Journal of Agricultural Economics and Development, Vol. 2(1), pp. 024-034, January 2013
Available online at http://www.academeresearchjournals.org/journal/jaed
ISSN 2327-3151 ©2013 Academe Research Journals

Full Length Research Paper

Small millers' and bakers' perceptions of the limitations of agro-processing development case study: Wheat-milling and baking industries

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Accepted 31 December, 2012

In South Africa the milling and baking industries are highly concentrated, and most of the major millers are vertically integrated with bakeries and this study aimed to identify the factors that restrict the development of agro-processing in the small wheat-milling and -baking industries in the rural areas of South Africa. Data was collected by means of a structured questionnaire and by conducting 15 interviews with various small wheat-milling and baking firms in the supply chain and with major role-players. The study found that the small wheat-milling and -baking industries had high barriers to entry, including the ability to acquire capital to start operations; to establish a market; to acquire knowledge of the wheat-milling and -baking industries; to uphold a well-maintained infrastructure; to acquire marketing knowledge, and require the necessary cash flow. The barrier to exit was to sell machinery at book value. They were exposed to wheat price volatility, and did not have the cash flow or the knowledge to counteract these price risks through risk-mitigating strategies available through derivative markets. They took several months to recover from setbacks which sometimes proved to be detrimental. Large-scale wheat millers and bakers had a competitive advantage over their smaller-scale counterparts to overcome above obstacles.

Key words: Food processing, wheat, commodities, development, barriers to entry, small wheat millers and bakers, agribusiness, risk, finance.

INTRODUCTION AND PURPOSE OF STUDY

The South African wheat industry was deregulated in 1997 with the abolishment of the Wheat Board and resulted in South Africa's grain market becoming one of the most liberal in the world economy at the turn of the century. The deregulation process also resulted in South African producers, millers and bakers being more exposed to global markets.

South Africa is a net importer of wheat. The reason for this is that South Africa's wheat prices are trading at import parity levels, making it more economical to import wheat products than procuring them from within the South African borders.

The main purpose of the study was to identify the factors that restrict development in the wheat milling and baking industries in the rural areas of South Africa. In short, the objectives of the study were to identify the critical success factors in the wheat milling and baking industries the factors that restrict or enhance competitiveness in these industries; the barriers to entry and exit; the risks in the wheat milling and baking industries; and lastly, to analyse the support structures provided to these industries. The study had a more qualitative than empirical approach in an attempt to assist stakeholders in important issues in this small business processing sector in rural areas.

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LITERATURE REVIEW

In 2004, the National Agricultural Marketing Council (NAMC) conducted a study, the main goal of which was to ensure the long-term sustainability of the South African wheat industry after the deregulation process. The study found that the number of wheat milling companies in South Africa had dropped from 137 in 1996/1997 to 103 in 2004. The NAMC (2004) study further found that, at that time there were 90 small mills, but that the remaining 13 large mills jointly produced 97 percent of South Africa's wheat flour. Together, the top four wheat milling companies control approximately 87% of the milling markets, according to the Food Price Monitoring Committee (FPMC, 2003).

This indicates the high level of market concentration and market power in the wheat milling and baking industry. This is also evident in the baking industry in South Africa, as it was determined that approximately 3,000 bakers were registered with the Wheat Board but that approximately 80% of bread production was in the hands of the four largest baking groups (FPMC, 2003). It is expected that the highest concentration of large baking groups would be mainly in urban areas and larger rural towns.

Given the high level of market concentration and power, the main goal of the study was to identify the factors that might contribute to these levels in the small wheat milling industry and, to a lesser degree, in the baking industry. The study therefore aimed to identify the factors that restrict or limit the development of the small wheat milling and baking industries, especially in the rural areas.

An unpublished study by the Industrial Development Corporation (IDC, 2010) provided valuable insight into the objectives of this study, by identifying factors that limited the development of agro-processing in the wheat milling industry in South Africa. Barriers to growth, key challenges facing the milling industry, a SWOT analysis (an acronym for strengths, weaknesses, opportunities and threats) as well as the market's structure and a Porter analysis on competitiveness were identified and analysed by the IDC (2010) study. It concluded that the greatest challenge facing South Africa was the attainment of food security.

