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### DESIGNED FUTURES

Design educators interrogating the future of design knowledge, research and education.

#### **Fashion, Frugal Futures: how informal micro-businesses design and develop apparel**

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#### **Abstract**

*The high failure rate of small and micro businesses together with limited information about the operations of informal fashion micro-businesses necessitated a study about the apparel product design and development process applied by custom-made apparel manufacturing micro enterprises (CMMEs). These micro-enterprises have an important role to play in poverty alleviation in South Africa despite implementing survivalist strategies, and they also provide a sense of self-worth and dignity to people who would otherwise depend on welfare (Grant 2013; Phakathi 2013; Campaniaris et al. 2011). According to Burke (2011), knowledge of design enables creativity and innovation and therefore to prosper, informal CMME owners need to be competent, as well as innovative (SME Reports 2014). Frugal innovation refers to a response to severe resource constraints with 'good-enough' products that meet basic needs at a low cost and thus provide high value (Zeschky, Widenmayer & Gassmann 2011). The purpose of this paper is to demonstrate how informal fashion micro-businesses apply frugal innovation to design custom-made apparel and improve their futures.*

*Following a qualitative approach, a multiple case study research design was applied in this study. Thirteen informal CMME owners located at a business incubator in Johannesburg were interviewed using an interview guide. Observations, garment analysis and documents contributed to data collection from participating businesses. The data from interview transcripts and field notes, including photographs, garment analysis and relevant documents from participating CMMEs, was analysed through content analysis.*

*The study revealed how the participants overcome resource constraints by applying social and cultural capital as tools in the apparel product design and development process. Innovation and creativity were demonstrated by the participating fashion micro-businesses in providing customers with garments that were not available in mainstream clothing retail stores. The study contributed to identifying specific areas for future training to enable the mastery of knowledge and skills. The study further contributes to the body of knowledge about informal enterprises and apparel product design and development in emerging economies.*

**Keywords:** Apparel product development, apparel product design, micro business, frugal innovation, sustainable entrepreneurship

## Introduction and problem statement

Informal micro businesses are often run from homes, backyards, converted buildings or on pavements, rather than from formally zoned business locations (Grant 2010). Home-based enterprises typically involve small-scale production and service enterprises, for example, making clothes (Henning & Akoob 2017). Owner-managed businesses such as these are headed by survivalist entrepreneurs, who embark on the entrepreneurship journey out of a need to survive (Phakathi 2013). These owners are mostly women (Grant 2013), often ill-equipped to manage the intricacies of a business (Henning & Akoob 2017), resulting in the high failure rate of small and micro-businesses including custom-made apparel manufacturing micro-enterprise (CMMEs) (Brink, Cant & Ligthelm 2003). The small size and the owner being responsible for **all** design, development and management activities of the informal CMME, impacts on the owner's ability to perform functions such as purchasing, production, human resources, sales, marketing and financial management effectively (Makhitha 2017).

Most informal micro-businesses, are survivalist with little possibility of growth and employing other people, playing an important role in poverty alleviation (Phakathi 2013). With a mean monthly income is more than the average minimum wage rate stipulated in the Basic Conditions of Employment Act No. 11 of 2002 (Ranyane 2015), informal businesses become both income and job-generating alternatives for unemployed people, giving a sense of self-worth and dignity to people who would otherwise be jobless and in need of welfare (Grant 2013). It is, therefore, important to understand the business dynamics of informal micro-businesses like CMMEs, as it holds the key to a better future for the unemployed.

Limited information is available on manufacturing in the informal economy in South Africa (Grant 2013), subsequently limiting an understanding of the way the CMME operates when designing and developing apparel products. A lack of understanding limits constructive improvement of the unique operations and effectiveness of apparel product design and development to ensure business survival. The aim of this study was to explore how apparel product design and development is done within the limitations of the informal CMME.

