

## Capital Is Not Enough: Innovation in Developing Economies

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**ABSTRACT** Economic development and social entrepreneurship often conceive of poverty as a resource allocation problem in which a lack of capital prevents the poor from increasing their income through entrepreneurship. This allocative view, however, represents only one possible approach to conceptualizing entrepreneurial opportunity. The alternative discovery- and creativity-based views place a greater emphasis on innovation which implies that superior ideas are also needed if poverty is to be reduced through firm performance. Drawing from a survey of 201 small business owners involved in a microcredit programme in Nairobi, Kenya, we find that the financial, social, human capital–performance relationships are mediated in part by innovation. Further, we find that differentiation-related innovations lead to better firm performance than novelty-related innovations.

**Keywords:** capital, developing economies, entrepreneurship, expertise, innovation, microcredit, networks, opportunities, poverty, ties

### INTRODUCTION

Over a decade ago, Venkataraman (1997) proposed that the study of how opportunities are recognized and exploited constituted a distinct domain upon which to build the field of entrepreneurship. Since his seminal work, scholarly interest in the topic has not only increased (Ardichvili et al., 2003; Casson, 1995; Dew et al., 2004; Eckhardt and Shane, 2003; Sarason et al., 2006; Shane, 2003; Shane and Venkataraman, 2000), it has evolved with distinctions made among allocative, discovery, and creativity views of opportunity (Sarasvathy et al., 2003). Such distinctions, however, have not yet diffused to the field of development, which includes development economics, social entrepreneurship, and related subsets like microcredit, where the allocative view has received emphasis. According to this allocative view, entrepreneurs seek profit through arbitrage by

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matching existing supply with existing demand, thereby reallocating available resources from less to more efficient uses (Alvarez and Barney, 2004; Kirzner, 1997). As a result, the poor are thought to be precluded from entrepreneurship, not because they have failed to recognize profit potential, but because they lack the capital (human, social, and particularly financial) to exploit those opportunities (Aghion et al., 1999; Fishman and Simhon, 2002; Patrick, 1966; Tzannatos, 1999). In such cases, lack of capital diminishes social welfare not only by denying the poor the capacity to increase their income and improve their standard of living, but also by preventing the development of a marketplace that views them as customers and seeks to serve their needs (Arndt, 1988; Karlan and Morduch, 2009; Prahalad, 2009). Therefore, the underlying logic assumes that, if capital is expanded through efforts like education (human), access to networks (social), or loan availability (financial), then business development will necessarily follow.

Although we would agree that these different forms of capital increase the odds of business formation and its potential success, we are concerned about two implicit assumptions: (1) that each person has the current capacity to use entrepreneurship to escape poverty; and (2) that the allocative view of entrepreneurship will continue to be as effective in the future as it was in the past. There is reason to question both of these assumptions. First, the subset of the population that was first to benefit from financial capital (e.g. microloans) may not be representative of all poor people. Indeed, there is little reason to suspect that people in underdeveloped nations are more entrepreneurial than the general population in developed nations. In developed nations, where capital is presumably more abundant, rates of entrepreneurship tend to hover around only 3–10 per cent of the population (Bosma et al., 2009). Second, the allocative view of entrepreneurship is likely to offer diminishing returns as additional poor people pursue those opportunities that were known to everyone, but simply unexploited because of a lack of capital (Osmani, 1989). As developed nations have become more aware of the benefits of making credit available to the developing world, investment in banking programmes has increased significantly (Daley-Harris, 2007; Fairbourne et al., 2008). With more abundant financial capital, and the increased lending it allows, well-known opportunities are likely to be exploited, leaving the next wave of entrepreneurs to realize diminished returns from similar activities unless they discover or create opportunities that are not already being exploited. Thus, it appears that the discovery and creativity views of entrepreneurship may become increasingly relevant to economic development efforts as capital becomes less scarce.

In contrast to the allocative view, discovery and creativity views of entrepreneurship employ a dynamic, evolutionary perspective of the market process in which new entrants must innovate to create value over and above existing product offerings (McMullen, 2010). The discovery view traces its roots to the work of Hayek (1945), who proposed that entrepreneurs retain and engage in more of those behaviours that are rewarded by the market, as signalled by prices and communicated by profits. This perspective operates according to a logic of learning in which entrepreneurs experiment with new sources of supply or demand. The creativity view is grounded in the works of Buchanan and Vanberg (1994), Sarasvathy (2001), and others who suggest that demand is neither known, nor discovered, but rather co-created through a process of social negotiation among various stakeholders in an effort to arrive at mutual gains or to test the market

using inexpensive investments (an amount that one can afford to lose in order to learn more) (Sarasvathy and Dew, 2005). Neither discovery nor creativity views presume that existing conditions are completely meeting or completely failing to meet people's needs. Consumers are making do with whatever means are available to them (Baker and Nelson, 2005). Although these solutions may not be ideal or anywhere near satisfactory, people are consuming resources in the effort to satisfy their needs to the best extent possible. As a result, there is always competition for any new product offering, even in the absence of formal markets. Innovation is therefore necessary to win business away from current solutions – be they market products or resources provided by non-market sources, such as nature, government, or NGOs. As markets become more efficient, the innovation needed to persuade customers to switch products may require significantly greater technological sophistication and knowledge to create, but the need to demonstrate value-addition in order to win customers is no less likely in under-developed nations where formal markets are absent than it is in developed nations that boast highly efficient markets. Capital – be it human, social, or financial – is important to facilitate the development of business opportunities in competitive markets, but capital itself is not the innovation. The view taken here is that capital is necessary but insufficient for business development and that innovation is a more proximal driver of performance.

The purpose of this study is to combine prior research on poverty alleviation which has emphasized the allocative view of opportunity with the creation and discovery views of opportunity that are at the heart of entrepreneurship scholarship. If economic growth through business development is going to lead to poverty reduction in developing economies, it must be *broad-based* across sectors and *inclusive* of a larger segment of the population to be sustainable (Ianchovichina and Lundstrom, 2009). Microcredit has made considerable progress in making resources available to the poor that provide them the opportunity to be included in the broader economy, but consideration of the discovery and creativity views of entrepreneurship suggest that capital may not be enough. Thus, we ask: Is lack of capital the obstacle preventing the poor from enjoying higher firm performance (and related higher incomes and standards of living), or is it simply a necessary but insufficient condition that must be accompanied by innovation? If innovation is necessary, what types lead to enhanced firm performance in a developing economy, and what are their antecedents?

To address these questions, we conducted a survey of 201 small business owners in Nairobi, Kenya in the context of a microcredit programme. We find that firm performance leads to reduced indications of poverty but that innovation was an important intervening variable for social, business, and individual capital to improve outcomes for business owners. Specifically, we find that the microcredit clients distinguish between differentiation-related innovation, in which newness is determined in relation to competitors' product offerings, and novelty-related innovation, in which newness is determined in relation to the community in which the customer is embedded. We also find that differentiation-related innovations, more than novelty-related innovations, improved the likelihood of firm performance for entrepreneurs.

Our findings contribute to the social entrepreneurship literature and the broader development literature by illustrating that firm formation and job creation is not solely an 'allocative problem' – capital is not enough. Instead, we argue that the firm performance

of poor entrepreneurs is an ‘idea problem’ where the importance of innovation would seem to be as applicable to developing economies as it is to developed nations. However, not all innovation contributes to economic development in the same way. We find that differentiation-related innovation and novelty-related innovation have distinct antecedents and outcomes for the entrepreneur, such that entrepreneurs in developing economies are likely to exhibit a greater preference than entrepreneurs in developed economies for differentiation-related innovation. Because it focuses more on rent seeking than rent creation, differentiation-related innovation may be less likely than novelty-related innovation to contribute to economic growth. Given that it is the mission of many development agencies to contribute to improvements in social as well as private welfare and that contextual incentives in developing economies may encourage a preference for differentiation-related innovation over novelty-related innovation despite the fact that it is less likely to contribute to economic growth and improvements in social welfare, our findings suggest that development agencies offering credit may wish to take a more active role in screening business ideas during the loan origination process.

The remainder of the article proceeds as follows. After a brief overview of poverty theories, we link our dependent variable in this study, firm performance, to poverty reduction. Next, we examine why innovation, both novelty-related and differentiation-related, is linked to firm performance. As illustrated in Figure 1, we then examine social, business, and individual antecedents, and their direct effects, on both innovation and

**Forms of Capital**

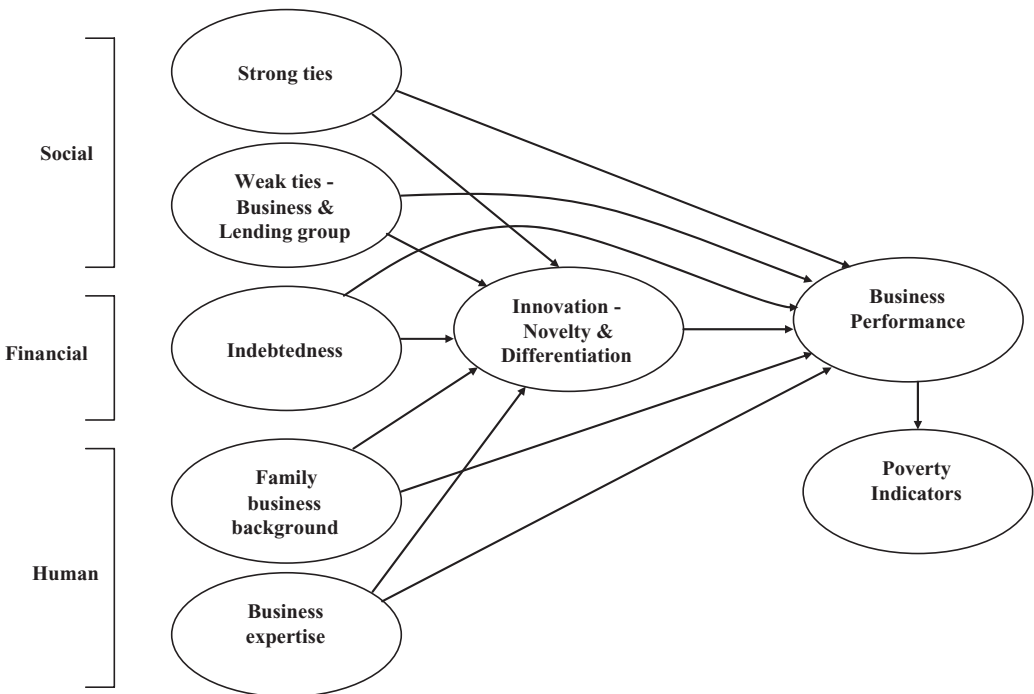


Figure 1. Proposed conceptual model of microenterprise performance in a developing economy

firm performance in the context of a developing economy. Finally, we discuss the implications of our findings to the field of development.