Other studies reviewed included a study conducted by Mather (2005), which identified consistent patterns in the food processing sector, like food processing small and micro enterprises (SMEs). These SMEs tended to sell and market their products outside of the formal retail structures that exist in South Africa (such as Pick 'n Pay, Shoprite/Checkers, Woolworths and Spar). They rather supply smaller independent retail stores or other enterprises involved in a further stage of processing, and to SME food processors supplying local or regional markets. SMEs in this sector are competitive on the basis of price and/or quality, but rarely on the basis of volume. Wheat millers, for example, supply small bakeries with a guarantee that their flour is suitable for speciality baking.

A study conducted by McDonald et al. (2008), which focused on the costs and benefits of higher tariffs on wheat imports to South Africa, showed that the benefits to the wheat industry are highly concentrated but smaller than the loss of income caused in other sectors.

There is a need to understand the spatial structure of retail and service businesses in rural and urban areas. The contributions and application of the Central Place Theory (Christaller, 1933) on the impact of various forces that affect geographical concentration, on the impact of transport cost and the scale of production, and on spatial patterns of commercial activities, can provide a useful theoretical basis in this regard. Rural bakeries do not have the benefit of economies of scale in comparison with larger bakeries which mostly operate in urban areas and larger towns. Transport cost of bread could perhaps benefit the local rural bakery, depending on the procurement situation of the rural baker. For various economies of scale, these issues can impact on the production cost per loaf of bread.

With this high level of market power present in the wheat milling and baking industries, this study aimed to identify factors that restricted the development of agro-processing in these industries. Special emphasis was placed on small-scale wheat millers and bakers, as the lack of small-scale millers and bakers in rural areas was a concern. From an employment creation perspective and in the interest of the rural economy, it is vital to identify these growth barriers, or factors limiting the development of agro-processing in the rural areas.

The DTI (2011) mentions the small-scale milling industry as an area where intervention will facilitate the entry of small- scale maize millers in South Africa. It is expected that they will be very competitive in rural areas and that this will contribute to enterprise development and the alleviation of poverty and pressures on real wages.

METHODOLOGY

Information and data were collected by conducting interviews and using a structured questionnaire with various wheat milling and baking firms in the supply chain as well as with major role-players. From the onset of the study in 2010, it was evident that wheat millers and bakers who were willing to participate and could provide accurate data would be difficult to find. The main reason for this concern was the simultaneous investigation conducted into these industries by the Competition Commission (CompComA, 2010). Wheat millers and bakers were therefore sceptical about making themselves available to participate in the study and provide accurate data. Originally, the study was limited to the geographical areas of the North West and Free State provinces. However, due to the investigation and the industry role-

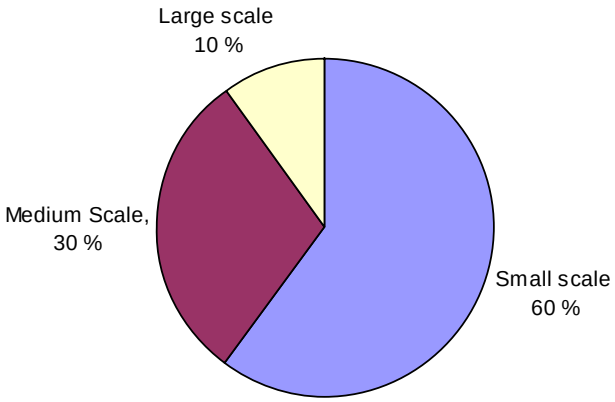

Figure 1. Size and scale of wheat millers interviewed.

players' unwillingness to share information, the study was forced to go beyond these two provinces.

Only 15 wheat millers and bakers were willing to be interviewed and provide information relevant to the study. Of the total number of interviews conducted, 10 were with wheat millers and five with bakers. As far as possible, the study captured the views of small-, medium- and large-scale wheat millers and bakers.

The average wheat miller interviewed had less than 10 years of experience, milled on a small scale, and had a total capital investment in machinery, buildings and vehicles of between R1 million and R2 million. On the other hand, the average baker interviewed fell into two categories of experience, namely, those with less than 10 years, and those with between 11 and 20 years of experience, and all of them baked on a small scale. These typical wheat millers and bakers who were interviewed suited the study perfectly as the purpose of the study was to identify the factors that restrict (small-scale) wheat millers and bakers in rural areas. Figure 1 gives a breakdown of the size and scale of the wheat millers interviewed. Out of the total number of wheat millers interviewed, 10 percent were in the large-scale category (> than 1 000 tons per day), 30 percent represented the medium-scale category (26 to 1 000 tons per day), with the remaining 60 percent milling wheat on a small scale (0.5 to 25 tons per day).