## Literature review

A formal, or informal micro-business such as a CMME has a maximum of five full-time employees, the total turnover per annum does not exceed R0.20m, and the total gross asset value does not exceed R0.10m (Mahembe 2011). The owners of informal CMMEs use their skills to create individually designed, custom-made apparel for individual customers (Tselepis 2013). The adoption of custom-made apparel has resulted from customers' desire to personalise the style, fit and colour of their clothes (Lim, Istook & Cassill 2009). To obtain a custom-made garment requires the commission of a CMME (Adelaja, Salusso & Black 2016) who caters for a variety of local customer needs, from casual to career wear to special occasion custom-fitted garments of high-quality, that are uniquely individual and unavailable in retail stores (Bye 2010).

Innovativeness can increase the likelihood that a business can succeed (Leadbetter 2014). Informal micro-businesses in an emerging market find themselves responsive to extremely limited resources with products that have great cost advantages compared to available products, defined as frugal innovation (Zeschky, Widenmayer & Gassmann 2011). The informal micro-business reverts to developing products that may look substandard to available products because they provide limited functionality and are often produced from basic,

inexpensive materials. Frugal innovators are not restricted to technologies, products and services, but have a fresh approach to using resources and ideas, thus making the most of what is already available (Leadbeater 2014). The limited resources available to informal CMMEs can serve a process of creative innovation.

Leadbeater's (2014) view that frugal innovators excel at do-it-together (DIT) as opposed to do-it-yourself (DIY), corresponds with Grant's (2013) view of social capital or social networks and aligns with the principles of ubuntu. The ubuntu philosophy found in African communities, advocates 'helping others to help yourself' (Letseka 2013). Ubuntu is about advancing oneself in a way that uplifts neighbours and peers at the same time (Thompson 2017). The practice by small apparel businesses to use social networks, which refers to businesses' reliance on friends, family or neighbours, or collaboration with other businesses in a cooperative, to bring in more business (Hodges et al. 2017) was found to be mostly neighbourhood-based, especially for women-owned informal businesses (Grant 2013). This is referred to as social capital in Bourdieu's habitus theory (Bourdieu 1986). Cultural capital, entailing self-improvement by acquiring knowledge and skills through investment in terms of time (Bourdieu 1986), also contributes to innovativeness.

In emerging markets, customer needs are fragmented, and consumer-spending power is low (Amankwah-Amoah, Boso & Debrah 2017). With unemployment in South Africa at 27,6% (StatsSA 2019), the CMME is forced to adopt frugal innovation to satisfy a financially resource-constrained customer's needs. Producing a custom-made garment is very much a hands-on process with a unique kind of creative and critical thinking (Bye & Sohn 2010). Customers of the CMME remain value-conscious, expecting superior performance from custom-made apparel products (Makopo, De Klerk & Donoghue 2016) irrespective of financial constraints.

Western context custom-made garments are exclusive, luxury fashion items that can only be afforded by high-income consumers (Frings 2014). In the South African emerging market context, the exclusivity of the custom-made garment does not automatically involve a high price. In the luxury fashion market, high prices are related to the exclusivity and status of luxury products and brand names (Donvito 2018). Designers can have distinctive fabrics exclusively made for them by fabric mills (Frings 2014), while the informal CMME is restricted to the fabrics that are available in the local fabric retail stores. Contrary to this, the informal CMME creates an exclusive, once-off, custom-made garment with limited resources for a customer with a limited budget, from local fabric creatively sourced within their means.