## THEORY AND HYPOTHESES

### Poverty

Though definitions vary, there is a general consensus that poverty is the inability of an individual to address basic human needs, such as food, clean water, shelter, and access to medical care (Bradshaw, 2007). This definition is consistent with the concept of absolute poverty which employs a threshold or standard as its criterion in determining who is poor – e.g. those living on less than US\$2 per day (World Bank, 2000). Though it is not our focus in this study, poverty can also be discussed in relative terms, emphasizing the inequality in a particular society (Valentine, 1968). Whether absolute or relative, however, poverty is an imbalance in the allocation of resources within a given context for which researchers have proposed a number of distinct explanations (Blank, 2003). We describe the four most prominent.

Poverty as ‘individual deficiency’ focuses primarily on the characteristics of the person. Consequently, poverty is either self-imposed through decision making, level of motivation, or work attitudes (Bradshaw, 2007; Murray, 1990), or superimposed by external misallocation of resources, such as when an individual’s choice set is constrained by lack of access to education, nutrition, job opportunities, and other basic resources needed to overcome individual deficiencies in knowledge, skills, and decision making (Sen, 1999). Poverty as ‘structural failing’ looks beyond the individual to economic, social, and political systems that prevent standards of living from rising. For example, failure of the economic system to provide an adequate number of higher salaried jobs or lack of proper education and technical training are structural barriers that can lead to greater levels of poverty (Chubb and Moe, 1996; Quigley, 2003; Rank, 2004). Poverty as ‘cultural deficiency’ offers the notion that enduring sets of beliefs and values concerning issues of work, the importance of education, and the role of an individual in society can be transmitted across generations, resulting in a disenfranchised subset of society or ‘underclass’ with a culture of poverty (Murray, 1990). This poverty culture makes it more difficult for individuals living within that segment of society to deviate from accepted norms of behaviour that contribute to the segment’s impoverishment (Huntington and Harrison, 2000). Because the cultural factors leading to poverty can become ingrained at the national level, this perspective may be particularly important for the efficacy of change efforts in less developed nations (Lindsay, 2000).

The final perspective, which our study examines, identifies poverty as ‘a capacity or opportunity deficiency’. Together, uncertainty and a lack of capital (both social and economic) create a vulnerability for those with less in any given society by limiting their horizon of possibilities (Chakravarti, 2006). Expanding capacity for the poor provides greater choices and increases the opportunity for ‘voice’ and ‘exit’ regarding their situation (Hirschman, 1970). Suggestions for capacity expansion through asset accumulation (De Soto, 2003; Moser, 2007) or access to capital through microcredit (Parsons, 2007; Yunus, 2008) have garnered much attention recently, based on the assumption

that this capital will unleash greater opportunities for income development through firm formation.

### **Poverty, Firm Formation, and Firm Performance**

The decision to create a firm is an occupational choice. Ideally, an individual would face the decision of working for a wage at the prevailing rate or becoming an entrepreneur where income is derived from the output of a firm's use of capital, labour, and the entrepreneurial ability of the individual (Lucas, 1978). In the absence of constraint, each individual would weigh the profit from self-employment with the prevailing wage in the labour market and choose the occupation with higher earnings (De Mel et al., 2008).

Assumptions of constraint-free choice and choice itself may be problematic, however, especially in the context of a developing economy. We know, for instance, that constraints on choice are almost always present, even in developed nations (e.g. financial constraints; Blanchflower and Oswald, 1998). In developing economies, weak institutions make transactions within and across firms even more uncertain and costly, further restricting the range of exchange possibilities (North, 1987). Higher agency concerns in these economies tend to limit specialization by forcing the entrepreneur to fulfil many roles as a jack-of-all-trades (Lazear, 2005). Moreover, because wage employment in developing economies is often dependent on formal education and/or social connections, the poor may find themselves with little choice but to start businesses in an effort to provide for their basic needs (Bhola et al., 2006; Minniti and Bygrave, 2005). Therefore, the decision to start a business and the type of business chosen will be a function of both the environment and the human, financial, and social capital available.

Greater opportunities in the labour markets and stronger social safety nets in developed nations make it less likely that entrepreneurs will start businesses out of necessity (McMullen et al., 2008). Instead, entrepreneurs start new businesses predominately to take advantage of market opportunities – i.e. opportunity-based entrepreneurship. Like necessity-based entrepreneurship, opportunity-based entrepreneurship is likely to be the activity that promises the highest expected return at the moment of decision. But unlike necessity-based entrepreneurship, opportunity-based entrepreneurship is not a forced choice that is thrust upon the entrepreneur (McMullen et al., 2008). Consequently, opportunity-based entrepreneurship allows for planning, due diligence, and preparation. Its pursuit is entered into voluntarily by the entrepreneur and is therefore likely to be the activity that promises the highest expected return among choice sets from many different points in time.

Necessity-based entrepreneurs, by contrast, are less likely to engage in a thorough search for innovative opportunities and are more likely to focus on imitative opportunities that are well-recognized (Matin et al., 2002). These imitative opportunities are easier to identify and require less capital, but they are also more likely to be pursued by others, and therefore more susceptible to diminishing returns. The likelihood that necessity-based entrepreneurs might realize less fruit from their labours than opportunity-based entrepreneurs does not mean that they will not realize any benefit. Indeed, it is quite possible that necessity-based entrepreneurs have greater motivation to develop their

businesses than opportunity-based entrepreneurs who may have other options (Homans, 1974, p. 32). We expect both opportunity- and necessity-based businesses to generate resources needed to improve poverty indicators related to housing, access to nutritious food, access to medical care, and the like, but we expect firm performance associated with opportunity-based entrepreneurship to be greater than firm performance from necessity-based entrepreneurship. Thus,

*Hypothesis 1:* In a developing economy, firm performance will be associated with reduced indications of poverty, and this reduction will be greater for opportunity-based than necessity-based entrepreneurs.

### **Innovation and Firm Performance**

Innovation is central to economic change. Whether these changes are ‘radical’ or ‘incremental’, they play an important role in economic growth beyond the traditional inputs of labour, capital, or scale effects (Mokyr, 1992; Schumpeter, 1934). Differences in factor productivity associated with innovation have been shown to account for almost half the differences in incomes across countries (Hall and Jones, 1999; Romer, 1990). This has resulted in significant efforts to understand the source and diffusion of technological change and introduce appropriate industrial policy (Dosi, 1982; Freeman, 1994). In contrast, innovation in developing countries has often centred on changes in institutions or infrastructure that address efficiency issues in the use of land, labour, and resources in production (Powell, 2008). Recently, more attention has been directed towards market innovation in the developing world as well (Aubert, 2010; Mendoza and Thelen, 2008; World Bank, 2010).

Innovation in new ventures requires entrepreneurs to imagine something novel, refine those ideas, make an initial investment, and justify their venture to key stakeholders who can offer support and legitimacy (Cornelissen and Clarke, 2010). Although the capacity to innovate is partly determined by knowledge and motivation (McMullen and Shepherd, 2006), the poor in developing countries may face additional obstacles as well. These may include inefficient formal institutions – e.g. inadequate creation or enforcement of property rights grounded in the rule of law (Rodrik, 2000), low transaction governance capacity (Pralhad, 2009), etc. – or debilitating informal institutions that discourage or entirely prevent the belief that change is possible – what Appadurai (2004) calls a limited ‘capacity to aspire’. Such ambivalence about the horizon of possibilities can manifest from historical conditioning or prior failed attempts to alter conditions.

Efficient institutions are likely to encourage the introduction of variance to the market in the form of innovation as a matter of competitive necessity. As the efficiency of institutions increases, transaction costs diminish, and markets become more efficient (North, 1987). In such cases, new products must compete against a broader array of product offerings, requiring them to be even more novel and useful than if they were introduced to markets that were embedded in highly inefficient institutions. Less efficient markets, by contrast, imply that unmet demand exists because of insufficient supply. Consequently, product offerings may not have to be as novel to compete. Consistent with

this logic, our observations during data collection in Kenya mirrored those of others who have also examined entrepreneurship in nations with less efficient institutions (Matin et al., 2002). Businesses started by the poor appeared quite similar – i.e. products such as goods (e.g. fruits or canned goods) or basic services with some unusual exceptions were offered. Similar examinations in Indonesia (Bradley et al., 2011), however, find the poor starting more novel types of businesses – perhaps revealing greater capability or capacity to pursue higher variance opportunities owing to the different institutional context. Novelty may be a ‘price of admission’ that increases with the efficiency of the market. As a result, a lack of it may serve to deter entrepreneurship in developed nations more than in developing economies where competition appears to emphasize minor differences between highly similar products. Therefore, it is important to understand both theoretically and empirically whether the types of innovation that drive economic growth in developed nations can be implemented in developing economies and what types of innovation will have the greatest benefit for the poor who are trying to start businesses in those countries.

*Dimensions of innovation.* Schumpeter (1934) described innovations both *by type* (product, process, marketing, and organizational) as well as *by degree* – what we will call differentiation-related or novelty-related innovations. Differentiation-related innovation is concerned primarily with how entrepreneurs position their products in relation to the competition. Do they make them differently, do they distribute them differently, do their products meet customers’ needs differently, do they offer their products less expensively, and do they attract customers differently? In each instance, the focus is on how entrepreneurs have innovated to differentiate their products from incumbents. This implies that markets already exist and that entrepreneurial performance is a matter of outcompeting incumbents. In contrast, novelty-related innovation is concerned primarily with new sources of demand or supply. Is the product new to local, national, and/or international markets? Has the entrepreneur found a new source of supply? Are they introducing customers to a product that these customers were previously unaware of? This dimension of innovation emphasizes new markets and their creation. The entrepreneur is, in effect, taking known sources of supply to unknown sources of demand, unknown sources of supply to known sources of demand, or creating demand by making people aware of supply (Sarasvathy et al., 2003).