The study made use of various methodologies to ensure that the information gathered was consistent and accurate. The methodologies used included the Porter model, which was used to analyse the determinants of competitiveness in the wheat processing sector; the price volatility methodology; and a risk management framework that divided the risks associated with the milling and baking industries into macro and micro environments.

As mentioned, the study made use of the Porter model to analyse competitiveness in the wheat sector. Figure 2 indicates Porter's four forces that impact the ultimate profit potential of an industry. The four forces include factor conditions; firm strategy, structure and rivalry; demand conditions; and the role of the government. The signs indicate a relatively positive, neutral or negative impact on the potential profitability of the industry.

The unpublished study by the IDC (2010) concluded that the greatest challenge facing South Africa is the attainment of food security. This is underpinned by high population growth, high levels of poverty, logistics cost and heavy reliance on a few staple foods. The demand for wheat as a staple food is likely to be sustained for many decades to come. The milling industry will always play a vital role in addressing food security problems, provided that issues such as transportation and power supply are addressed and that the industry's competitiveness is maintained or enhanced.

For the purposes of this study, risk management was divided into a macro and a micro level. All identified risks which have an external impact on the daily operations of the milling industry are classified as macro risks. Macro risks can be divided into political, economic, social, technological and environmental risks (Louw, 2007, unpublished report). Micro risks have an internal impact on the milling industry in that these types of risks are unique to and affect the long-term sustainability of the industry. Micro risks can be divided into operational, product market, financial, input and export, and human-related risks.

RESULTS

Of the total number of respondents, 40 percent indicated that the level of competition within the wheat milling and baking industries was competitive (Figure 3), while the remaining 60 percent indicated that they were highly competitive. This does not necessarily inhibit the entry of businesses, although it makes it less lucrative for a new business to enter such a highly competitive industry. These high levels of competition can be unhealthy, as it may restrain the long-term sustainability of small-scale wheat millers and bakers.

The process of value-adding in the wheat industry is clear. At present though, the industry's unwillingness to share information, due to a fear of retaliation, makes research laborious and difficult. Small-scale industry participants perceive access to finance as a major constraint, with the fundamental problem being the low margins associated with the industry and its high overhead costs per unit. This makes it difficult for small-scale millers to integrate vertically in their individual businesses. Large-scale millers therefor have a competitive advantage as they have easier access to finance which they can use to integrate vertically.

The critical success factors of the current wheat millers and bakers, who remain in business despite this level of competition, were identified. These factors focused on the important areas of a wheat milling and baking business that functions in an efficient manner for it to be