Innovation is driven by entrepreneurship (Muñoz-Bullón 2016) as small businesses, such as the frugal survivalist CMME, show a remarkable capacity to innovate (Phaho 2008), which is what fashion is known for (Malem 2008). Innovation is found in the potential opportunity that informal CMMEs see in each customer that approaches them for a garment, as well as in the value that is added by creating a garment where there was just a customer's idea. Borrowing or renewing a product resulting from an already existing design brought to the CMME to duplicate within the customers' means and CMMEs' resources is indicative of the informal CMMEs business. March and Simon (cited in Maes & Sels 2014), state that "most innovations result from borrowing rather than invention". It is not unusual in the fashion context to conceptualise and manufacture new products based on past products and experiences (Moeran 2015), emphasising the importance of knowledge and experience for creative and innovative apparel designs. Therefore, product renewal adopted by the CMME is the least risky category of product design and development (Cross 2011). The purpose of this paper is, therefore, to demonstrate how informal fashion micro-businesses apply frugal innovation to design and develop custom-made apparel and improve their futures.

## Methodology

A qualitative case study design was followed to determine how informal CMMEs design and develop custom-made apparel within an emerging market context. A private sector business incubation hub in Johannesburg was chosen to gain access to informal CMME owners. A purposeful convenient sample of 13 owners of informal CMMEs participated in the study. Ethical clearance was obtained for the study and participants gave written consent for the data collection methods used. A semi-structured interview schedule with questions about how custom-made garments were designed and developed was used to collect digitally recorded data through face-to-face interviews, assisted by an intern from the incubation hub as translator. Data collection was enriched by participant observations on how the owners designed and developed custom-made garments at the workshops of five of the thirteen CMMEs, as the other eight owners no longer operated their businesses from the incubation hub when observations commenced. These methods resulted in an insider's approach to view the practices and processes of the participating CMMEs. Transcriptions of interviews and fieldnotes of observations during site-visits, which included photographs, were analysed through content analysis. Coding, categorising and sorting were applied to analyse qualitative data from the transcriptions and fieldnotes (Flynn & Foster 2009), resulting in a thematic analysis to identify patterns and themes emerging from the data (Wahyuni 2012).

## Findings and discussion

The business operations of the CMME was indicative of a **survivalist** approach as recognised through these claims "I would actually sew because I wanted an income at the end of the day" or "I want to make money" and "I want to sew different things so I can make more money to support my family" and "I want to start a business to reduce poverty in the community". These individual motivations for starting a CMME not only confirm the need for survival but encompass a much broader approach of empowerment and upliftment for participants themselves, families and communities. This suggests the existence of the principle of ubuntu, where the upliftment of the CMME owner would cascade down to the community. Destitute conditions, which relate to insufficient family income and difficulty finding a job, are motivating factors and reasons to start an informal micro-business (Henning & Akoob 2017), such as a CMME.

To sustain the CMME's business, **resourcefulness** emerged in the way in which key resources were sourced. Resourcefulness is considered part of any problem-solving approach through means of creativity (DeLong 2010). The access to sewing machines through which the required custom-made garments could be produced was evident as these participants indicate "Now I don't have a machine ... I always used borrowed machines" and "I don't have a machine, I borrow some machine". Participants were willing to plan to reach their goal(s), demonstrating a strong will to act but also strongly reliant on social networks to achieve these goals.

The initiation of the CMME's business is in part dependent on the exposure of the owner to sewing technique and equipment training. The value of this **training** was expressed in these statements "you know, school sometimes helps [...] It [school] gives you a light [...] So, I know from then [school], I've got that experience" and "If you know how, how to do, hai it's not difficult". The incubation hub's website confirmed that these participants had been exposed to industrial machines since joining the incubation hub with their sewing skills improving during training to sew different types of bags from recycled materials, gaining cultural capital.

The strength of the CMME's business is also enforced through the owner's sewing **experience** gained over time, for example since childhood, as mentioned by these owners "I like sewing

since I was young I used to sew” and “I was a little girl from school, I was just like to sew” or a natural ability or gift for sewing as expressed by this owner “it’s just a talent, I just know”.

Participants also mentioned that their customers preferred the quality of the garments they produced for example they mentioned, “the quality of my clothes”; “I’m just going to, for quality”; and “she says her sewing is nicer than ‘retailer A’”, emphasising why customers ordered custom-made garments and confirming Makopo et al.’s (2016) finding that customers expect exceptional quality from custom-made garments.