For developed nations, early models of Schumpeter’s lone entrepreneur introducing innovations to the price system have been superseded by the notion that innovation is a process that involves a network of actors who rely heavily on interactions with customers, suppliers, and a range of institutions outside the firm (Garud and Karnoe, 2003; Laursen and Salter, 2006; Von Hippel, 1988). As a result, technical change occurs more quickly and knowledge diffuses rapidly as common technological standards and ‘open models’ of innovation speed the adoption of new products and processes (Chesbrough, 2003) and innovators band together in teams or coalitions that are based on ‘swift trust’ networks (Laursen and Salter, 2006).

Evidence suggests that innovation generally has a positive relationship with performance, whether through internal efforts at R&D (Löf and Heshmati, 2006) or through more collective efforts with external partners (Garud and Karnoe, 2003). The challenge,



however, becomes sustaining performance in innovative environments where knowledge spreads rapidly. When competitors are investing more heavily in search of technological opportunities, firms may have to increase the novelty of their innovations to maintain higher performance. Examinations of the robotics (Katila and Ahuja, 2002) and hard drive industries (Christensen, 1997), for example, suggest that search for more novel products leads to greater innovation and overall firm performance in developed nations. Thus, radical innovations provide a greater first-mover advantage and the opportunity to generate higher rents.

The need for differentiation through innovation increases whenever consumers have choices. D'Aunno et al. (2000) note, for example, that when service organizations are located in close geographical proximity, it is difficult for all competitors to stay in the market. However, they also suggest that the search for acceptable and successful new templates is contingent on strong institutional forces, such as states awarding funds directly to organizations to support their efforts to find and implement alternative templates or norms of governance and property rights that give decision making discretion to local entities (Fligstein, 1996). Finally, they found that organizations would mimic models of divergent change that were provided by non-local, but equivalent peers. That is, organizations are likely to mimic behaviour that they can observe among peers embedded in similar institutional and resource environments (Greve, 1998; Martin et al., 1998).

In developing economies, we would also expect innovation to be important, though the types and degree of innovations may differ for several reasons. Innovation does not necessarily require extension of the knowledge frontier. Indeed, an innovation may be new only to the focal society (McMullen, 2011). Innovative uses of technologies such as cell phones, for example, have had dramatic impacts on banking, trade, and health care, often exceeding the economic impact of the technology in developed nations (Aubert, 2010). Developing economies are also likely to present distinct challenges that influence innovation. For example, financing for new ventures is scarce and rates are high due to greater uncertainty in the environment (Beck and Demirguc-Kunt, 2008). Property rights for knowledge capital can be underdeveloped, providing those who invest in innovation with little protection from piracy. The rule of law may also be impaired or absent, creating agency problems even when property rights are in place (McMullen, 2011). Thus, political and social connections should matter more when institutional environments are hostile (De Mel et al., 2008). At the firm level, labour regulations can make hiring and firing and finding employees with specific levels of schooling or expertise more difficult. On the whole, transaction costs are higher (McMullen et al., 2008), making arm's length transactions more difficult (Zacharakis et al., 2007) and altering the collaborative nature and implementation of innovations.

For the extremely poor in developing economies, innovation in entrepreneurial activity is also important. Prior work indicates that the creation of imitative businesses within microcredit groups offers diminished returns that make loan repayment more difficult (Bateman and Chang, 2008; Davis, 2006; Olson, 1996). Randomized experiments with microcredit groups in Peru revealed that receiving entrepreneurship education, which included marketing and product placement training, provided increased revenues for clients. The novelty of a good idea implies, however, that one must bear additional

uncertainty to pursue it; unfortunately, the poor may not be in a position to bear even minimal amounts of additional uncertainty. If the line between success and failure is razor thin, there is little room for error without running the risk of not being able to repay the microcredit loan (Bruton et al., 2011). Thus, limited resources and competition require the poor to be resourceful and innovative, but the severity of this scarcity also prevents them from being any more innovative than absolutely necessary to generate revenue for the business. Therefore, adopting currently accepted technologies from developed countries provides legitimacy that allows access to resources and reduces uncertainty regarding acceptance of new products or services (Cornelissen and Clarke, 2010). For these entrepreneurs, differentiation-related innovation would not only appear to be more likely than novelty-related innovation; we would expect it to lead to higher firm performance. For differentiation-related innovations, the entrepreneur does not have to inform or educate consumers about the value of her product for solving or addressing their problems. Instead, she merely has to persuade customers that her product is superior to the product offerings they currently use. Thus,

*Hypothesis 2:* In a developing economy, innovation will have a positive relationship with firm performance, but differentiation-related innovations will be associated with higher performance than novelty-related innovations.

### **Financial Capital, Innovation, and Firm Performance**

Financial capital availability has been important to studies of firm survival and performance across literatures in economics (e.g. Holtz-Eakin et al., 1994), development (e.g. Demirgüç-Kunt et al., 2008; Patrick, 1966), and entrepreneurship (e.g. Bates, 1995; Cooper et al., 1988). Financial resources provide time to identify or develop products and to find a favourable position in the market. They can also signal to potential customers and suppliers that a firm is viable (Eisenhardt and Schoonhoven, 1996). Financial resources have been associated with increased self-employment earnings (Holtz-Eakin et al., 1994) and the amount of income owners can take out of their businesses (Gimeno et al., 1997). Obtaining start-up funds, however, is challenging regardless of the economic setting. Because of information asymmetry and uncertainty about the business opportunity, lenders can be reluctant unless collateral or a high rate of return is available to justify the risk (Shane, 2003). This situation is exacerbated in countries where weak political economic institutions – e.g. lack of property rights established and enforced by the rule of law – leave the poor without collateral (Powell, 2008). Microcredit overcomes these institutional voids by using social collateral where groups agree to be jointly liable for each other's loans, even when there are no physical assets available (Webb et al., 2010). Some evidence has been generated showing that credit improved participants' ability to generate income and smooth household consumption (Hashemi et al., 1996; Hossain, 1988; Pitt and Khandker, 1998). As a result of the publicity given microcredit (Yunus, 1999), small loans to the poor, who are often without collateral, have risen rapidly to over 3100 lending institutions working with approximately 92 million clients around the world as of 2004 (Fairbourne et al., 2008). Although there are encouraging signs from microcredit, we believe that the nature of these

resources and the developing economy in which they are sourced differ from capital available in developed markets and will lead to divergences in innovation and firm performance.

Available financial capital in developed nations is derived from several sources. Debt can be acquired by using assets for collateral or equity can be obtained from investors. In either case, there is typically a careful screening process in which the viability of the business idea is examined by outside bankers or investors to estimate the level of risk and potential return. Financial capital can also be traced to organizational slack where resources exceed current obligations. Available slack – in the form of cash – provides readily accessible resources, whereas potential slack – the ratio of debt to equity – indicates the amount of resources against which one may borrow. Studies find that these varieties of capital generally have a positive or an inverse-U-shaped relationship with innovation (Greve, 2003; Nohria and Gulati, 1996) and performance (Bradley et al., 2010a; Daniel et al., 2004; George, 2005).

In contrast, financial capital from microcredit loans in developing economies is a form of indebtedness characterized by minimal loan screening by the lender and a lack of physical collateral. Microcredit lenders reduce transaction costs of small loans by relying on lending groups to select their own members and to monitor and collect delinquent payments (De Aghion and Morduch, 2005). Less attention is given to the business opportunity pursued because it is often assumed that the member ‘can put into practice the skills that they already know . . .’ (Yunus, 1999, p. 140). Instead, screening is more often based on the trustworthiness of the individual and the number of ties to other group members (De Aghion and Morduch, 2005). A lack of collateral means that the risk to the individual is fundamentally high. Because of a lack of equity and highly leveraged debt to assets (assuming any have been accumulated by the borrower) ratio, there is essentially no potential slack. Even though peer pressure reduces risk for the lender, personal or environmental shocks that impact the ability to conduct business can have dire consequences for the individual (Bruton et al., 2011).

Easy access to credit has broader market implications. Schumpeter (1939) observed that speculation often occurs at the genesis of new industries, technologies, or geographic markets when potential gains are misjudged and too much capital is attracted to new ventures. This easy credit can distort pricing through false perceptions of demand as evidenced during the technology bubble (Wheale and Amin, 2003). As opportunities are exploited, information diffuses to other members of society with little to no acquisition cost, allowing followers to imitate the innovator and capture a portion of the innovator’s entrepreneurial profit. Though imitating entrepreneurs may at first serve to validate that market demand is indeed increasing, their continued entry into the market increases competitive pressures (Hannan and Freeman, 1984), such that costs from new entrants exceed the benefits and entrepreneurial profit becomes divided among too many actors (Schumpeter, 1934). Evidence of such decreasing marginal rates of return to microcredit has been seen in Bangladesh where increasing percentages of the employed population work in the informal sector where they compete in low skill service industries (Davis, 2006). In India, agriculture is increasingly done on small plots of land where there is little opportunity to see gains to productivity through innovation from scale (Dichter

and Harper, 2007). Greater microcredit loan size is often equated with an expanding business. Given the imitative nature of many microcredit businesses, we expect that larger loans may indicate an attempt to match returns of prior years or of other competitors by expanding businesses that are beginning to experience decreasing marginal rates of returns. When unsuccessful, larger loans may indicate attempts to make ends meet by smoothing personal consumption (Morduch, 1998). Thus, we expect that:

*Hypothesis 3:* In a developing economy, indebtedness will have (a) a negative relationship with innovation, and (b) a negative relationship with firm performance.

### **Social Capital, Innovation, and Firm Performance**

Because it is enmeshed in social relations of varying configurations, business development is more than a function of economic exchange. This involves a change in the kind, rather than the degree, of embeddedness (Woolcock, 1998). Granovetter (1985) noted that firms are explained by 'structures of personal relations and networks of relations between and within firms'. These social networks contribute to the range of information available to entrepreneurs and thus their ability to recognize and act on entrepreneurial opportunities (Hoang and Antoncic, 2003). Although entrepreneurs have some level of knowledge and capabilities, complementary resources are often needed to produce and deliver goods or services (Teece, 1987). Networks provide access to resources such as business financing, marketing advice, and distribution channels (Hansen, 1995). The composition of social networks also affects the type and heterogeneity of information available, which, in turn, affects the types of opportunities pursued. The extent to which entrepreneurs innovate and execute their business ideas is seen, therefore, to be a function of the social network in which they are embedded as well as the relative strength of ties within that social network (Ruef, 2002). Whether individuals form a closer or broader network of social relationships is a function of the social capital in a society (Fukuyama, 2002) and may lead to differing drivers for business innovation and performance in developed versus developing nations.