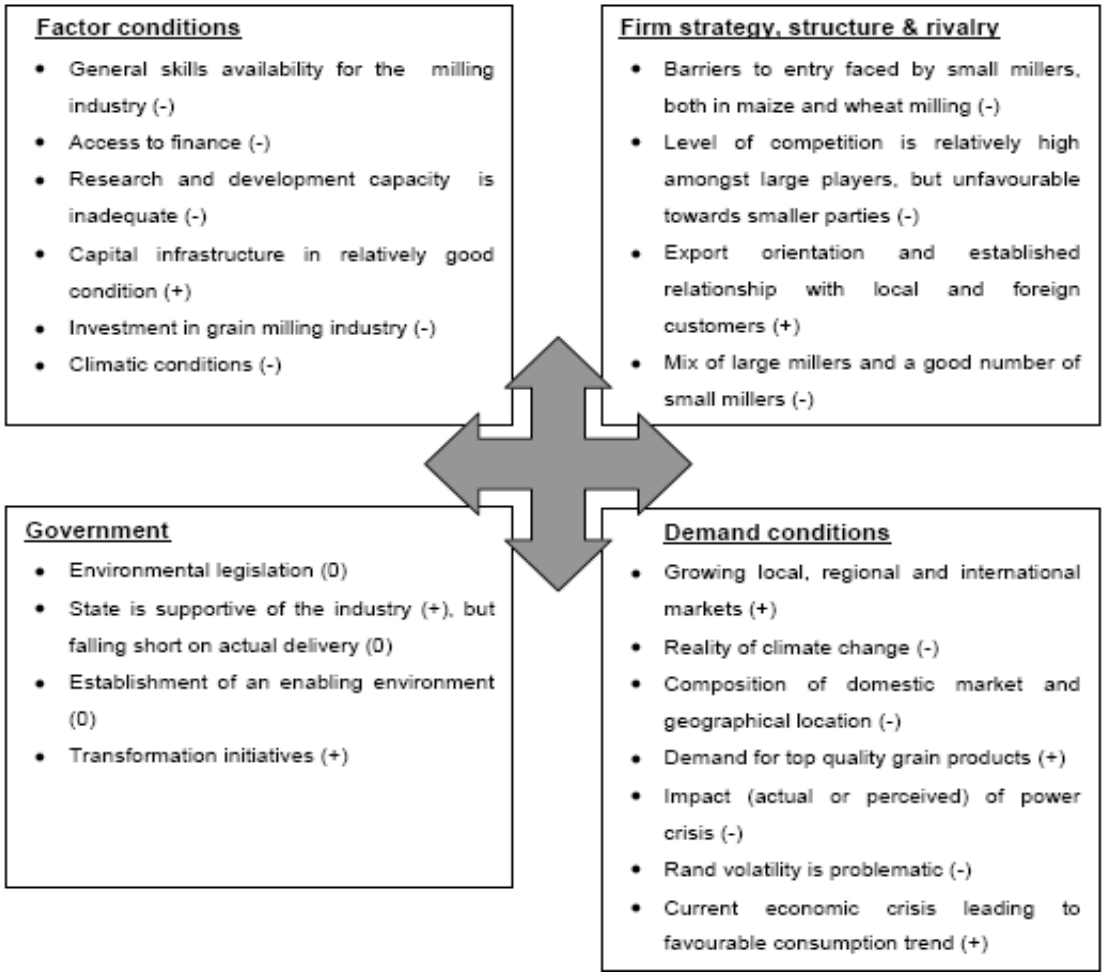

Figure 2. Porter's four forces for the milling industry, as identified by the IDC. Source: IDC (2010).

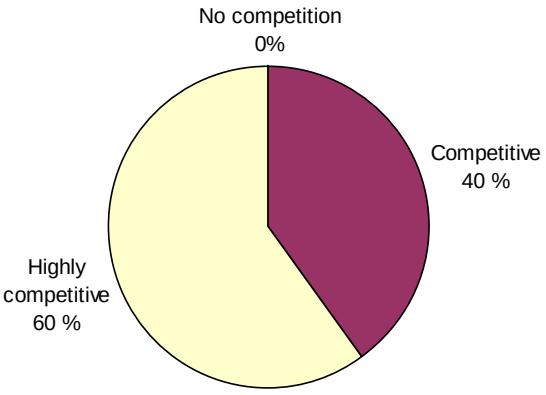

Figure 3. The level of competition perceived by wheat millers and bakers interviewed.

successful and profitable. The highest-ranked area to function efficiently is a clearly established and well-defined market. Before one can start operations, one must be aware who the final consumer will be, in what geographical area the product will be sold and what distribution channels will be used. In addition, the overall success of the business is also dependent on the effective management of cash flow, as procurement is mainly done on a cash basis and slow payments become a problem.

In order to be successful, knowledge and experience at management level is essential. Knowledge and experience refer to the overall management of the business as well as techniques involved in milling and baking. Table 1 ranks the ten most important areas of a small wheat milling and baking business for it to be efficiently managed.

By identifying barriers to entry and exit, details of the factors that restrict development in the wheat milling and baking industries were explained. These industries have relatively high barriers to entry. This is supported by the low number of new wheat millers and bakers who have

Table 1. The critical areas of a small wheat milling and baking business as identified by the respondents.

Areas	Ranking*
Well-defined market (end consumer)	1
Effective management of cash flow	2
Knowledge of wheat milling and baking	3
Effective cost management strategy	4
Procurement management	5
Obtaining and managing required capital	6
High level of service delivery	7
Management of labour	8
Wheat gristing techniques	9
Well-managed marketing campaign	10

*Ranked from 1-10, with 1 being the most critical area.

Table 2. Barriers to entry for small wheat milling and baking industries.

