

The respondents were requested to provide example of their recent sources of innovation. Interviews results show that sources of food innovation which are used to improve food processing by local food suppliers include: employees, retailers, distributors, and Government agencies.

Interviews results also show that employees are the source of innovation during the bumper season. For example, Meat King family business management allows employees to suggest different chicken product when the market is flooded with chicken.

> I allow my employees to come out with new ideas. Well sometimes it depends on the stock. When we got a big stock, as is the case right now, we got a lot of chicken in our stock. So then employees may come up with new ideas, new

Table 2. Development of themes from code sentences, codes and categories.

Codes sentences	Codes	Categories	Themes
1. ….for some reasons certificates have to take three years 2. … … … ….they charge very high 3. … monthly sells is Tsh 4 million in a month … … if you register with TFDA or TBS they will ask for Tsh 780,000 … each 4. … Every year you have pays the fees 5 …. have established institutions, boards and agencies all these are dealing with one thing 6. … … ….I have more than 60 food items that means each of these food items I have to have certificates	• Three years • High fees • Many regulators with high annual fees is high	• Bureaucracy • High compliance cost	Government requirements
1 ….our suppliers rejected our products 2 … … due to smell, taste and colour …. 3 … … Tanzanians have not been sensitised on the important of wholegrain (Dona) 4 … if you are producing dona and yet you are telling somebody that the wholegrain is good while the appearance is not attractive compared to refined maize flour it is a very difficult sale for us 5 … … People are not ready to major change	- Product rejection - Smell - Taste - colour	• Consumer preference	Consumer preferences
1. We have a production manager who is a Kenyan and he … … … 2. … … has been with us for two years 3. most of Tanzanians dont understand meat processing. 4. Six production managers passed at this factory were Kenyans. 5. There is a lack of commiment.	- Production manager from Kenya - Foreigners - Lack of commitment • Lack of skills	• Lack of skills	Lack of skilled staff
• As soon we call for the payment then they are not happy • ….we have just received payment this month • …. they keep your money and pay you after sixty days	• Payment delay • Communication breakdown	Trade credit	Trade credit

products which we can sell. Eh …. with chicken we had lots of thighs in our stock. We started removing their skins we get chicken Stir Fry.. (Meat King Managing Director).

Retailers as gatekeeper are the major source of innovation for local food processors in Tanzania. However, this kind of idea for innovation is prompted by pressure for change from modern food retailers. These findings are in line with the findings reported in a study by Fortuin and Omta (2009) who found that downstream actors are the major source of innovation in food industry. Furthermore, food processors seem to rely on the information from retailers on packaging and product quality. For example, maize flour processors used information from retailers to change the packaging colour and symbol.

This means the market is very … very dynamic. And things keep changing, taste and preferences are changing, and packaging also … … ….Village supermarket asked us to put pad for the chicken parts we supply to them. But packaging is so fluid in … … eh … particularly when you deal with supermarkets (Mzomo Servicces Limited Managing Director).

In product innovation, local food suppliers rely on the information from the Government and the chefs. For example, Happy Sausage prefers to have the chefs' view on change and product improvement. But for maize

flour processors information and ideas for product innovation have been provided by the Government which has an interest in reducing vitamin deficiency in Tanzania. Knowing this, maize flour processors have engaged in innovation to meet the country's requirement.

> Through TFDA, Government provided training for our food technologists for six months and we were given those vitamin supplements to be mixed in maize flour. The Government issued fliers that explained the importance of food fortification for the health of human being (Monaban Finance Director).

These findings demonstrate the importance of modern food retailers in food innovation. They suggest further that food innovation is an incremental product innovation, which is consistent with what is reported in a study by Baregheh et al. (2012) who that food processors develop more incremental product innovation than radical product innovation. Importantly, this description of sources of innovation shows that modern food retailers and distributors are considered as major sources of innovation to food processors. This finding is in contrast to the findings in previous studies conducted in Tanzania by Nandonde et al. (2015) which found that food processors relied much on Government agencies as the source of innovations.