*Strong ties.* Family and close friends are those with which we spend considerable time, have higher emotional intensity, and greater intimacy, creating 'strong ties'. There is a greater likelihood that family and friends will be socially involved with one another, creating a higher density network of relational lines (Granovetter, 1982). Entrepreneurs in developed nations often rely on strong ties at founding, particularly for early stage funding and emotional support (Gimeno et al., 1997; Shane, 2003). Reliance on strong ties in developing economies has an additional motivation. A distrust of institutions and lax enforcement of contracts require greater reliance on strong tie family networks or close trust relationships for a wide range of economic activities (Humphrey and Schmitz, 1998; Zacharakis et al., 2007). For example, Chinese businesses in Asia have relied extensively on family firms as an imperfect substitute for rule of law (Fukuyama, 1996; Redding, 1996). Evidence suggests that young firms are more likely to survive (Brüderl and Preisendörfer, 1998) and have greater profitability through strong ties (Aldrich et al., 1987). The downside to reliance on a small circle of trust is the limitations of potential

resources and market size that an extra-community network might provide (Woolcock, 1998). Further, because family and close friends tend to move in the same circles, the information exchanged overlaps considerably with what is already known, reducing its novelty. Additionally, deference to traditional approaches, because of either prior success (Levitt and March, 1988) or social custom (Fukuyama, 2002) will reduce the likelihood of exploring either novel or more incremental innovations. If this is the primary source of a business idea, it is less likely that an entrepreneur will be alert to discovery of innovations, create novel combinations, or explore new markets. Thus,

*Hypothesis 4:* In a developing economy, strong ties will have (a) a negative effect on novelty and differentiation-related innovation, and (b) a positive effect on firm performance.

*Weak ties.* Information is also exchanged between acquaintances like buyers and suppliers with whom there is regular contact, but reduced interpersonal connection when compared to strong ties. There is a reduced likelihood that the buyers and suppliers of a particular entrepreneur have social interactions, creating a lower density relational network (Granovetter, 1982). Weak ties provide alternative sources of information that might not be directly available to a particular individual. Access to this additional information can be combined with current knowledge to discover or create non-obvious opportunities in the market (Shepherd et al., 2007). Ruef's (2002) study of entrepreneurial teams found that young start-ups generated more innovative ideas when weak-ties networks were greater. The empirical link between weak ties and firm performance in young firms has been limited (Hoang and Antoncic, 2003), but evidence suggests that new firms often use broader networks to acquire resources (Starr and MacMillan, 1990) and that the link between weak ties network and performance increases with age (Hoang and Antoncic, 2003). In developing economies, microcredit institutions also rely on social networks for business development where institutional controls or collateral are absent. Group members have extensive contact which provides the opportunity to develop new or deepen already existing social relationships within the group (Anthony, 2005). The lending groups also have incentive to bring new information to other group members to help with their businesses and increase likelihood of loan repayment. This may lead to greater breadth of both differentiation- and novelty-related innovation. Although weak ties may lead to more novel innovations, we expect that reliance on these more diverse networks may diminish firm performance in developing economies. If an entrepreneur's business ideas are primarily from outside the close trust family, it may be a signal that the individual has fewer resources or power (Woolcock, 1998). Weak ties may also be 'leak points' for opportunities, leading to arbitrage of ideas that promise high profit potential. If trust in the culture is low, and there is little enforcement of contracts, then weak ties may become liabilities in terms of firm performance. Thus,

*Hypothesis 5:* In a developing economy, weak ties from business and lending group networks will have (a) a positive effect on novelty and differentiation-related innovation, and (b) a negative effect on firm performance.

## Human Capital, Innovation, and Firm Performance

Given the importance of social factors (Carroll and Hannan, 2000) and resources for new firm opportunities (Pfeffer and Salancik, 1978), it would be easy to overlook individuals in the business development process – particularly those that are disadvantaged with seemingly little capacity. However, research has consistently and powerfully shown that individuals are at the centre of the means and motives required to take action on opportunities in the face of significant uncertainty (McMullen and Shepherd, 2006; Shane, 2003). Two individual factors that may provide greater discernment in discovering or creating new means–end combinations over and above general characteristics (e.g. education, age) are family business background and business expertise.

Exposure to family business allows an individual to learn how to start and develop a business either through apprenticeship or vicariously. Many of the information and skills necessary for decision making are not codified but are learned tacitly (Polanyi, 1966). Exposure through family business can be valuable in opportunity discovery and creation (Busenitz and Lau, 1996) and further exploitation (Delmar and Davidsson, 2000; Dunn and Holtz-Eakin, 2000). The value of family business experience may work two ways. Entrepreneurs must believe that the utility of pursuing an opportunity is greater than spending time elsewhere (Douglas and Shepherd, 2002). If they have seen business models and ideas through family or close friends that have succeeded or failed, then their expertise in evaluating this opportunity will be greater (Amit et al., 1993). Prior history in observing a specific industry with particular products, suppliers, customers, and routines is likely to lead to ideas that are recombinations using that knowledge set. The ability to access resources is also more likely for an industry in which there is prior knowledge. As a result, any new business development is more likely to be incremental than novel in nature, improving the likelihood of increased revenue generation. Thus,

*Hypothesis 6:* In a developing economy, family business experience will have (a) a positive relationship with differentiation-related innovations, (b) a negative relationship with novelty-related innovations, and (c) a positive relationship with firm performance.

Hayek (1945) argued that a significant portion of knowledge is specific to time and place. As a result, those who have acquired this knowledge through prior business experience or training may see opportunities for innovations that will not be recognized by all actors in a particular market. Expertise enables entrepreneurs to ask the right questions, increasing their effectiveness during information gathering (Cooper et al., 1995). Business expertise also provides valuable knowledge about financing and developing the business. Knowledge from prior business exposure or superior training increases confidence in opportunity exploration (Begley and Tan, 2001) and the likelihood of new business development (Reuber and Fischer, 1993). In contrast to family business experience where prior routines are likely to be stronger, business expertise should allow an entrepreneur greater latitude in exploring new combinations. Prior knowledge from training and experience provides the entrepreneur with an understanding of ‘how things

are done' in uncertain contexts, leading to improved outcomes, as Karlan and colleagues found through experiments of business training with microcredit clients in Peru (Karlan and Valdivia, 2007). Therefore,

*Hypothesis 7:* In a developing economy, business expertise will have a positive relationship with (a) differentiation-related innovations, (b) novelty-related innovations, and (c) firm performance.

## METHODS

### Population and Sample

The fieldwork for this study was conducted in two phases. In the first phase, a pilot study was conducted with a microcredit agency in the summer of 2009 in the Dominican Republic. Surveys from 51 microcredit clients were collected and analysed. Survey items that were unclear were modified or eliminated based on this initial sample. A second set of surveys were collected in the autumn of 2009 in Nairobi, Kenya with a microcredit agency whose regional office serves around 4000 clients with 9 credit officers. Each officer has specific groups that they visit every week. The officers attend the meetings, oversee the loan repayments and savings collections, and resolve group issues. The selection of groups was random in the sense that the groups chosen were those that happened to meet on the days data were collected. Four fieldworkers collecting data worked alongside each credit officer. The microcredit groups were diverse, representing the spectrum of industries seen in microfinance firms across the agency.<sup>[1]</sup> Surveys were conducted within the urban centre where clients were conversant or literate in English. A pilot test was conducted prior to the larger data collection effort to ensure that the questions were well understood and also to assess the time required to complete the questionnaire. The credit officers and fieldworkers made an appeal to the loan recipients to participate in an important and voluntary survey; a reward was offered to those who completed the questionnaire. Because members of each group chose to participate, the sample was representative of the surveyed groups. The fieldworkers and supervisors verified completion of the questionnaires, providing 201 samples for further analysis.

### Variables

*Poverty indicators.* Poverty indicators were adapted from a scorecard (Chen et al., 2008) using data from the Welfare Monitoring Survey (Government of Kenya, 2000). The scorecard isolates variables that are highly predictive and easily measurable indicators that a family will be below five poverty lines: Kenya's national poverty line, Kenya's 'food' poverty line, the 'extreme' poverty line used by the United States Agency for International Development (USAID) for microfinance reporting, \$1/day, or \$2/day. The items are screened with an entropy based 'uncertainty coefficient' from a list of 100 potential indicators. The final poverty indicators map well with other earlier approaches (Sahn and Stifel, 2003; Stifel and Christiaensen, 2007; Zeller et al., 2006). For *housing*, we measured home ownership, wall/roof construction materials, floor materials, and

electricity service. *Nourishment* was the number of meals per day, amount of meat in the diet, and access to clean water. *Education* was measured as child schooling – public, private, or none. *Medical* was the location where general medical care needs are met and whether children have received vaccinations. *Resources* were measured by telephone service and whether the client owns a radio/DVD. *Necessity/opportunity-based entrepreneurship* was two indicators from the Panel Study on Entrepreneurial Dynamics (PSED) related to opportunity costs relative to other employment opportunities.

*Dependent variable.* The dependent variable was *firm performance* measured as profit relative to the prior year (increased, decreased, or stayed about the same). Profits are a key indicator of success for entrepreneurs. They indicate achievement of sales relative to costs and are used as a basis for comparison to competitor performance (Bracker and Pearson, 1986). Lenders also use the figure to determine the level of debt a business can support. Particularly in a development context, revenues that exceed expenses provide income that can be used to purchase basic necessities and improve living standards. The perceptual measure was appropriate in this study as financial statements were not available. The respondents were also asked to report a specific figure with the question ‘How much did your profit change since last year?’, but the response rate was lower ( $n = 71$ ) than the perceptual measure. This number divided by reported total sales had a correlation of 0.61 with our measure.

*Covariates.* At the business level, we measured three social structure variables that influence the ability to innovate in the marketplace and generate profits. Following the approach used by Ruef (2002), entrepreneurs were asked the source of their initial business idea using a *non-mutually exclusive* coding scheme. *Strong ties* were with the number of family members or friends involved with the business. *Weak ties* were with the number of business associates such as customers or suppliers involved with the business. We added the category of *lending group ties* for discussions with microfinance group members. It could be argued that the lending group is either a strong tie or weak tie depending on the strength of group member relationships. We were interested in the separate idea generation that might occur in microfinance groups; the correlations were not unreasonably high at 0.39 and 0.50 with strong ties and weak ties, respectively. We also measured *indebtedness* as current loan size. Previous studies have shown that capitalization through loans is associated with increased entrepreneurial activity in transition economies (McMillan and Woodruff, 2002) as well as an increased level of income available from the business (Gimeno et al., 1997).