Barriers	Ranking*
Obtaining the necessary capital to start operations	1
Establishing a market	2
Knowledge of wheat and wheat milling industries	3
Sound business skills	4
Well-maintained infrastructure surrounding the business	5
Lack of marketing management knowledge	6
Trusted relationship with suppliers and buyers	7
Availability of necessary cash flow	8
Location of the business	9
Employing a highly-skilled labour force	10

*Ranked from 1-10, with 1 being the most significant barrier.

entered these industries in recent times (Interview with National Chamber of Milling, 2010). Table 2 identifies and ranks the ten most significant barriers to entry that exist in the wheat milling and baking industries.

A barrier to entry is any factor that restricts potential wheat millers and bakers from entering the market, or restricts their development. The first barrier identified by respondents was their inability to gain the necessary capital, including fixed and operational expenditure, to start operations. Milling wheat requires a significantly higher capital investment than milling maize. Start-up finances in the maize milling industry was estimated at R850 000, whereas start-up finances for a small miller in the wheat milling industry can exceed R1.5 million. These estimates give a further indication of the industry's financial burden. Therefore, capital requirements were indicated as being the largest barrier to entry this industry. Many small wheat millers felt that the necessary support structures were not in place for them to qualify for the necessary capital. Millers felt that obtaining capital from the government or government institutions were too time-consuming and tiresome, as it could take several years for departments to make the necessary funds available.

Establishing a market was also indicated as being a potential barrier to entry. Prospective wheat millers and bakers must exploit new market opportunities or develop new products. It was indicated that there was space in the rural areas to increase wheat milling and baking capacity.

Another identified barrier to entry into the wheat millers and bakers industry was the miller's technical and management knowledge of milling and baking, for example, have some relevant experience and knowledge of the grades of wheat that are used for milling; of the steps and processes involved in wheat milling and baking; and of how to manage the overall wheat milling and baking business. The large-scale millers can hire specialists for each process involved in wheat milling and baking, for example, procurement, financial, and/or marketing specialists with high levels of knowledge and experience in their respective fields. On the contrary,

Table 3. The ten most significant constraints and challenges currently being experienced by small wheat millers and bakers.

Constraints/Challenges	Ranking*
Knowledge levels of labourers	1
Theft taking place on and around the premises	2
Availability of wheat	3
Electricity supply and costs	4
Credit availability from banks and support from the DTI	5
Deteriorating infrastructure	6
Collusion among wheat millers	7
Imports of wheat and flour	8
Respective cash flow positions	9
Ability of large-scale millers to keep high volumes of raw material on hand	10

*Ranked from 1-10, with 1 being the most significant issue/constraint/challenge.

smaller-scale wheat millers, as owners, perform most of the functions required.

A barrier to exit is any factor that restricts an existing wheat miller and baker from exiting the market. The barriers to exit that exist in these industries include the ability to sell machinery at a price acceptable to the owner. If an owner wants to discontinue operations, a willing buyer of the assets is required. Finding a suitable buyer for one's assets is a difficult task and potentially restricts the wheat miller or baker from exiting the market freely. This represents a challenge, as new market entrants are limited. There is also no guarantee that a price equal to the book value of the assets will be attained. Potential buyers could offer prices much lower than the book value of the assets, thus discouraging wheat millers or bakers from selling their assets.

South Africa is dependent on wheat imports, as it does not produce sufficient wheat quantities to meet local demand (NDA, 2011). Imports, especially imports of raw materials, and to a lesser degree exports, have an impact on the wheat milling and baking industry. The impact of imports on the respondents' businesses was more indirect, as wheat millers were more exposed to the imports of wheat products by international competitors. Imported wheat grain was sometimes not of an acceptable standard, which affected the wheat millers' final product.

The impact of wheat price volatility on especially the smaller-scale millers and bakers was identified as being a variant factor that could restrict or limit these industries. Volatility provides a measure of the possible variation or movement in a particular economic variable that describes the tendency of a commodity, for example the wheat market, to move either up or down and the extent to which the anticipated move may progress. The lack of predictability and uncertainty associated with increased volatility may influence both producers and consumers. High volatility may limit the ability of processors to secure supplies and control input costs. Wheat price volatility was seen as a major risk with the largest impact on profit margins, daily operations and planning structures.

