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The Messy Reality of Agglomeration Economies in Urban Informality: Evidence from Nairobi's Handicraft Industry

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Summary. — This paper investigates intermediate input effects and labor pooling in the context of urban informality, examining the handicraft industry of Nairobi, Kenya. The paper tests if conditions found in informality interfere with transition pathways in production clusters. 102 semi-structured interviews were conducted with industry participants, including 69 production firms. Findings confirm the existence of important agglomeration economies, but those benefits are curtailed due to constraints of informality on firms, especially location constraints in urban space. At the same time, informality also introduces particular diseconomies of agglomeration that undermine the value of proximity of firms to each other, particularly within clusters.

Key words — agglomeration, Urban informality, Africa

1. INTRODUCTION

Urban informality as defined herein represents a significant share of employment and housing in many developing world cities and is a frequent research topic touching on important aspects of economic development, urban livelihoods, and human development. Informality and, in particular, the informal economy, is often in the eye of the beholder (Potts, 2008) and has been described as a backward and nagging problem to be overcome by modern industry (Boeke, 1961); a collective act of heroic entrepreneurism and resistance in the face of an ineffectual state (De Soto, 2000); and as a last bastion for survival of the neglected poor of the world (ILO, 1972).

Another frequent research topic also related to economic development, urban livelihoods, and human development, is the effect of agglomeration economies in developing world cities. Scholars have increasing interest in fostering agglomeration effects in the developing world; often seeking to extend the benefits observed in "The Third Italy" (Bianchi, Miller, & Bertini, 1997). The particular agglomeration economies in the Italian context interested scholars because growth came from small- and medium-sized firms such as those which typically dominate urban regions in the developing world. This scholarship focused on industrial districts in the developing world and examined the assumed benefits of agglomeration (Murray, 1990; Nadvi, 1992; Schmitz, 1989; Storper, 1990). These studies led to a special edition devoted to the topic in *World Development* in 1999. This research also generated a literature exclusive to African industrial clusters (McCormick, 1999; McCormick & Oyelaran-Oyeyinka, 2007; Meagher, 2007; Murphy, 2006, 2007; Zeng, 2008). Further, it is argued in *The World Development Report* for 2009, with special emphasis on Africa, that policy makers and development practitioners have largely failed to foster agglomeration economies in the developing world and that policy makers should act with haste to correct these failures (World Bank, 2008).

This paper investigates the relationship between urban informality and agglomeration economies in Nairobi, Kenya. Urban informality is thought to produce a "messy reality" in local applications (Kudva, 2009, p. 1625) that can obscure a clear understanding of relationships, processes, and resource allocation. This study recognizes this messy reality and seeks to create a clearer explanation of the relationship between informality and agglomeration economies by looking at the role of intermediate input effects and labor pooling in the Nairobi handicraft industry, particularly in clustered and non-clustered firms. Research questions include: *What effects of these two agglomeration economies are observable in the industry? Are there confounding influences of informality on these agglomeration economies? If so, how do they work and how do they create problems for cluster development?*

The results of the study suggest that the reality is indeed messy with three dynamics operating simultaneously: (1) while the industry seems to experience important agglomeration benefits such as increasing returns to scale due to access to suppliers, customers, and workers within clusters; (2) those benefits seem to be curtailed due to constraints of informality on firms, especially location constraints in urban space; and (3) at the same time, informality also introduces particular diseconomies of agglomeration that undermine the value of proximity of firms to each other, particularly within clusters. This article concludes by suggesting that the dynamics found in this industry, if widespread in other informal industries may, in part, help explain why informal industrial clusters so often fail to evolve into higher order industrial districts with robust and endogenous agglomeration economies (McCormick, 1999; Van Dijk & Sverrisson, 2003).

2. THEORY

(a) *Urban informality*

The term urban informality, or informality as defined and used throughout this article, includes the suggestion by Lloyd-Evans that the informal sector is "a heterogeneous group of activities and employment relationships that share one common characteristic—the lack of legal recognition, regulation or protection" (2008, p. 1885), and also includes the

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recognition that informality goes beyond the preoccupation with economic production. Therefore, this definition recognizes that informality is an organizing logic that influences governing norms of urbanization (Roy, 2005), housing for much of the urban population in the developing world (Hansen & Vaa, 2004) and the social production of urban space (Kudva, 2009). Informality is understood more as a process of creating spaces of exclusion (Smiley & Koti, 2010) where urban citizens often live their daily lives on the border of legality and legitimacy. However, this concept of informality is so broad that it is difficult to make it operational. All of these characteristics of urban informality will manifest in very local ways, but this article focuses on informal economic production nested in the larger concept. Therefore, operationally, informality is here a function of government registration of firms in which the informal status of urban land and government institutions are considered when appropriate to explain interaction between economic production and informal urban processes and space.