Founder backgrounds were also examined as explanatory variables for innovation and performance. *Family business experience* was a dummy variable measure of the question: ‘Did your parents ever work for themselves or run their own businesses?’. Children of business owners learn information and necessary skills to exploit opportunities and have shown higher rates of firm formation (Delmar and Davidsson, 2000) and incomes (Lentz and Laband, 1990). *Business expertise* was a relative perceptual measure of technical skills or business training in comparison to competitors on a 1–5 Likert scale. This measure had a significant correlation to prior work experience in the same industry ( $p < 0.05$ ). Entrepreneurs with more specific education and work experience are more likely to



recognize opportunities (Casson, 2005) and to exploit those opportunities (Roberts, 1991).

Innovation as a change in products, processes, or markets that adds value was measured in two forms. *Novelty-related innovations* are disequilibrating actions in which entrepreneurs act on new information, usually created by changes in the market, that allow the recombination of resources into more valuable forms that generate a profit (Schumpeter, 1934; Shane and Venkataraman, 2000). Schumpeter offered a typology of five forms of innovation: new products or services, new geographical markets, new raw materials, new methods of production, and the reorganization of industries (Schumpeter, 1934). We created seven items based on this typology that were appropriate for a development context, for example, 'The product or service I am offering is new to the local market'. *Differentiation-related innovations* are equilibrating actions in which entrepreneurs respond to shortages and surpluses in the market created by incomplete information through resource acquisition, resource recombination, and sales with the hope of making a profit (Kirzner, 1997; Loasby, 1982; Rosen, 1997). Prior studies have focused on measuring alertness in the discovery process from Kirzner's work rather than the actions they take (Busenitz, 1996; Kaish and Gilad, 1991). Therefore, we created five items along the lines of the Schumpeter typology, except that the items emphasize equilibrating innovations rather than novel innovations, for example, 'The product/service I offer is pretty common, but I've figured out a better way to attract customers than many of my competitors'. A confirmatory factor analysis using varimax rotation showed strong loadings on two factors for all but three items, which were dropped. The five remaining items for the differentiation-related innovation had factor loadings ranging from 0.57 to 0.84 and an alpha of 0.79. The five remaining items for novelty-related innovation had factor loadings from 0.63 to 0.76 and an alpha of 0.82. A complete list of innovation items are shown in the Appendix.

*Controls.* At the industry level, *competitive intensity* was measured as the number of competing firms in the same business reported by the respondent, capturing the level of competition for opportunities and available resources in the environment (Aldrich and Ruef, 2006). *Industry effects* were accounted for at the 2-digit level. Initial categories included retail (ISIC 52), wholesale (ISIC 51), hotel/restaurant (ISIC 55), health services, agriculture (ISIC 05), transport (ISIC 60), recycling (ISIC 37), and other services (ISIC 93). Wholesale, transport, recycling, and agriculture had too few respondents, making observations completely determined and standard errors questionable. These were combined with retail or other services, with the other services category excluded in the analyses. *Business age* was current year minus founding year, with younger organizations assumed to have higher liabilities of newness (Hannan and Freeman, 1984; Stinchcombe, 1965). *Network diversity*, or ties to a wide variety of people, should encourage access to information that facilitates innovative business opportunities (Aldrich and Zimmer, 1986). Diversity was calculated based on a list of the number of people from the following groups that have been involved with the business: family members or friends, lending group, business customers, and business suppliers. Network diversity

( $H$ ) was then computed in terms of Shannon and Weaver’s (1963) information entropy measure as:

$$H = -\sum (\ln p_i) p_i \tag{1}$$

where  $H$  is summed over the number of categories for social ties and  $p_i$  is the proportion of total contacts in that category. *Discourse directed ties* was taken from Ruef (2002), which asks whether the initial business idea was inspired by general media (newspaper, radio, or other press). Information that leads to innovation often diffuses through the media more rapidly than through interpersonal relationships (Strang and Meyer, 1993). Founder controls include *age* as current year minus the birth year of the entrepreneur. Age incorporates the positive effect of experience and provides credibility when transmitting information to other people when seeking to obtain resources or develop the firm (Freeman, 1982). Although age has been shown to be curvilinear with firm formation due to greater opportunity costs with time (Holtz-Eakin et al., 1994), this negative effect may be less influential in developing economies. *Education level* in developed nations has been previously associated with greater likelihood to exploit entrepreneurial opportunities (Rees and Shaw, 1986) and increased performance from those businesses (Gimeno et al., 1997).

**Analyses**

Ordered-response models recognize the indexed nature of various response variables; in this application, innovation and firm performance are the ordered response. Underlying the indexing in these models is a latent but continuous descriptor of the response. In an ordered probit model, the random error associated with this continuous descriptor is assumed to follow a normal distribution. We used Stata’s probit function with maximum likelihood estimation to analyse McKelvey and Zavoina’s (1975) ordered probit model, which can be specified as:

$$\begin{aligned}
 T^* &= \beta X + \varepsilon, \text{ with} & (2) \\
 T &= 0 \text{ if } T^* \leq \mu_0 \\
 &1 \text{ if } \mu_0 \leq T^* \leq \mu_1 \\
 &2 \text{ if } \mu_1 \leq T^* \leq \mu_2 \\
 &\zeta \text{ if } T^* \geq \mu_{\zeta-1}
 \end{aligned}$$

where  $T$  is the observed version of latent variable  $T^*$ ,  $X$  is a vector of explanatory variables,  $\beta$  are the coefficients to be estimated, and  $\mu_\zeta$  represent thresholds that distinguish different ordered values.

**RESULTS**

Table I provides descriptive statistics of the dataset. Table II presents univariate regressions for poverty indicator differences with firm performance measured as profits. For housing, wall/roof construction, floor material, electricity, general medical care, meals

Table I. Means, standard deviations and correlations of key variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 Performance	0.69	0.69																		
2 Industry – retail and wholesale	0.72	0.45	-0.04																	
3 Industry – hotel and restaurant services	0.05	0.23	0.02	-0.38																
4 Industry – health services	0.01	0.12	-0.11	-0.20	-0.03															
5 Competitive intensity	27.12	39.81	-0.11	-0.09	-0.08	0.06														
6 Business age	4.38	3.42	-0.01	-0.05	-0.04	0.03	0.24													
7 Network diversity	0.49	0.47	0.37	0.02	0.09	-0.05	-0.44	-0.30												
8 Directed ties – discourse	0.41	0.72	-0.20	-0.02	0.01	-0.01	-0.18	-0.16	0.01											
9 Strong ties	0.58	0.82	-0.09	0.02	-0.01	0.01	-0.09	-0.18	0.06	0.36										
10 Weak ties – business	0.47	0.71	-0.19	-0.05	-0.04	-0.02	-0.02	-0.14	0.11	0.75	0.24									
11 Weak ties – lending group	0.43	0.55	-0.17	0.01	-0.03	0.05	-0.31	-0.27	0.39	0.50	0.39	0.50								
12 Indebtedness/100,000	0.69	0.88	-0.10	0.04	-0.03	-0.06	-0.03	0.02	0.12	0.41	0.32	0.45	0.21							
13 Age	32.52	8.11	-0.06	-0.06	0.02	-0.04	0.17	0.39	-0.37	0.06	0.06	0.03	-0.24	0.10						
14 Education level	11.60	2.00	0.14	-0.15	0.20	0.02	0.27	0.16	-0.23	0.33	0.19	0.32	-0.10	0.26	0.46					
15 Family business experience	0.53	0.50	0.09	0.03	-0.13	-0.05	0.09	0.25	-0.32	0.22	0.07	0.36	-0.30	0.11	0.42	0.42				
16 Business expertise	2.79	0.68	0.29	-0.06	-0.05	-0.04	0.03	0.27	0.05	0.10	0.12	0.26	-0.05	0.17	0.42	0.30	0.31			
17 Innovation – differentiation	29.90	3.75	0.30	0.07	-0.17	0.06	-0.16	-0.14	0.30	0.22	-0.23	0.29	0.32	-0.12	-0.40	-0.14	-0.04	-0.01		
18 Innovation – novelty	20.08	6.32	-0.19	0.00	-0.06	0.04	0.02	-0.20	0.20	0.38	0.21	0.31	0.50	0.09	0.02	-0.01	-0.15	0.12	0.07	

Notes: N = 201. Pairwise correlations reported. Correlations above 0.14 are significant at p < 0.05.

Table II. Results of univariate analyses for firm performance and poverty indicators

Variable	All clients			Opportunity-based			Necessity-based			$\chi^2$ -test <sup>a</sup>
	n	Coeff (SE)	$\chi^2$	n	Coeff (SE)	$\chi^2$	n	Coeff (SE)	$\chi^2$	
<i>Housing</i>										
Home ownership	181	0.28 (0.15)	4.28†	134	0.27 (0.16)	3.3	47	-0.12 (0.58)	0.04	
Wall/roof construction	167	1.37 (0.24)	39.01***	124	1.31 (0.26)	28.59***	43	1.87 (0.54)	13.7***	
Floor material	167	0.50 (0.17)	8.37**	124	0.74 (0.18)	15.43***	43		n.e.	n.e.
Electricity	153	2.33 (0.51)	23.63***	117	2.75 (0.54)	29.89***	36		n.e.	n.e.
<i>Nourishment</i>										
Meals per day	177	2.01 (0.50)	18.77***	134	2.21 (0.51)	21.08***	43		n.e.	n.e.
Meat in diet	180	0.43 (0.13)	10.91***	133	0.54 (0.18)	9.44**	47	0.22 (0.20)	1.15	
Clean water	170	0.08 (0.48)	0.03	134	0.11 (0.48)	0.05	36		n.e.	n.e.
<i>Education</i>										
Child education	110	0.31 (0.36)	0.76	96	0.22 (0.42)	0.29	14		n.e.	n.e.
<i>Medical</i>										
General care	161	0.49 (0.19)	6.63**	118	0.76 (0.26)	9.48**	43	-0.14 (0.33)	0.18	*
Child vaccinations	100		n.e.			n.e.			n.e.	n.e.
<i>Resources</i>										
Telephone service	167	-0.14 (0.14)	1.01	124	0.15 (0.27)	0.35	43	-0.01 (0.21)	0	
Radio/DVD owner	166		n.e.	124		n.e.	42		n.e.	n.e.

Notes: † p < 0.10; \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001.