The study found that small-scale wheat millers and bakers were exposed to wheat price volatility and did not have the cash flow or knowledge to counteract wheat price risks by using the risk-mitigating strategies available on the Commodities Derivatives Market of the JSE (also known as SAFEX). Large-scale millers indicated that they did make use of SAFEX as part of their risk mitigating strategies. This ability to offset wheat price volatility created an advantage for large-scale millers over smaller-scale millers. Large-scale millers also employ specialists in specific fields that enable them to take advantage of these opportunities.

A factor that clearly restricts the development of small-scale millers and bakers is the lack of government support in terms of the quality of infrastructure and grants that are provided. Many respondents expressed their concern about the quality and maintenance of infrastructure affecting their businesses as unnecessary costs were incurred and impacted on service delivery and hence decreasing their profitability. Transportation infrastructure is also a challenge for the milling industry. Many railway lines are not being maintained, which forces millers to make use of road transport which is 30% more costly. Electricity supply and prices were specifically mentioned as being added challenges to their businesses. As further start-up operations and expansion require more capital, many respondents expressed their concern over the substantial length of time it takes to qualify for much-needed funding and grants.

The constraints and challenges faced by the wheat industry (as indicated in Table 3) provide valuable insight into possible factors that may restrict the competitiveness and profitability of small-scale millers and bakers. The opinions of the challenges faced by the wheat milling industry were very diverse. The level of labourers' knowledge, reliability and motivation was indicated as being a serious challenge for the industry, especially in

Table 4. Weaknesses of small wheat millers' and bakers' businesses.

Weaknesses	Ranking*
Motivated, loyal labour force	1
Obtaining the necessary capital	2
Developing an effective marketing campaign	3
Handling bad debts	4
Acting against theft	5
Procurement and logistics management	6
High overhead costs	7
Increasing milling and baking capacity	8
Limiting product differentiation	9
Cash flow	10

*Ranked from 1-10, with 1 being the weakest area.

Table 5. Threats to the small wheat milling and baking industries.

Threats	Ranking*
Ever-increasing input costs (electricity and fuel prices)	1
Unhealthy level of competition within the industries	2
High levels of imported flour	3
Shortage of motivated and loyal labourers	4
Theft at the premises	5

*Ranked from 1-5, with 1 being the biggest threat.

the rural areas. Other constraints or challenges included on-site theft, the availability of wheat, high electricity costs, credit availability from commercial banks, a lack of support from the Department of Trade and Industry, deteriorating infrastructure and the level of wheat and flour imports.

Table 4 summarises and ranks the areas of relative weaknesses experienced by the interviewed small wheat millers and bakers. By identifying the weaknesses, valuable insights were obtained regarding issues that their businesses struggle with and where they require assistance.

Wheat millers' and bakers' highest-ranked weakness was found to be their inability to find loyal and motivated labourers. Other weak areas of their businesses included developing a marketing campaign, handling bad debt, acting against theft on site, and obtaining the necessary capital to expand.

There were also many threats to the wheat milling and baking industries, as identified by the respondents. The five highest-ranked threats that existed are explained in Table 5.

The highest ranked threat that exists within the industry, over which respondents have little control, is the rise in input costs. From a development point of view, more could be done to protect the wheat milling and baking industries against this threat. Other threats include the unhealthy level of competition within the industries, the high level of imported flour experienced in recent times, the shortage of motivated and loyal labourers and theft on sight.

The study also identified possible risks that have a direct impact on the wheat milling and baking industries. On-site theft was mentioned as being the biggest risk faced on a daily basis. Other risks included power outages and electricity price increases; the quality of surrounding infrastructure and logistics; defaulting on debt because of these industries doing business on a cash basis; the impact of price volatility on profits; and the level of staff skills. These facts support all the findings in the previous sections.

Table 6 gives an indication of the strengths of the existing wheat millers and bakers. Factors that enhance profitability and competition were perceived as a high-quality product and service offering, good management and expertise, business location and high levels of integration.

To survive, one must produce high-quality and consistent products at market-related prices that meet the demand and specifications of the end consumer. In addition, good management skills are required.

The study also identified possible opportunities in these industries which indicate whether there is room to expand and whether these industries would be sustainable in the

Table 6. Strengths of small wheat millers' and bakers' businesses.

Strengths	Ranking*
High-quality product offering	1
High-level service offering	2
Good management team and expertise	3
Good location of the business	4
Low overheads maintenance	5
High level of integration	6
High profit-making industry	7
Low barriers to entry	8
Healthy level of competition within the industry	9
Market-related product prices	10

*Ranked from 1-10, with 1 being the strongest area.