Fundamental to the continuation of the CMME is general apparel construction experience, such as sourcing fabrics that results in owner confidence in garment construction. Participants expressed **confidence** in their ability to select appropriate fabrics for their customers when they mentioned, “so now I’ve learned, what they [customers] want that’s what goes ” and “you can tell, the other one you know, it’s experience neh [...] It’s a lot of experience”, as well as “it’s the knowledge of material, you need to know your fabrics ... it comes with experience”. Confidence also manifests itself in continuous practice through which knowledge and skills are obtained as this participant indicates, “when you sew something, you get more pro uhm creative, and you want to do another”. Subsequently, knowledge and experience are gained over time (Hardaker & Fozzard 1997).

A **lack of confidence** emerged to stifle the attempt of more complicated garments as expressed by some participants who said “No, I don’t know how to make [wedding dresses] ...” and “She doesn’t know how to [...] she can only do the traditional wear and church”. These participants had the ability to sew, but at the same time were not confident to apply their existing knowledge and skills to new or unknown fabrics or garment styles. Pattern design uncertainty also prevailed, as this participant mentioned, “I do [would] like to learn how to draft because from the school I didn’t know, I didn’t understand it, drafting patterns”. This lack of confidence may be linked to the level of competence of these participants (Dorst & Reymen 2004). As with any practical skill, such as sewing, the physically doing and repeating a task will improve a person’s ability to execute the task, thereby increasing experience, expertise and confidence.

Radical product innovation transpires when technology is established to meet or create new markets and may include new product types or new production systems (Cross 2011). Innovation in the CMME emerged through the way in which tools and technologies were used, fabrics sourced, and the relationship between a customer’s ideas and the CMME owner’s own style or identity. A lack of access to ‘new’ manufacturing systems is observed through **sourcing sewing machines** as one of the most innovative activities performed by the CMME and the most important resource in producing custom-made apparel. Various options of obtaining a sewing machine emerged, which was personally owning sewing machine as this participant indicates, “domestic machine at home [...] Yes, I’ve got a overlock [...] overlocks [domestic] from my mom”, or borrowing a sewing machine as discussed earlier to demonstrate resourcefulness. Another option was access to industrial lockstitch, zig-zag and overlock machines at the incubation hub, as these owners indicate “domestic machine [...] here at the project ... industrial machine” and “And now I’m using these ones” confirming learned skills and experience obtained through the incubation hub, adding to their cultural capital (Bourdieu 1986).

This also reveals the importance of social networks and social capital (Grant 2013, 2010; Bourdieu 1986), as well as the principles of ubuntu. The lack of access to ‘new’ manufacturing systems is also evident in the absence of computer software to create sketches or prototypes to make garment patterns. Innovative ways were found to substitute technology by using inexpensive old-fashion methods to test a new idea, as this owner indicated when trying out a new idea for a bag, “I take a paper, and a scissor and I do it before”. **Manual sketches** and

patternmaking were also observed as part of the design and development process for custom-made apparel, as well as **manual cutting** of fabrics. Seven of the owners mentioned that they cut out garment pattern pieces with scissors as indicated by their response, “I cut with scissors”. This was confirmed through observations that revealed no electric or automated cutters, even for small orders pattern pieces were individually hand-cut, with scissors.

CMME owners are expected to create novel products through manufacturing systems that may be regarded as obsolete, thus radical innovation is not present in their manufacturing process. Limited access to advanced technologies did not stifle creative design and innovation as the willingness to adopt old-fashioned ways to deliver to customers’ needs resolved the limitations.