<sup>a</sup> Z-test:  $(\beta_1 - \beta_2) / \text{SQRT}(\text{SD}\beta_1^2 + \text{SD}\beta_2^2)$ .

Z = 1.65 at p < 0.05, 2.33 at p < 0.01.

n.e., not estimated due to a lack of variance.

per day, meat in diet were all significant to at least the  $p < 0.01$  level, and home ownership was significant at  $p < 0.10$ . Several of the non-significant indicators were a result of invariance across the firm performance measures or basic necessities being met in some form. For example, all children were reported to have had vaccinations. All respondents with children attended either public or private school. Only 4 per cent of respondents did not own a form of radio or DVD player. This result is less surprising given its sampling of an urban area. On the other hand, only 3 per cent of respondents had regular telephone service, creating little variance. The majority of those surveyed perceived themselves as opportunity- rather than necessity-based entrepreneurs. Sample size and minimal variance for a number of poverty indicators prevented comparison using a  $\chi^2$ -test for several of the indicators. General medical care was significantly greater for opportunity- than for necessity-based businesses ( $p < 0.05$ ). Where coefficients were estimated for both entrepreneurship types, the opportunity-based entrepreneur coefficients were greater than the necessity coefficients, though not significantly different according to  $\chi^2$ -tests. We also observed that the coefficients for a number of poverty indicators were higher for opportunity-based entrepreneurs than for the general sample, providing additional indirect evidence. The results as a whole provide support for Hypothesis 1, which expected firm performance to be associated with reduced indications of poverty and for this association to be greater for opportunity- than for necessity-based entrepreneurship.

In Table III we present the results of the ordered probit models predicting performance. Model 3.1 is a baseline control model. Model 3.2 tests Hypothesis 2 – the effects of differentiation-related and novelty-related innovation as mediators on performance. Models 3.3 and 3.4 test the independent covariates on differentiation-related innovation and novelty-related innovation, respectively. Model 3.5 tests in the independent covariates on performance. Model 3.6 is the full specified model, testing the intervening effect of innovation.

In Hypothesis 2, we hypothesized that innovation in a developing economy would have a positive relationship with performance. The results are supported for differentiation-related innovations ( $\beta = 0.286$ ;  $p < 0.001$ ), but not for novelty-related innovations ( $\beta = -0.067$ ;  $p < 0.05$ ). A  $\chi^2$ -test comparison of the innovation types showed differentiation-related innovations were significantly greater than novelty-related innovations on performance ( $\chi^2 = 5.29$ ,  $p < 0.01$ ), providing support for Hypothesis 2. We then examined factors that would affect innovation and firm performance. We expected indebtedness to have a negative relationship with innovation and a negative or non-significant relationship with firm performance. Indebtedness was significant and negative with both differentiation-related innovation ( $\beta = -0.432$ ;  $p < 0.001$ ) and novelty-related innovation ( $\beta = -0.326$ ;  $p < 0.01$ ), supporting Hypothesis 3. Indebtedness as loan size was positive, though not a significant indicator of performance in Model 3.5 ( $\beta = 0.269$ ;  $p > 0.05$ ) or the fully specified Model 3.6 ( $\beta = 0.409$ ;  $p > 0.05$ ). Thus, Hypothesis 3 is supported. Our examination of social structure showed strong ties were negatively related to innovation, supporting Hypothesis 4a for differentiation-related innovation ( $\beta = -0.342$ ;  $p < 0.01$ ), but not for novelty-related innovation ( $\beta = -0.004$ ;  $p > 0.05$ ). Strong ties were not significantly related with performance ( $\beta = -0.180$ ;  $p > 0.10$ ), thus Hypothesis 4b is not supported. Hypothesis 5a proposed that weak ties will have a positive effect on innovation. This was supported for lending group weak ties on both

Table III. Ordered probit models predicting innovation and business performance

Variable	Model					
	(3.1) Performance	(3.2) Performance	(3.3) Innovation – differentiation	(3.4) Innovation – novelty	(3.5) Performance	(3.6) Performance
<i>Industry controls</i>						
Industry – retail and wholesale	-0.352 (0.335)	-0.796 (0.429)†	0.281 (0.218)	0.012 (0.206)	0.153 (0.434)	-0.323 (0.517)
Industry – hotel and restaurant	-1.265 (0.572)*	-1.238 (0.647)†	-0.526 (0.412)	-0.949 (0.394)*	0.298 (0.760)	0.000 (0.853)
Industry – health services	-1.800 (1.126)	-2.275 (1.321)†	1.440 (0.917)	0.295 (0.756)	-0.516 (1.350)	-1.436 (1.701)
Competitive intensity			0.000 (0.003)	0.012 (0.003)***	-0.009 (0.005)†	-0.010 (0.005)*
<i>Business controls</i>						
Business age	-0.017 (0.039)	-0.040 (0.047)	-0.062 (0.032)†	-0.023 (0.030)	-0.044 (0.054)	-0.029 (0.059)
Network diversity	1.716 (0.352)***	1.287 (0.364)***	0.484 (0.302)	0.423 (0.281)	0.432 (0.498)	0.328 (0.590)
Directed ties – discourse	-0.588 (0.201)**	-1.332 (0.295)***	0.443 (0.247)†	1.030 (0.235)***	-0.175 (0.457)	-0.912 (0.603)
<i>Business covariates</i>						
Strong ties			-0.342 (0.1124)**	-0.004 (0.116)	-0.180 (0.313)	-0.041 (0.319)
Weak ties – business			0.418 (0.247)†	-0.355 (0.235)	-1.257 (0.422)**	-1.248 (0.448)**
Weak ties – lending group			0.726 (0.288)*	0.568 (0.281)*	0.268 (0.462)	0.291 (0.498)
Indebtedness/100,000			-0.432 (0.122)***	-0.326 (0.117)**	0.269 (0.226)	0.409 (0.257)
<i>Individual controls</i>						
Age	-0.008 (0.017)	0.078 (0.029)**	-0.026 (0.021)	0.046 (0.020)*	0.006 (0.029)	0.039 (0.039)
Education level	0.312 (0.080)***	0.398 (0.089)***	-0.315 (0.087)***	-0.111 (0.075)	-0.157 (0.148)	0.125 (0.214)
<i>Individual covariates</i>						
Family business experience			0.668 (0.286)*	-0.628 (0.266)*	1.440 (0.457)**	1.098 (0.495)*
Business expertise			0.351 (0.1187)†	0.410 (0.180)*	0.816 (0.366)*	0.764 (0.413)†
<i>Innovation</i>						
Innovation – differentiation		0.286 (0.064)***				0.208 (0.099)*
Innovation – novelty		-0.067 (0.031)*				-0.009 (0.042)
<i>Goodness-of-fit</i>						
Log likelihood	-78.53	-59.26	-198.94	-350.48	-41.68	-37.02
Pseudo R <sup>2</sup>	0.22	0.39	0.23	0.10	0.40	0.44
n parameters	8	10	15	15	15	17

Notes: Case reported n = 201. Unstandardized estimates reported along with standard errors in parentheses. Other services (ISIC 2-digit 93) was the omitted industry category. † p < 0.10; \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.001.

differentiation-related innovation ( $\beta = 0.726$ ;  $p < 0.05$ ) and novelty-related innovations ( $\beta = 0.568$ ;  $p < 0.05$ ). Hypothesis 5a was only marginally supported for business weak ties on differentiation-related innovations ( $\beta = 0.418$ ;  $p > 0.10$ ) and not for novelty-related innovations ( $\beta = -0.355$ ;  $p > 0.10$ ). Performance was negatively related to business weak ties ( $\beta = -1.248$ ;  $p < 0.01$ ), supporting Hypothesis 5b, while performance on lending group weak ties ( $\beta = 0.291$ ;  $p > 0.10$ ) was not significant. Family business experience had a positive relationship with differentiation-related innovation ( $\beta = 0.668$ ;  $p < 0.05$ ) and a negative relationship with novelty-related innovation ( $\beta = -0.628$ ;  $p < 0.05$ ), supporting Hypotheses 6a and 6b, respectively. Family business experience had a positive relationship with performance ( $\beta = 1.098$ ;  $p < 0.05$ ), supporting Hypothesis 6c. Finally, business expertise had a positive relationship with differentiation-related innovation ( $\beta = 0.351$ ;  $p < 0.10$ ), indicating marginal support for Hypothesis 7a, and a positive relationship with novelty-related innovation ( $\beta = 0.410$ ;  $p < 0.05$ ), supporting Hypothesis 7b. Business expertise was positive with performance in Model 3.5 ( $\beta = 0.816$ ;  $p < 0.05$ ), but became marginally significant in Model 3.6 ( $\beta = 0.764$ ;  $p < 0.05$ ) in the presence of innovation. This provides support for Hypothesis 7c and evidence of an intervening effect of innovation on the business expertise–performance relationship.

## DISCUSSION AND FUTURE RESEARCH IMPLICATIONS

International organizations and developed nations have set an ambitious goal to halve the number of people in the world living in poverty by the year 2015 (World Bank, 2000). While investment has led to rapid economic growth in many countries (e.g. China and India), the challenge remains to include the poorest in the economic development process (Bruton, 2010; McMullen, 2011). Efforts through programmes like microcredit have generated greater capital availability for the poor, with the hope that this will unleash entrepreneurs towards greater participation in the informal or formal economy (De Soto, 2003). This study examined whether innovation in business opportunities is an important intervening factor in the ability to generate firm performance and poverty reduction. Drawing from the discovery and creation views of opportunity, we find that the type of innovation matters – differentiation-related innovation more than novelty-related innovation leads to greater firm performance for the microcredit clients studied. We also show that, through innovation, human forms of capital – specifically business expertise and exposure to family business – lead to higher firm performance than financial or social forms of capital.

The fields of management (Bruton, 2010) and entrepreneurship (McMullen, 2011), including this special issue, have called for research in the development context. The eclectic nature of our field allows scholars to draw from expertise in economics, psychology, sociology, finance, and others to offer valuable insights at different levels of analysis. The findings from this study highlight how these might be applied to understand the relationship between forms of capital, innovation modes, and their implications for development.