Factors limiting the flow of innovation ideas among downstream actors

Across the agrifood processing firms, several differences can also be identified to highlight various options that exist in terms of what challenges they face in the innovation flow from downstream actors and the type of innovation that is taken up. This part starts with similarities and proceeds with the differences from across-cases with a focus on constraints on the innovation ideas flow among downstream actors since the emergence of urban modern food retailing in Tanzania.

Similarities across seven cases

A cross-case analysis shows that all seven food processors perceive trade credit to limit the flow of information among downstream actors hence innovation to the food sector in Tanzania (Table 3). This is a new finding unlike the previous findings which focussed more on external actors and not on what is taking place within the retailer-supplier relationship. In the previous studies, barriers to innovations were much more focussed on process innovation such as learning capacity, patents right and reward for employees (Fortuin and Omta, 2009; Caiazza et al., 2014). The finding in the current study shows that what is corrupting the relationship in the value chain at the distribution side has more impact on innovation. It can be argued that trade credit is a distribution innovation, whereby a particular firm reflects on the market and design a credit policy. Therefore, food suppliers do not get all of the information from consumers who are with the modern food retailers. This happens because modern food retailers are afraid of being asked about the promises of clearing their credit for the goods supplied.

Interviews results show that modern retailers do not communicate with food suppliers frequently because the former are afraid of being asked to settle some of their debts. The failure of the retailers as the gatekeepers of freeing communicating with local food suppliers denies food processors the opportunity of having more market information.

Differences across the seven cases

A cross-case analysis shows that the Government requirement was a challenge to commercialisation of innovation in the food industry. This finding correlates with the findings in the previous studies on the impact of government requirements on food innovation in developing economies (Oliveira et al., 2014; Bossle, et al., 2015). Table 3 shows four firms namely, Mzomo Services Limited, Darsh Industries Limited, Meat King and Happy Sausages linked with Government requirement as the constraint in sharing innovation ideas between downstream actors. These

Table 3. Factors that limit flow of innovation information among downstream actors.

Factors	Mzomo Services Limited	Darsh Industries Limited	Meat King	Monaban	Foot Loose	Basic Elements	Happy Sausage
Government requirements	√	√	√	x	x	x	√
Counterfeit products	x	√	x	x	x	√	x
Trade credit	√	√	√	√	√	√	√
Consumers preference	x	√	x	√	x	√	x
Skilled staff	√	x	√	x	x	x	√

Governmental requirements are fees and certifications for each of the new food items which a firm wishes to introduce in the market. Moreover, in some cases Governmental agencies fail to issue certificates on time thereby delaying the introduction of a new product or innovation to the market. Interviews results show that certificates for the rejection or acceptance can be issued in not less than 2 years. In another study, Al-Mutairi et al. (2015) found that bureaucracy is a major problem that confronts actors in the food industry in developing economies when they want services from food regulatory bodies.

> We have applied for maize flour certificate from Tanzania Bureau of Standards (TBS). But for some reasons certificates have to take three years to get through TBS process. Three years and so, you are waiting for certificate (DashDil Production Manager).

Another government requirement is the annual certification for the new food items. These fees limit some of the food processors from commercialising new food items. Food industry includes a high proportion of small scale enterprises which are characterised with low capital and who cannot easily afford to pay for the annual fee. Therefore, knowing that regulations are not supportive of exchange of market information, food suppliers tend to minimise or ignore them. Interviews results show that some of the local food suppliers distribute their foods with no certifications from the authorities because of the delay. Downstream actors do so while full aware that their actions are against the laws.

> … …. their charges are very high. If I tell you, this product Custard Powder is selling hardly … … eh …. of … … eh … … If you go through my sells, they hardly amount to Tsh 400,000 in a month. And in a year it's about 4 million or thereabouts. But if you register with Tanzania Food and Drugs Authority (TFDA) or TBS, they will ask you for about 780,000/=. That is the cost of the registration process alone. In that case, how will a product sustain? My profit will be 10%. For that case my profit will be 400,000 and I have to pay 800,000 to TBS and TFDA each. For what purpose, I have to start this product. It is not like that you register and you finish every year you have to pay the fees (DashDil Production Manager).

