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August 2016

The nuts and bolts of micro-manufacturing in the township - a Cape Town case study

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The informal sector is frequently viewed as comprising only street traders. However, micro-manufacturing of various types constitutes a small but significant component. A Cape Town case study of informal metalwork manufacturers, retailers, suppliers and customers shows that township metalworker enterprises and supply chains bring about important opportunities for promoting value adding, skills development and employment. Policy interventions that would help them grow include the provision of more suitable manufacturing and trading spaces as well as services such as electricity.

Introduction

Informal manufacturing micro-enterprises are prominent in many developing countries, and are important through their contribution to practical skillsets and potentially maximizing income earning opportunities for participants. This occurs through value-adding practices, application of specialized labour and local supply-chain linkages. As such the sector is a worthy recipient of economic development and policy attention. However, several factors constrain the growth of these enterprises (and in some cases are the very reasons for their informality): these include institutional barriers (e.g. regulation, taxation), an inability to compete globally, inadequate technology and infrastructure and a lack of skills.

Little research has been conducted on informal-sector manufacturing in South Africa, which has resulted in knowledge gaps as to the sectors' size and its contribution to employment and economy. Recently, Fourie & Kerr (2015) provided national numbers at the industry level, using data from StatsSA's Survey of Employers and the Self-Employed (SESE). They report results, for 2013, showing that 7.4% of informal enterprises are in the manufacturing

sector; this is estimated to be more than 110 000 informal manufacturing enterprises countrywide. These provide work, in manufacturing, for 6.6% of all people working in the informal sector, amounting to more than 160 000 jobs for owners and employees in 2013. (The Stats SA *Quarterly Labour Force Survey* identifies approximately 2.3 million persons as employed in the informal sector in 2013.)

These national numbers provide the backdrop for this article, which presents findings of a local-level case study (Petersen *et al*. 2016) on the nature of informal-sector metal manufacturing and the supply-chains involved in such operations.

Background and research method

Informal microenterprises typically comprise a heterogeneous mixture of cash-based and largely unregistered economic sub-sectors such as trade (liquor, groceries, street food), personal services (hair and beauty salons), construction, mining, and manufacturing activities (see Charman & Petersen, *Econ3x3* 2015). Informal manufacturing activities typically include cabinet and bed making, shop fitting, crafting, shoe manufacture, clothing and others.

Within this grouping, informal metalwork micro-enterprises (MMEs) play a potentially important role in the township economy with respect to serving local demand for certain products. We used a supply-chain approach to investigate business activities and value adding in informal metalwork MMEs in some Cape Town townships to assess their business sustainability and business environment.

During mid-2014 we conducted interviews with and observed 30 informal MMEs that we encountered in the Cape Town townships of Brown's Farm, Samora Machel, Nyanga Junction and Delft South. In addition, we conducted interviews with persons active in the MME supply chain (formal *and* informal enterprises), related logistics enterprises and policy makers. We also interviewed 50 potential metalwork consumers as they browsed MME products.

Informal MMEs: creating value in the township economy

Though obviously not a representative sample, this analysis reveals important information on the extent to which informal MMEs are value creators in the township economy. Also, MME operators operate and interact with both formal and informal sector businesses in their operations, making rational choices to do so. However, the research identified

structural and operational challenges where intervention from a local government could bolster these enterprises.

Of the thirty MMEs interviewed, the predominant business type are welders (20) who specialize in electrical (arc) welding of steel into a variety of popular products such as gates, burglar bars and shack or shed structures. The other enterprises are: eight constructors of prefabricated shacks (so-called *hokkie* or *zozo* shacks), one appliance repairer and one tinsmith.

Twenty-five (83 percent) of these are owned and operated by males. The female participants in the sample operate exclusively in the street sales of prefabricated zozo shacks manufactured by their husbands/partners. The metalwork sector has a high presence of foreign nationals: fifty percent of these enterprises (15) were operated by South Africans and an equal number by foreign nationals from Mozambique (7), Zimbabwe (5) and DRC (3).

All of the interviewed informal MMEs operate from either their homes (both formal housing and informal shacks) or pavement areas. Such places are a constraint on activities and profitability due to noise complaints, exposure to weather, criminality (especially on public pavements) and strained relations with neighbours. In some cases, public pavements are rented from adjacent private landowners who also sub-let electricity and water to the MMEs. Electricity costs vary according to usage, from R50 to R200 or more per week. The high cost of this way of accessing electricity, given the significant energy demands of the typical metalwork enterprise, is a common complaint from the MME operators. Such residential and open street operations also tend to fall foul of local government town-planning and land-use zoning regulations, thereby exposing them to harassment or fines from local government officials.

Equipment is an important factor in metalwork, also indicating a constraining element. The most common piece of equipment is arc welding machines, in addition to a range of hand tools appropriate to the tasks. Portability of equipment is important - all tools have to be transported to work regularly in a range of toolboxes and bags. Fourteen of the thirty respondents own a motor vehicle - primarily *bakkies*.