### Forms of Capital

Despite the development field's emphasis on the national level of analysis, it is important not to lose sight of the individual in poverty reduction efforts. Regarding *human capital*, we

focused on indicators that are related to the knowledge level and expertise of the entrepreneur. Business expertise and family business experience were both positive indicators of innovation and performance. However, family business experience was more positively related to differentiation-related innovations, whereas business expertise was more positively associated with novelty-related innovations. How people acquire this general business expertise and how it differs from exposure to family business in terms of opportunity development are questions that appear promising for future research. It could be that the heavily contextual nature of family business experience causes entrepreneurs to perceive it as more reliable and less risky than business expertise. This would make it the preferred option when the cost of an error of commission is high – e.g. innovation is tried, fails, and consumes extremely scarce resources in the process. Business expertise, in contrast, may be more abstract and relatively more risky, but also more capable of generating novelty-related innovations. As a result, the cost of an error of omission, such as failing to reap the reward associated with an innovation, may also motivate entrepreneurial action, but less so when resources are scarce. As resources become less scarce and the threshold of affordable loss increases (Sarasvathy, 2001), novelty-related innovation would appear to become increasingly attractive (less costly) relative to differentiation-related innovation. Consequently, a question emerges of whether a lack of business expertise precludes entrepreneurs from being able to discover or create novelty-related innovations, or whether entrepreneurs in developing economies are simply less willing to bear the additional uncertainty associated with such innovations given the resource constraints that they face.

Not all individuals share the same motivation for engaging in entrepreneurship, especially in developing economies. Our measures of necessity- and opportunity-based entrepreneurship suggest that some individuals in poverty may be simply trying to earn enough to survive, while others may have intentions of growing a business. Because they often provide self-employment but no job creation, microcredit organizations have been accused of falling more in the former category than the latter (Karnani, 2007). If firm growth is needed for development, entrepreneurship research (e.g. Penrose, 1959) may be particularly helpful to development efforts. Conversely, developing economies may offer a rich context in which to test the applicability of entrepreneurial theories of the firm. What are the distinctive individual characteristics, decision making policies, and resource constraints that limit or drive growth in developing countries? Are the physical, psychological, and emotional challenges of entrepreneurship in developing economies greater than or different from those faced by entrepreneurs in developed nations? Studies of psychological stability in extreme circumstances suggest that some have a learned ability for resourcefulness (Rosenbaum, 1988). The effect of cognitive abilities such as delayed gratification (Mokyr, 1992; Rosenbaum, 1988), future orientation (Bruton et al., 2011), empathy and perspective taking (Davis, 1980; McMullen, 2010) on entrepreneurial motives and means and vice versa may be especially important to understanding business development (Baum and Locke, 2004; McMullen and Shepherd, 2006) in extreme environments such as developing economies (McMullen, 2011).

With regard to *financial capital*, loans and their repayment (indebtedness) are central to the continuance of microcredit institutions. This initial funding has helped millions to



generate income through self-employment. We distinguished this financial capital, however, from the capital that is available (collateralized debt, equity, slack) in developed nations. Loans for the poor are high-risk debt. We find that instead of increasing the likelihood of innovation, indebtedness actually decreased both differentiation-related and novelty-related innovation. Higher levels of indebtedness decreased the likelihood of differentiation-related innovation 1.5 times (odds ratio =  $1/\exp[-0.432]$ ) and decreased the likelihood of novelty-related innovation 1.4 times (odds ratio =  $1/\exp[-0.326]$ ). Prior work has indicated that slack has diminishing returns to innovation (Nohria and Gulati, 1996) or entrepreneurial behaviours (Bradley et al., 2010b) as a result of a lack of discipline or investment in questionable projects (Jensen, 1986). In a development context where we measured capital availability as loan size, the higher level of indebtedness might diminish search for alternative business ideas that may take time, with the knowledge that loans must be repaid over relatively short timeframes. We also found that loan size has a negative or non-significant relationship with performance. This result is similar to findings for indebtedness from studies in a developed context (George, 2005), but contrasts to the microfinance field which has implicitly or explicitly relied on loan size as an indicator for success (Morduch, 2000). Our logic suggests that better performing businesses with cash flow should reduce their reliance on high interest loans rather than increasing them over time. Increasing loan size suggests greater expenditures and may be an indication of increasing personal consumption rather than business development (Morduch, 1999). Thus, future studies using longitudinal data may want to track the relationship of business performance to loan size over time to test assertions that improvements in standards of living associated with increases in loan sizes are indicative of increases in incomes. Alternative loan forms including microsavings associations should also be considered alongside microcredit. The savings programmes require greater patience, but result in loans with greater collateral. In turn, this may provide more time for business pre-planning leading to improved performance in comparison to microcredit businesses (Hannig and Wisniwski, 1999).

With regard to *social capital*, networks are also a source of assistance in business development. We found evidence that network diversity had a positive effect on performance in our initial control model. We also found that weak ties had a significant effect on both novelty- and differentiation-related innovations. Specifically, business weak ties had a marginally positive significant effect on differentiation-related innovation. However, business weak ties became liabilities when predicting performance (3.3 times). This contrast between the ability of weak ties to increase innovative business ideas and their implementation for business performance is important. Business relationships that the poor enter into with suppliers and other contacts may be predatory or non-mutually beneficial as one might expect. In contrast, strong ties, as expected, had a negative relationship with innovation. We did not, however, find the positive relationship with performance that has been hypothesized and proposed by others (Webb et al., 2009). These mixed findings suggest that greater exploration into the relative value of social networks on firm performance for poor entrepreneurs, including microcredit clients, is needed. Does trust alter the nature of some of these weak ties? Could reputation or status imputed by the microcredit agency help alter the nature of weak ties and improve performance by allowing clients greater access to suppliers and buyers?

Microcredit lending groups are a specific form of social capital studied here where workers are expected to act in solidarity creating strong ties. Our interviews and findings from others (Bruton et al., 2011) suggest those ties are weaker and more pragmatically-driven by the purpose of obtaining loans than presumed. Lending group weak ties did increase the likelihood of differentiation-related innovation (2 times) and novelty-related innovation (1.7 times). This suggests that lending groups offer promise as a source of variance for business idea generation, though there is little research in this area. However, they did not have a significant effect on firm performance. Perhaps group members share ideas within the group, but lack support outside the group to implement those innovations. Further research is needed to understand the social structure of lending groups. Do groups tend to pursue common business ideas? If so, do they collaborate, employing higher levels of trust and reciprocity, or do they view each other as competitors? Therefore, whether lending groups offer mutual business support beyond loan repayment is understudied, despite having important policy implications for microlenders. Similarly, the role of lending groups in ideation remains relatively neglected by the literature and in need of further research.

### **Innovation Mode**

As in developed nations, innovation predicted firm performance. But unlike in developed nations, the type of innovation seemed to matter in developing economies. Differentiation-related innovations, more than novelty-related innovations, were advantageous to firm performance for microfinance clients. Model 3.2 shows that entrepreneurs with differentiation-related innovations were 1.4 times as likely to report higher firm performance as those with novelty-related innovations (odds ratio =  $\exp [0.286 - (-0.067)] = 1.42$ ). Even if an entrepreneur were to create something completely new to the market, the likelihood of being able to bring the idea to fruition, given the institutional climate and social marginalization of the actors, is more limited (McMullen, 2011). This does not mean that more novelty-related innovations are unnecessary, nor does it suggest that such innovations would not generate greater income. Instead, it seems to imply that greater assistance may be needed to bring such opportunities to fruition (McMullen, 2011). Fairbourne et al. (2008) have proposed microfranchising as one such possibility. By moving the poor away from commodity retail products and towards more innovative and novel products or services, it may promise higher returns. In addition, the franchise model offers a proven business concept with greater likelihood of success, potentially enabling entrepreneurs to overcome knowledge and training limitations that often limit their options. Despite its promise, the microfranchise is currently under-researched.

### **Other Implications for Development**

Though capital and innovation play a role in opportunities for the poor, the type of industry in which a person chooses to start a business also plays a critical role in its survival and performance (Shane, 2003). In this study we control for industry, but there are several findings of interest. None of the industries entered by entrepreneurs had a positive outcome with innovation or performance. Our observation, and one shared by

others, is the lack of diversity in businesses started by the poor. Clearly, knowledge, training, and resources play a role in determining the scope of business opportunities available. It is worth noting that competition increased the likelihood of novelty-related innovations significantly. However, competition had a negative effect on firm performance. It seems that even though competition may have driven the respondents to try new things, the innovations either failed to create value or the value created by these efforts could not be captured by the entrepreneurs. Future research efforts might examine how and when industries emerge in developing economies and how the poor might either avoid or compete more effectively in highly competitive retail operations with diminishing returns. Microfranchising or appropriate technology may be vehicles through which the poor could enter different industries or develop a niche within a current industry. For example, International Development Enterprises has provided treadle pumps and low-cost drip irrigation systems using local distributors. These technologies have lower thresholds for investment and training allowing the poor an opportunity to participate (Polak, 2009). Realizing the full potential of appropriate technology requires distributed agency in which social entrepreneurs, NGOs or government agencies, and local entrepreneurs work together (McMullen, 2011). The process, however, is poorly understood (Webb et al., 2010), and more research is needed.

If the poor are going to pursue more unique opportunities, then they will often need assistance from those with the knowledge or skill set to recognize and capitalize on those opportunities. Yet, many of those offering help in development agencies may not have training or experience in entrepreneurship as well. In this study we focused on microcredit lending agencies. In their case, the emphasis has been on portfolio risk and loan repayment rates (De Aghion and Morduch, 2005). Little, however, is known about the screening practices of the agency, the decision making policies of the lenders, and the expertise of the loan officers that oversee the clients. A greater understanding of the expertise and entrepreneurial skills of the client officers may predict variance in group repayment and business performance across groups. Understanding the background and training needs of loan officers and their ability to assist clients in their business endeavours is needed. More broadly, understanding the entrepreneurial expertise of development agencies and their managers and the subsequent effect on business development for the poor would offer both theoretical and practical value.

## CONCLUSION

Capital alone is not a 'silver bullet' for the problem of poverty in developing economies. We have shown that, similar to developed nations, innovation is necessary for microcredit businesses to achieve firm performance, which contribute to increases in income and standards of living. We find, however, that innovation in developing economies may differ from that in developed nations. In this study, microcredit entrepreneurs distinguished between the more supply-oriented, differentiation-related innovation and the more demand-oriented, novelty-related innovation. Each type of innovation had different antecedents and outcomes. Not only were the entrepreneurs more likely to engage in differentiation-related innovation, but differentiation-related innovation was shown to be positively associated with firm performance. By complementing the

allocative view with the discovery- and creativity-based views of entrepreneurship, we have highlighted important distinctions for firm performance in a development context and offer future potential research areas in the field.