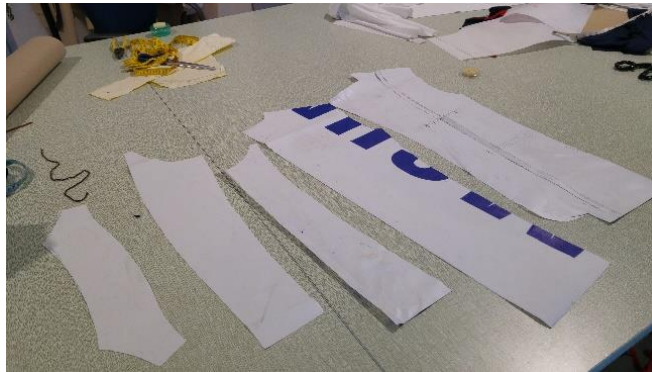
**Innovative** use of mobile phones emerged as the CMME’s answer to cutting-edge manufacturing solutions. The mobile phone was both a recording device of inspirational ideas as these participants indicate, “So I was taking photo [...] then I come do it”, and “If I see a nice bag, I take a photo sometimes”, or an information source for new ideas as these participants mentioned “I also go to the Internet to look at patterns [...] No, I'm using my phone [...] I google”, and “we are aware of trends [...] I think Instagram is it now [...] I like Pinterest as well”. Observations confirmed that participants used their mobile phones to access the Internet and applications such as WhatsApp. The camera function of a mobile phone was used by customers and CMME owners to capture and send photos of preferred garment styles and available fabrics through WhatsApp or the mobile phone email function. The mobile phone is, therefore, an important tool to facilitate CMME innovativeness. Application of mobile phone features was aptly illustrated by a participant who said “to choose fabric [...] go to the shop and shoot, WhatsApp me I'll tell you what I want” and “Ja, we send the pictures of this” [fabrics]. CMME owners also used their mobile phones to send quotes, inform the customer when the ordered garment was ready for collection and the amount due via WhatsApp.

Innovation in CMMEs manifests through the creative ways in which fabric is used, resulting in a competitive advantage in the products they deliver. The combination of the well-known shweshwe fabric with other fabrics such as leather and lace illustrates the creative visualisation of products that are different while exemplifying the true nature of the African context in which the products are produced (Figure 1).



**Figure 1: Combination of traditional African fabric and lace**

However, delivering on such creativity results in finding innovative solutions to enable the successful combination of these different fabrics through inexpensive reuse of PVC banners to support the fabric combinations, which is illustrated through this participant who says *“actually I'm mixing leather and shweshwe ... if I saw the leather is too soft ... PVC just to support leather”*. PVC banners were combined with shweshwe fabric to make different bags, and sometimes PVC banners were used to make pattern pieces before cutting the garment fabric (Figure 2).



**Figure 2: PVC used for pattern pieces**

The CMME is challenged to produce innovatively unique garments which cannot be found in retail stores, as illustrated in these quotes *“They [customers] can't find in the shops ...”*; *“Some of them [customers] they said they, they want to wear their own clothes”*; *“Like the old people didn't like the dress for the shop because sometimes it's open, the skirt is open ... And then also my church didn't like the dress like this ... They need a normal dress”*; and *“I believe everybody now wants something that will like suit their style. Everybody wants to be exclusive. Nobody wants to wear what another person is wearing. They all want to be like different in their own different way”*.

Innovation expands to CMMEs expressing their **own style** or **identity** as designers, especially when given free rein to design a custom-made garment as this offers the CMME owner the opportunity to express their creativity, skills and how they envisage the design, as this owner explains *“Yes, that is the more exciting client because then you, it's you, it reflects you”*. The interpreter also pointed out *“She's doing her own thing, that are very unique ...”* Although the uniqueness is not found in a ‘first-ever’ design it rather emerges through renewing an already existing design by creatively expressing their own design identity, as these participants indicate *“I'm not exactly going to copy their style. I'm going to like bring my own creativity in to the table”* and *“She's doing her own thing, that are very unique ...”* and *“... so now she takes those ideas [from fashion design school] and change them to something different”*.