All informal metalworkers both manufacture on orders for clients and sell finished ('off the shelf') products to the public. Purchases of ordered welded items generally incur a 50% deposit, with final payment (usually in cash) on fulfilment of the order. The deposit covers the raw materials and the balance is meant to cover the cost of labour. Zozos, burglar bars, gates and other fittings are installed at the client's premises. Some metalworkers and tinsmiths primarily sell readymade products to passing foot traffic.

In the survey sample the majority of enterprises make gross profits in the vicinity of R5 000 per month or more, from turnover of R8 500 to R13 500 per month. From their stated incomes, but also their ownership of specialized assets such as tools, their prior work experience and skills, most MMEs appear to operate beyond what one would regard as survivalist levels – they tend to be market-oriented or growth-oriented enterprises that add substantial value to the township economy.

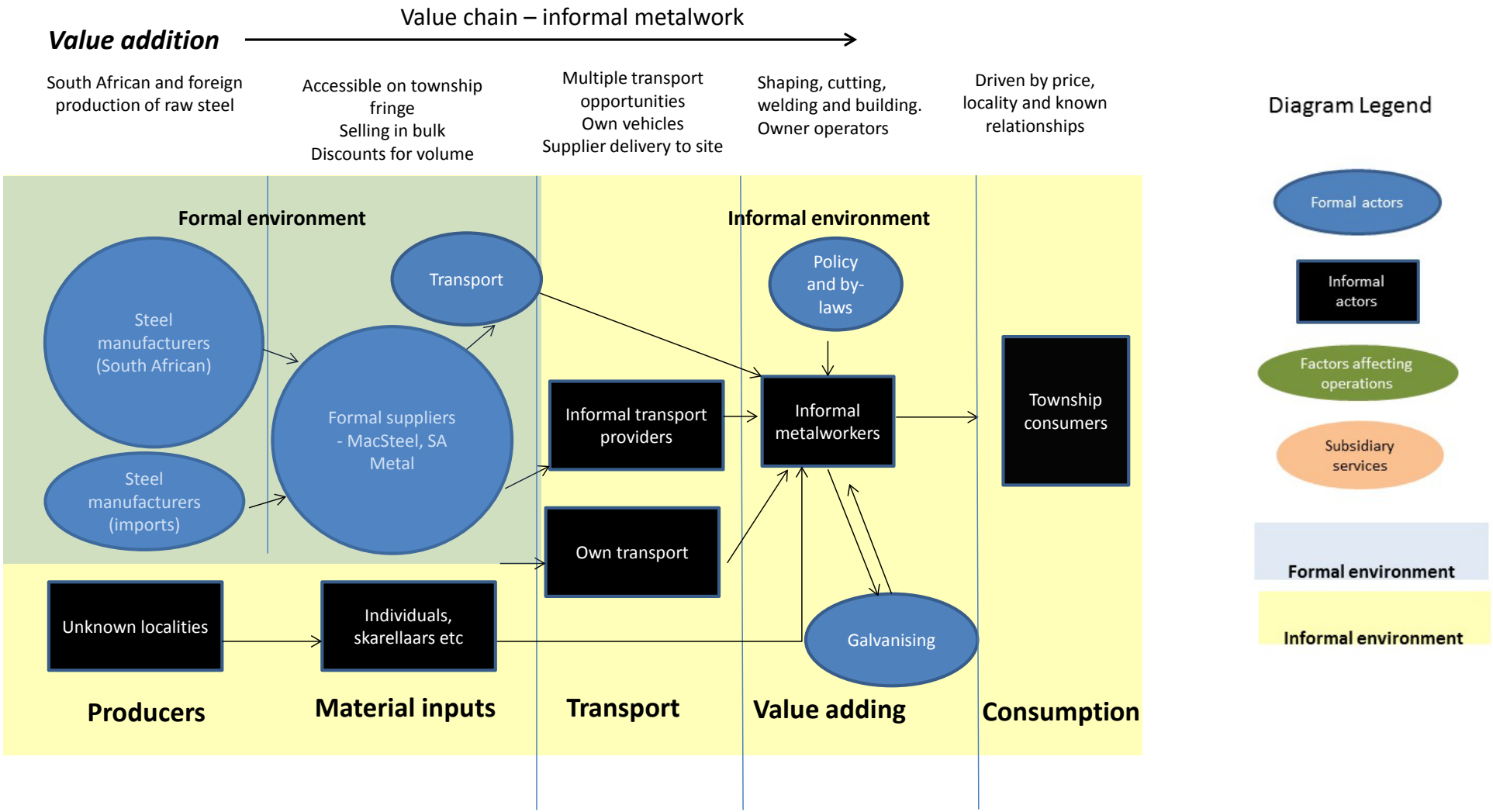
Informal MME supply chains

The research identified a range of interesting aspects regarding the supply chains surrounding this sector – notably how it is connected to the formal sector. Figure 1 shows the flows of material and labour inputs to informal MMEs from the formal and informal sectors, how value is added to the various commodities along the supply chain, as well as the broader operating environment of these enterprises. It reflects how informal MMEs support a formal and informal metal-supply sector (ranging from informal reclaimers to scrap dealers); the supply of transport, electricity and water services as well as real estate; and formal-sector value-adding services such as galvanizing. The overall supply chain is an interwoven network of both formal and informal businesses and operations, which serves to enhance efficiencies for the informal-sector MME operator.