(b) *Informality and agglomeration*

This article deals with two agglomeration economies: *Intermediate input effects*, the benefits accruing to upstream and downstream suppliers due to increased interaction and proximity; and *Labor pooling*, labor search costs savings due to a local concentration of skilled labor.

These effects are described by Marshall (1890) and Krugman (1991). Access to raw materials and intermediate input providers used in the production of final products will likely be important to any industry with several value-added layers and continuously changing designs and customer tastes. Also, access to customers for intermediate and final products are likely to generate "shopping externalities" and other efficiencies where proximity to other producers creates increasing returns to scale. Labor pooling will occur as the density of economic activity for an industry increases in an urban region and employees are drawn to areas where employment opportunities are readily available and employers benefit from a ready "pool" of labor for any present or future need. This effect is particularly important when specific skills are required by an industry. However, we must differentiate between localization economies and urbanization economies regarding both of these effects (Rosenthal & Strange, 2004). Urbanization economies accrue to large urban contexts where diversity of workers, business inputs, and employers creates a positive externality. Localization economies impact high concentrations of same or similar firms because similar firms require similar inputs and because employees with desired skill sets tend to pool near the employers who use them thereby benefiting both employees and employers. This article is primarily concerned with localization effects because it examines a single industry, or more accurately a series of sub-industries. These positive externalities tend to establish clusters of relatively dense agglomerations of firms in the same or similar industries.

The relationship between informal space and agglomeration economies is a research topic gaining increasing interest. Amin (1994) initially provides a skeptical perspective suggesting that informal firms will likely be *unable* to specialize in product development and labor force skills, generate innovations, or rely on "institutional thickness" in terms of available options for conflict resolution and collective action. Murphy (2006, 2007) suggests that informal Tanzanian furniture makers are impacted by proximity to main markets where certain benefits of agglomeration are present, but that spatial patterns expected by agglomeration theory are not fully observed primarily due to firm location decisions that prioritize safety and stability. Similarly, Sonobe, Akoten, and Otsuka (2011) find that prosperous metal workers in Nairobi must leave behind industry clusters in order to grow their business due to congestion and high rates of competition.

McCormick (1999) provides data from six previous studies of African industrial clusters in which she finds limited agglomeration effects due to the forms of competition she observes and the low entry barriers within the industry. The cases studied by McCormick and Oyelaran-Oyeyinka (2007) and Zeng (2008) largely establish that the institutional context undermines the ability of African clusters to source human capital, technology, and other important inputs required for robust agglomeration effects. Meagher's (2007) analysis of informal clusters in Nigeria shows that the combination of structural adjustment policies and state neglect tends to increase the economic pressures on firms causing existing informal networks to fragment into highly counterproductive practices such as design stealing, undercutting, and other types of pernicious competition.

Other studies contain more positive results that suggest informal industries can and do benefit from agglomeration efficiencies. Chirisa (2009) conducted a spatial study of informal production in Harare, Zimbabwe and found that the traditional orienting factors of agglomeration, such as the CBD and industrial zones, were highly relevant and determined spatial relationships for informal firms. Kimura (2011) and Chung (2012) found that ethnic or kinship ties are important conduits for transfer of skills and upgrades to technology in informal clusters. Kinyanjui and Khayesi (2005), Lyons and Snoxell (2005) and Kinyanjui (2010) found that a considerable amount of social capital is created in informal clusters in which firms rely on each other in difficult times to overcome formal institutional weakness. Ali, Peerling, and Zhang (2010) suggested that the lowered entry barriers in informal clusters are a positive externality that allows firms to overcome financing shortfalls. This agrees with the ILO's (1972) longstanding position that informal firms and clusters offer important life-sustaining livelihoods and thus deserve material and policy support.

There is an important dichotomy between the studies that are more positive about agglomeration effects in informal production and those that are less positive. Among *formal* firms, low-tech industries with heavy labor inputs are often cited as a key to successful national development strategies. These industries greatly benefit from healthy agglomeration economies (Fan & Scott, 2003; Scott, 2006). This is especially true of the two effects considered here. In these studies, robust labor pooling and intermediate input effects are important to understanding the success of Asian development strategies. The low-tech/labor-intense qualities of these incipient industries are also definitional aspects of informal industries such as the ones examined in the above cited literature and in this article. As much of the cited literature suggests, there is reason to doubt that agglomeration economies can achieve the same results in informal industries as in formal industries.

However, there is reason for hope that informal production clusters can benefit from agglomeration efficiencies over time. An important paper by Van Dijk and Sverrisson (2003) provides a typology of production clusters in the developing world and mechanisms for transition within clusters. The authors define clusters as "relatively dense networks of enterprises and organizations, the value chains of which are connected but not necessarily through what we usually understand by economic transactions" (p. 185). The authors