A cross-case analysis results show that lack of controlled on counterfeit products also limits innovation among actors in the food value chain. Two firms, DarshDil Limited and Basic Element, assumed that lack of control of counterfeit products limit food innovation downstream.

> There is an imported sachet of tomato sauce since we introduced ours. It is imported from Dubai, imitated everything except quality. The other importer has copied our product but he is importing from China. The price is below ours. We have reported this to TBS and TFDA. But nothing has happened. You know, our duty is to report this unethical behavior but not force them on what to do. But if we know something, we tell them though not officially …. even those inspectors. That there is this …. and this is happening here (Basic Element Limited Processing Manager).

Consumer preference limits downstream local food processors from promoting new products, a finding which is in line with Stern et al., 2009; Tepic et al., 2014). This factor is more common for staple foods such as maize flour whereby consumers prefer refined maize than wholegrain (dona) maize flour or fortified maize flour. A Cross-case analysis shows that firms whose consumers' preference is strong factor include Monaban, DarshDil Industries and Basic Elements. For example, Monaban introduced fortified maize flour in 2012 as required by the Government; however in the market, consumers were not used to food fortification. The maize fortification was rejected by consumers due to their preference for other products.

> Despite all these efforts, our distributors' rejected our products; about 30 tons of the maize flour was rejected due to smell, taste and color. Consumers were complaining about unusual smell of the product. Because we believed in what we were doing we accepted to distribute those fliers issued by the TFDA in 2014 (Monaban Finance Director).

A cross-case analysis results further show that lack of skilled staff for some of food processing in Tanzania limit the flow of innovation ideas from downstream to the processors. This finding correlates with the finding in the previous study by Tepic et al. (2014) which reveals that insufficient skills of employees constitute important barriers to innovation of the food sector. Three firms admit that lack of experienced and qualified staff limit innovations. Particularly valuable employee skills include marketing and communication skills which can help to promote new products. Some other firms have staff with university degrees and long experience in food processing. For example, Basic Element Limited has hired staff from Kenya and Tanzania with long experience in food processing. Furthermore, the private firm has a min-lab at the factory for food analysis.

> Yes! That's why I am telling you we have premium products. They stopped international suppliers because of our products. They want uniqueness, they want special. That's why now am looking for people who can do marketing and

networking. Then other people can do production … … … … … .But anyway sometimes I have to put a man because the law says so. But that one is not an issue, the issue is the person who is a graduate has to control, the process. That's where the music starts! (Basic Element Limited Marketing Manager)

Trade credit limits the flow of innovation among downstream actors. Modern food retailers as the gatekeepers receive information from final consumers who are the most useful to food processors for product development. However, this information is not flowing to food processors. This happens due to lack of full communication among actors for fear that issues of loan repayment may emerge, as noted earlier. Therefore, trade credit concerns limit the exchange of information among the downstream actors in the food value chain in Tanzania. Interviews results show that it takes up to 90 days for processors to get paid despite the signing of contract between the parties with a 30 days payment clause.

Yes they (supermarkets) are in regular contact with our staff for the orders. So as soon we call for the payment then they become uncomfortable (Happy Sausage Finance Manager).

For example, last year suppliers stopped to supplying Uchumi supermarket, a Kenyan chain store that collapsed in Tanzania and Uganda in 2015. At the time of the collapse, suppliers in Tanzania owed the retailer Tsh 2 billion (Lazaro, 2015). With this kind of tension, it is likely that the exchange of information among actors is not vibrant or detailed enough to support innovation. This study however, found local food suppliers still getting innovation ideas from modern food retailers.

Counterfeit product limits innovation among local food processors in Tanzania. In general, Tanzania has failed to fight against counterfeit products due to lack of staff with the mandate and requisite authority of fighting against counterfeiters. Some local food suppliers have, tried to introduce new products and be innovative nonetheless. However, counterfeit products in the market present a big challenge. The presence of counterfeit product limits innovation among actors in the value chain.

You know we are doing business and our goods are distributed at different places that means if you want to hold me down you can do that. You can go somewhere and order 1000 plastic bags and Pole can do this for you. You take them at your factory at Manzese and you start filling those bags by using our brand names. So I am distributing on this side and you are distributing on the other side. Simply you are using my trade name (Basic Element Limited Marketing Manager).