Table 7. Opportunities identified by small wheat milling and milling respondents.

Opportunities	Ranking*
Vertical integration of the various businesses	1
Wheat milling in rural areas	2
Expansion into retail markets	3
Opportunities to mill other grain types (diversification)	4
Increase in milling capacity	5

*Ranked from 1-5, with 1 being the best opportunity.

long term. Table 7 identifies possible opportunities that can be exploited by these industries.

Wheat millers and bakers felt that the biggest opportunity in the industry is by vertically integrating with other areas of the wheat industry, profit risks could be mitigated and their businesses could expand. Some wheat millers specifically mentioned vertical integration with bakeries, as is currently the case with many large-scale wheat millers. Other opportunities include the expansion of operations in rural areas.

FINANCIAL PERFORMANCE

Evaluating the financial performance of small wheat millers and bakers provided valuable insight into the ability of the existing wheat millers and bakers to be sustainable. In order to capture the financial performance of wheat millers and bakers, the perceptions their turnover performance over the past five years was evaluated. Respondents were asked to indicate their performance over the past five years on a scale of very good, good, average, bad and very bad. Figure 4 indicates the perception of existing small wheat millers and bakers on their turnover's performance over the past five years.

The figure indicates a clear bell-shaped phenomenon, illustrating that, for some wheat millers and bakers; their turnover was very good while, for others, it was very bad. Approximately 34% of respondents indicated that their financial performance over the past five years was average and another 33% indicated that their respective turnovers over the past five years were above average. From this 33%, 11% indicated that their turnover was very good, while the remaining 22% indicated that their turnover was good. The small millers and bakers indicated that there is room in the market for different sizes and scales of wheat millers and bakers and that the key lies in identifying new market opportunities and fully exploiting these opportunities.

The last bracket of wheat millers and bakers were represented by 33% of respondents. This bracket of indicated that their turnover over the past five years was below average and that they have experienced a drop in sales over the past few years. From this 33%, 22% indicated that their turnover performed badly, while 11% indicated that it performed very badly. From the analysis, it was also notable that the impact of increases in input costs on their respective businesses was dramatic.

The financial performance of large-scale wheat millers and bakers were superior to that of smaller-scale wheat millers and bakers. Smaller-scale wheat millers and bakers therefore required more support from the Department of Trade and Industry (DTI) and government institutions to aid in their sustainability.

Figure 4. The perception of turnover over the past five years.

However, the study found that there were only a few small bakeries left in the rural areas that were included in the study. One of the reasons for this was the increase of supermarket bakeries in small towns. Rather than for profitability, supermarkets merely viewed bakeries as an additional product-line that they could offer to their customers. Bakeries focusing only on their core business therefore experienced increased competition from these supermarkets, as customer-buying behaviour changed towards a one-stop shop where they could buy all their groceries.

CONCLUSIONS

The main purpose of the study was to identify the factors that restrict the development of the wheat milling and baking industries in rural areas. A literature review was conducted to demonstrate that the study would add to the existing body of knowledge on factors that restrict the development of agro-processing. Conducting research within the small wheat milling and baking industries proved to be difficult. Finding those who were willing to share information and views was difficult with the simultaneous investigations by the Competition Commission (CompCom B, 2010). Trust between stakeholders in the supply chain seemed to be a major obstacle. Research, flow of information and development are important cornerstones for informed policy decisions, benchmarking, and expansion and growth in any industry and seemed to be restricted due to the investigations being conducted. The most important critical success area identified for existing and new entrants was the establishment of a well-defined market (end consumer) when setting up their businesses. Other critical areas included effective management of cash flow, knowledge and know-how of wheat milling and baking, and effective management of input costs.

The impact of wheat price volatility on the profitability of smaller-scale wheat millers and bakers the majority of the respondents and had a dramatic impact on the profitability of the majority of respondents. They also did not have the necessary skills and cash flow to make use of price hedging and other risk-mitigating strategies, especially in comparison to the large-scale wheat millers and bakers.

A factor that was clearly restricting development and affecting their businesses was a lack of government support in terms of quality infrastructure and grants.