Informal MMEs purchase all their raw steel from formal-sector wholesalers – dominated by a few large enterprises such as SA Metal, Metal Sheet and Afrox – as well as general hardware dealers in industrial areas outside the township. Steel purchases are made on an individual and cash basis, with the average amount per stock purchase being R2 660 (usually tied to customer deposits for orders).

An alternative source of materials is the recycled metal market – with materials mainly sourced from informal waste pickers, scrap collectors and second-hand scrap yards. Such recycled metal originates from both legitimate and illegitimate sources (such as stolen municipal infrastructure). The cost savings of buying second-hand inputs can bring about substantial profit opportunities through enhanced retail margins, even if this requires increased labour inputs to refashion the materials into new products. Nevertheless, none of the informal metalworkers interviewed rely on this source as the mainstay of their input procurement – for them it is not a reliable source.

Figure 1: The supply chain for the informal metalwork business based on data collected from thirty informal metalwork operators



Transport is of high logistical importance to the sector – revealed by relatively high vehicle ownership by MMEs – with enterprises commonly requiring transport of inputs from the wholesaler to a workshop and subsequently to deliver manufactured products (gates, burglar bars, and zozo shacks) to clients. Operators without vehicles commonly rely on transport provided by wholesalers, or hire vehicles from other enterprises in their networks.

The demand side: metalwork customers

The consumer side of the study reveals a reliable and fairly substantive demand for informal sector metalwork. A random survey was conducted in the relevant areas, interviewing 50 potential consumers who are familiar with informal metalworker activities; this sample varied across age (18-60 years), gender (25 male and 25 female) and ethnicity (African and Coloured). It emerged that 37 of them had purchased products from informal metalwork businesses. Since these customers live in the residential township area they signify the primary market for MMEs.

Burglar bars are the most demanded product due to reported high levels of property crime. The average purchase amount per transaction across the sector is R1 050 for burglar bars, rising to R3 000 for prefabricated shacks.

Enhancing informal MME business opportunities: formalisation plus informality

Informal economy metalworkers occupy clear-cut market niches relating to informal construction, security and household items. Despite their informal nature, many of the entrepreneurs demonstrate reasonable business sustainability beyond survivalist levels and deal in local skills and locally-demanded products. Their general wellbeing is apparent in the reasonable scale of asset accumulation such as vehicles and tools. Despite the low local incidence of these businesses (compared to liquor or grocery outlets), the township appears to be a relatively favourable business environment for MME operations. It also presents an important market opportunity to formal and informal steel wholesalers and reclaimers who sell into this market.

In retail informal business activities such as liquor or groceries, profitability is primarily a function of product margins and sales volumes. The metalwork trade is different. Prices for finished products vary evidently due to different (new or reclaimed) raw-material sources as well as the usage of labour. With labour being a manageable and tradeable input, informal MMEs can generate increased value and profit through the efficient employment of skilled workers, sub-contracting and pursuing economies of scale.

As noted, conducting an MME from residential-area sites can constrain profitability due to matters such as noise complaints, strained neighbour relations and illegality. Pavement operations are

exposed to weather and crime, while those that rent water and electricity from local landlords carry a considerable cost. In this way operating informally brings about important limitations to the operations of MMEs: without appropriate business premises or legitimate access to services it is difficult to scale up business activities, meet regulatory requirements or formalize. Furthermore, in terms of growing markets it would appear difficult for many MMEs to attract customers from beyond residential township areas.

On the other hand, informal vehicle hire from local networks rather than purchasing vehicles for transporting goods presents a cost-efficient business strategy. Similarly, by procuring second-hand material inputs, these enterprises benefit from their informality. Such options keep fixed and operational costs low and allow the MMEs flexibility in operations, which can reduce business risks and enhance prospects.

In light of these varied outcomes, supporting the MME sector in a competitive manner requires an approach that utilises elements of formalization to bolster the operational environment and access new markets, but also one that accepts that some degree of informality should continue.

A potentially useful approach would be to create suitable operational environments at low cost. The development of well-situated light-industrial parks (using shipping containers, low-cost buildings and individually-metered three-phase electricity) has the potential to draw together and synergize informal metalwork enterprises; it could also address business legitimacy issues. The clustering of related microenterprises would create a more standardized route for suppliers and product deliveries, allow greater economies of scale in deliveries and provide enhanced physical security for enterprises. At the same time it would create a hub for retail trade in MME products and thus enhanced access to consumer markets.

Such an approach accommodates the nuances of township metalwork micro-enterprises that, amidst their informality, hold inextricable ties with the formal sector. Furthermore, such a targeted approach would contribute towards microenterprise growth and regularisation in an important sector in the same way that value-adding (manufacturing) activity in the formal sector is supported.

References

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