Discussion and conclusions

Since the rise of modern food distribution in Tanzania, local food suppliers have been marginalised. Local food processors should be more innovative in order to increase their participation in the local modern food retailing, which is rising in Africa.

Regarding the first question, this study shows that downstream actors are very important players as a source of food innovation to food suppliers. Suppliers, retailers, and distributors being the gatekeepers of the market have to share information with local food processors in order to provide these processors with feedback about their products and to stimulate innovation. It is very important that information reaches key actors for a change to happen immediately.

The second question posed was what are the factors that limit a flow of innovation among downstream actors in Tanzania? The empirical finding of this study indicate that trade credit, government requirements, counterfeit products, consumers' preference and lack of skilled staff are the factors limiting a flow of innovation in the food value chain in Tanzania.

Previous studies demonstrated the importance of communication for the success of innovation. For example, Tepic et al. (2014) found that communication capability has a significant effect on the likelihood of the success of a project. The present study contributes to the body of knowledge on why modern food retailers do not share important marketing-oriented information with food suppliers despite the connection between information sharing and the success of innovation. The present study has also revealed that trade credit concerns limit the willingness of downstream actors from coming together and share information for fear that they may be reminded to repay outstanding debts by suppliers.

The DOI perspective of the diffusion of new ideas offers a valuable insight into how the constrained actors in the value chain can fail to absorb innovation. The DOI perspective implies that the primary driver of innovation diffusion is the adopter or the demander of the innovation plus the firm's interactions with other adopters

(Shanahan et al., 2008). The primary factor that explains why local food processors fail to adopt new food ideas from downstream actors is the authorisation delays related to government requirements. As noted in the foregoing discussion, within the supplier-retailer relationship a flow of innovation idea is constrained with trade credit. As Roger (2003) argues, interaction is very important for the flow of innovation ideas. Caiazza et al. (2014) argue further that if the firms have to utilise given innovation ideas they have to interact under the policies defined by the actors. But, since trade credit concerns limit communication among downstream actors in the food value chain, is bound to be constrains in innovation.

The present paper contributes to the insights on the barriers to food innovation diffusion among the downstream actors in the food value chain in Tanzania, a developing economy. Despite this contribution the study has the following limitations. First the study focussed only on suppliers, other important actors were not involved in the study. Future research may consider including other actors such as Government agencies, business associations and non-government organisations. Second, modern food retailing is a new phenomenon in Africa and in Tanzania in particular; Africa has witnessed the arrival of international retailers such as Walmart, and Carrefour. We suggest that future research on the exchange of innovation downstream, in the food value chain in the continent, may focus on the flow of innovation between local and international retailers. Furthermore, further studies are needed to understand the types of innovation which work between upstream and downstream actors and compare these innovations to others which have not worked between these parties.

This study shows that there is less collaboration among actors in the food value chain to enable information from final consumers to reach food processors. Poor linkages among stakeholders act as a key impediment to sharing information and thus to innovation (Bitzer & Bijman, 2014, Nandonde, 2016). One of the barriers noted is the delay in issuing certificates for commercialisation of food innovation related to government regulation. The respondents show that different organisations such as TFDA and TBS have different mandates of regulating food commercialisation in Tanzania. A failure to possess a certificate from any of the organisations may lend someone into trouble of even facing court charges. On the other hand, food processors claimed that overlapping responsibilities between these two regulatory bodies are confusing and inefficient.

Food safety is very important for the prosperity of any nation and thus certification and regulation are a key part of assuring food safety. However, we suggest that policy makers should create a one stop shop desk that could issue certificates and be recognised and adhered to by other actors. Trade credit was linked to poor flow of innovation ideas in food innovation between downstream actors in Tanzania. The respondents showed that modern food retailers are not in regular contact with them (processors) for fear that issues on outstanding payment may occur in their conversations. Value chain actors should recognise that a failure to share market information is like digging each other's grave.

Disclosure statement

No potential conflict of interest was reported by the authors.

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