The wheat milling and baking industry is exposed to a number of risks. These risks can potentially restrict development in the industry, for example, the quality of the surrounding infrastructure, electricity supply and prices, on-site theft, default on debt and the level of staff skills which all resulted in unnecessary costs.

The barriers to entry and exit in the industry that restrict development were also identified. These barriers included capital requirements and access to capital, the establishment of a market, cash flow management and the hiring of motivated and skilled labourers. Sound business knowledge was also important to take advantage of opportunities and successfully manage their cash flow, procurement and marketing campaigns.

As the wheat milling industry is a high-volume-output, low-profit-margin industry, wheat millers expand by adding value to their product in order to survive. This can be done by establishing bakeries, while bakers can develop their businesses into one-stop shopping experiences for customers. Large-scale wheat millers and bakers have a competitive advantage over their smaller-scale counterparts, in that they have the

necessary skills, knowledge, cash flow and economies of scale to quickly overcome obstacles.

In terms of power relations between role-players, the wheat milling and baking industries are highly concentrated, with the four largest milling and six largest baking companies dominating the market. Furthermore, these large milling and baking companies have a high level of vertical integration. Retailers, on the other hand, also have a relatively high degree of market power. The downside of this is that it increases barriers to entry for smaller-scale wheat millers and bakers. This pressure was also reflected in their financial performance.

Smaller businesses can, however, also be more creative by creating a niche through branding and differentiated products in order to establish markets and address certain current challenges.

It can finally be concluded that the larger wheat millers and bakers, who mainly operate in urban areas and in large towns, have a competitive advantage over their smaller counterparts in the rural areas where there is a lack of economies of scale, finance, skills and the ability to cope with risks such as price volatility.

Although the DTI's (2011) endeavors to facilitate small-scale maize millers (and wheat millers), the barriers for small-scale businesses are significant. It will be useful if policy makers are informed by this study regarding the complexities of this sector.

RECOMMENDATIONS

Recommendations can be made on how to develop the wheat milling and baking industries, with specific emphasis on the smaller-scale wheat millers and bakers.

An important finding of the study was that the small wheat milling and baking industries inhibited the willingness of respondents in the study to share information due to the simultaneous investigations conducted into these industries by the Competition Commission (CompCom B, 2010). The Competition Commission (CompCom B, 2010) could ensure that the industry, which supports the Commission, plays the role of a fair watchdog that protects businesses and consumers and sets clear 'rules of the game'.

Infrastructure problems need urgent, as it leads to higher costs.

With regard to the level of crime and theft, active steps should be taken by government and local communities to combat crime, especially in rural areas.

According to the South African Grain Information Service (SAGIS), any business that stores grain in silos and adds value to grain products must be registered with the Service. SAGIS could periodically issue reports and release information and statistics on the current state of small-scale wheat millers and bakers in South Africa.

As mentioned in the study, capital requirements in the wheat milling and baking industries are important in start-up operations. This requires urgent attention from government. The development and survival of wheat milling and baking in rural areas require a greater level of support through the financing of start-up businesses, training, gaining of relevant experience, etc.

The process of making funds available could be expedited, that is, making it available within a reasonable period of time after application.

The lack of motivated and skilled labourers was indicated by respondents as a serious issue within the industry. Existing wheat millers and bakers should be made aware of the skills development programmes available at the National Chamber of Milling, the South African Chamber of Baking and AgriSETA. The National Chamber of Milling expressed their disappointment at the extent to which government training authorities were involved in facilitating and training within the industry (National Chamber of Milling, 2010).

The small wheat milling and baking industries face a number of risks that impact on daily operations which is easier dealt with by large-scale wheat millers and bakers. A strategy should be established by organised business in the wheat and bakery industries to mitigate these risks, as this could save costs for smaller-scale wheat millers and bakers.

The value chain for small wheat millers and bakers in rural areas requires further research which could benefit new entrants and current businesses in order to create employment and development opportunities in those areas. These areas also need to be identified as value chains and can differ geographically. Certain areas that could warrant further investigation are relationships in supply chains, governance in supply chains, innovation and entrepreneurship in supply chains, logistics, procurement challenges, supply chain risks and quality and assurance management.

Other research opportunities emanating from the article are the greater focus on costs and profitability figures of small and large bakeries and millers. The theory of spatial economics and the impact of transport costs, economies of scale, market size effects and linkages are also areas that can be investigated in future.

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