Various designers, as mentioned in Dieffenbacher (2013), state the importance of identity or self-expression in fashion design, for example: *“it's all about your own identity”* (Farmer, cited in Dieffenbacher 2013, p. 74); *“the identity is maybe the most important aspect”* (Im, cited in Dieffenbacher 2013, p. 75), and *“for me, the most important starting point is my own identity as a designer”* (Cornejo, cited in Dieffenbacher 2013, p. 141). Although the CMME owner capitalises on the opportunity to express their design identity they are also creatively stifled when required to follow the customer's ideas and inputs, which may inhibit their innovative creativity, eloquently expressed by this owner when she says *“so now I've learned, what they [customers] want that's what goes [...] We just do replicas of what they [customers] want”*. Therefore, the CMME owners find themselves in a situation where they exchange their innovative creativity for the opportunity to earn an income.

Innovation is muted by a lack of research on the part of the CMME owner to determine design gaps and ideas. Timo Tissanen states in an interview with Dieffenbacher (2013) that “without thorough research, there can be no innovation”. The CMME owner acknowledges that they are unable to research the current fashion market to find the gap that their product range can fill, as these owners mention “But I never do my research [...] it's because I haven't started doing my own range” and “most research you probably put it if you want to do your own product [range] [...] we haven't really gotten time”. This does not stop the CMME owners from keeping up with apparel design trends as this owner indicates, “we are aware of trends”.

Research may contribute to a comprehensive body of knowledge, diverse experiences and the openness for ideas, which are essential for somebody to be creative (Pederson & Burton 2009), as creativity is essential for apparel designers to provide for innovation (Malem 2008). The informal CMME owner's creativity is jeopardised by the urgency to survive through custom-made apparel orders resulting in a lack of free time to spend on creative development of ideas and a design style, as this participant points out “So we're not creative right now at all [...] We're just not creative [...] We just want to get the orders out [...] It's hectic”.

To survive, the CMME owners neglect their own creative identity and focus on what the customer prefers, confirming the ‘creative-business tension’ observed by Mills (2011), and the ‘hectic’ workstyle of an SMME, found by MacDonald, Assimakopoulos and Anderson (2007). Bye and Sohn (2010) found that it was important for their sample of designers to find a balance between the pressures of deadlines at work and time for fun and discovery, which nurture the generation of new ideas. A lack of exploration, as witnessed during observations and mentioned by some participants, seems to affect their creativity. This supports MacDonald et al.'s (2007) conclusion that the real obstacles to informal CMME innovation are the lack of resources, especially the time and energy to do more than just survive.

## Conclusion

The study indicated that frugal innovation is part of the survivalist approach of CMMEs. The CMME not only provides a service of custom-made apparel within the emerging economy, and applies the principles of ubuntu in doing so, by alleviating poverty through self-employment and indirectly empowering the community through their success. Innovation and creativity are the fundamental principles on which the CMMEs success is based, founded in the resourcefulness of sourcing the equipment and material they need to produce custom-made apparel for the cash-strapped customer while relying on social capital. Although new sewing technologies might not be at the forefront of the CMME business, the mobile phone is relied upon to provide services to and from the customer.

The sewing experience laid down through schooling, self-taught skills or inherent ability to modify already existing apparel products creatively into custom-made one-of-a-kind designs, supports the meagre success of the CMME. The informal CMME has found creative ways to design and develop custom-made apparel with limited resources, and that suits the financially constrained customer. The CMME is adequately skilled to manage the design and development of custom-made apparel but lacks the confidence to master unknown styles and fabrics. Advanced sewing skills training, and specifically pattern design, were identified as future training areas which will enhance their cultural capital.

Confidence in their ability may improve the business sustainability of these businesses and increase the potential to address poverty in South Africa. Future research is also needed to determine the business skills required by the CMMEs and the impact of such training on the success of these businesses. As South Africa is stepping forward in addressing poverty and job creation, the importance of the informal CMME cannot be overlooked.



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