## NOTE

- [1] This was confirmed by the experience of a co-author who collected the field data and previously worked in the microcredit agency as a supervisor.

## APPENDIX: MEASURES OF INNOVATION

### Novelty-Related Innovation Measures<sup>a</sup>

- (1) The product/service I am offering is new to the local market. [New market]
- (2) The product/service that I am offering is new to the national market. [New market]
- (3) The product/service that I am offering is new to the international market. [New market]
- (4) I am marketing my product or service differently than my competitors. [New market]
- (5) I have been able to get supplies for my product/service differently than my competitors. [New material]

<sup>a</sup> Varimax factor rotation loadings 0.57 to 0.84.  $\alpha = 0.79$

### Differentiation-Related Innovation Measures<sup>b</sup>

- (1) The way I make products/services is different than what competitors have done previously in this market.
- (2) The way I am distributing product/services to the market is different than my competitors.
- (3) My product or service meets a need of customers that has not really been met before.
- (4) The product or service I offer is widely available, but I've figured out a better way to attract customers than many of my competitors.
- (5) In deciding on my business, I figured out a way to make my product or service less expensive or for the same cost than others.

<sup>b</sup> Varimax factor rotation loadings 0.63 to 0.76.  $\alpha = 0.82$

## REFERENCES

- Aghion, P., Caroli, E. and Garcia-Penalosa, C. (1999). 'Inequality and economic growth: the perspective of the new growth theories'. *Journal of Economic Literature*, **37**, 1615–60.

- Aldrich, H. and Ruef, M. (2006). *Organizations Evolving*, 2nd edition. London: Sage.
- Aldrich, H. and Zimmer, C. (1986). 'Entrepreneurship through social networks'. *The Art and Science of Entrepreneurship*, **22**, 3–23.
- Aldrich, H., Rosen, B. and Woodward, W. (1987). 'The impact of social networks on business foundings and profit: a longitudinal study'. *Frontiers of Entrepreneurship Research*, **7**, 154–68.
- Alvarez, S. A. and Barney, J. B. (2004). 'Organizing rent generation and appropriation: toward a theory of the entrepreneurial firm'. *Journal of Business Venturing*, **19**, 621–35.
- Amit, R., Glosten, L. and Muller, E. (1993). 'Challenges to theory development in entrepreneurship research'. *Journal of Management Studies*, **30**, 815–815.
- Anthony, D. (2005). 'Cooperation in microcredit borrowing groups: identity, sanctions, and reciprocity in the production of collective goods'. *American Sociological Review*, **70**, 496–515.
- Appadurai, A. (2004). 'The capacity to aspire: culture and the terms of recognition'. In Rao, V. and Walton, M. (Eds), *Culture and Public Action*. Stanford, CA: Stanford University Press, 59–84.
- Ardichvili, A., Cardozo, R. and Ray, S. (2003). 'A theory of entrepreneurial opportunity identification and development'. *Journal of Business Venturing*, **18**, 105–24.
- Arndt, H. W. (1988). 'Market failure and underdevelopment'. *World Development*, **16**, 219–29.
- Aubert, J. E. (2010). 'Innovation policy for the developing world: success stories and promising approaches'. *Development Outreach*, **12**, 7–25.
- Baker, T. and Nelson, R. (2005). 'Creating something from nothing: resource construction through entrepreneurial bricolage'. *Administrative Science Quarterly*, **50**, 329–66.
- Bateman, M. and Chang, H. J. (2008). *Microfinance Illusion*. Mimeo, University of Juraj Dobrila Pula, Croatia, and University of Cambridge, UK.
- Bates, T. (1995). 'Self-employment entry across industry groups'. *Journal of Business Venturing*, **10**, 143–56.
- Baum, J. R. and Locke, E. A. (2004). 'The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth'. *Journal of Applied Psychology*, **89**, 587–98.
- Beck, T. and Demircuc-Kunt, A. (2008). 'Access to finance: an unfinished agenda'. *The World Bank Economic Review*, **22**, 383–96.
- Begley, T. M. and Tan, W. L. (2001). 'The socio-cultural environment for entrepreneurship: a comparison between East Asian and Anglo-Saxon countries'. *Journal of International Business Studies*, **32**, 537–53.
- Bhola, R., Verheul, I., Grilo, I. and Thurik, A. R. (2006). *Explaining Engagement Levels of Opportunity and Necessity Entrepreneurs*. Research Report H200610, EIM Business and Policy Research, Zoetermeer.
- Blanchflower, D. G. and Oswald, A. J. (1998). 'What makes an entrepreneur?'. *Journal of Labor Economics*, **16**, 26–60.
- Blank, R. M. (2003). 'Selecting among anti-poverty policies: can an economist be both critical and caring?'. *Review of Social Economy*, **61**, 447–71.
- Bosma, N., Acs, Z. J., Autio, E., Coduras, A. and Levie, J. (2009). *Global Entrepreneurship Monitor: 2008 Executive Report*. Babson College, Universidad del Desarrollo, London Business School, Global Entrepreneurship Research Consortium (GERA).
- Bracker, J. S. and Pearson, J. N. (1986). 'Planning and financial performance of small, mature firms'. *Strategic Management Journal*, **7**, 503–22.
- Bradley, S. W., Shepherd, D. and Wiklund, J. (2010a). 'The importance of slack for organizations facing tough environments'. *Journal of Management Studies*, **48**, 1071–97.
- Bradley, S. W., Wiklund, J. and Shepherd, D. A. (2010b). 'Swinging a double-edged sword: the effect of slack on entrepreneurial management and growth'. *Journal of Business Venturing*, **26**, 537–54.
- Bradley, S. W., McMullen, J. and Simiyu, E. (2011). *Self-Employed or Employing Others? Pre-Entry Capabilities, Entrepreneurial Action, and the Learned Resourcefulness of Microcredit Firm Founders*. Babson College Entrepreneurship Research Conference, Syracuse, NY.
- Bradshaw, T. K. (2007). 'Theories of poverty and anti-poverty programs in community development'. *Journal Community Development Society*, **38**, 7–25.
- Brüderl, J. and Preisendörfer, P. (1998). 'Network support and the success of newly founded business'. *Small Business Economics*, **10**, 213–25.
- Bruton, G. D. (2010). 'Business and the world's poorest billion – the need for an expanded examination by management scholars'. *Academy of Management Perspectives*, **24**, 5–9.
- Bruton, G. D., Khavul, S. and Chavez, H. (2011). 'Microlending in emerging economies: building a new line of inquiry from the ground up'. *Journal of International Business Studies*, **42**, 718–39.
- Buchanan, J. M. and Vanberg, V. J. (1994). 'The market as a creative process'. *Economics and Philosophy*, **7**, 167–86.

- Busenitz, L. W. (1996). 'Research on entrepreneurial alertness: sampling, measurement, and theoretical issues'. *Journal of Small Business Management*, **34**, 35–44.
- Busenitz, L. W. and Lau, C. M. (1996). 'A cross-cultural cognitive model of new venture creation'. *Entrepreneurship: Theory and Practice*, **20**, 18–36.
- Carroll, G. R. and Hannan, M. T. (2000). *The Demography of Corporations and Industries*. Princeton, NJ: Princeton University Press.
- Casson, M. (1995). *Entrepreneurship and Business Culture*. Cheltenham: Edward Elgar.
- Casson, M. (2005). 'Entrepreneurship and the theory of the firm'. *Journal of Economic Behavior and Organization*, **58**, 327–48.
- Chakravarti, D. (2006). 'Voices unheard: the psychology of consumption in poverty and development'. *Journal of Consumer Psychology*, **16**, 363–76.
- Chen, S., Schreiner, M. and Woller, G. (2008). *A Simple Poverty Scorecard for Kenya*. Kansas City: Microfinance Risk Management.
- Chesbrough, H. W. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Boston, MA: Harvard Business School Press.
- Christensen, C. M. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Boston, MA: Harvard Business School Press.
- Chubb, J. E. and Moe, T. M. (1996). 'Politics, markets and equality in schools'. In Darby, M. R. (Ed.), *Reducing Poverty in America: Views and Approaches*. Thousand Oaks, CA: Sage, 121–53.
- Cooper, A. C., Dunkelberg, W. C. and Woo, C. Y. (1988). 'Entrepreneurs' perceived chances for success'. *Journal of Business Venturing*, **3**, 97–108.
- Cooper, A. C., Folta, T. B. and Woo, C. (1995). 'Entrepreneurial information search'. *Journal of Business Venturing*, **10**, 107–20.
- Cornelissen, J. P. and Clarke, J. S. (2010). 'Imagining and rationalizing opportunities: inductive reasoning and the creation and justification of new ventures'. *Academy of Management Review*, **35**, 539–57.
- Daley-Harris, S. (2007). *State of the Microcredit Summit Campaign Report 2006*. Microcredit summit campaign, Washington, DC.
- Daniel, F., Lohrke, F. T., Fornaciari, C. J. and Turner, J. R. A. (2004). 'Slack resources and firm performance: a meta-analysis'. *Journal of Business Research*, **57**, 565–74.
- D'Aunno, T., Succi, M. and Alexander, J. A. (2000). 'The role of institutional and market forces in divergent organizational change'. *Administrative Science Quarterly*, **45**, 679–703.
- Davis, M. H. (1980). 'A multidimensional approach to individual differences in empathy'. *JAS Catalog of Selected Documents in Psychology*, **10**, 85.
- Davis, M. (2006). 'Planet of slums'. *New Perspectives Quarterly*, **23**, 2, 6–11.
- De Aghion, B. A. and Morduch, J. (2005). *The Economics of Microfinance*. Cambridge, MA: MIT Press.
- Delmar, F. and Davidsson, P. (2000). 'Where do they come from? Prevalence and characteristics of nascent entrepreneurs'. *Entrepreneurship and Regional Development*, **12**, 1–23.
- De Mel, S., McKenzie, D. and Woodruff, C. M. (2008). *Who Are the Microenterprise Owners? Evidence from Sri Lanka on Tokman v. de Soto*. World Bank Policy Research Working Paper No. 4635.
- Demirgüç-Kunt, A., Beck, T. and Honohan, P. (2008). *Finance for All? Policies and Pitfalls in Expanding Access*. Washington, DC: The World Bank.
- De Soto, H. (2003). *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. Jackson, TN: Basic Civitas Books.
- Dew, N., Velamuri, S. R. and Venkataraman, S. (2004). 'Dispersed knowledge and an entrepreneurial theory of the firm'. *Journal of Business Venturing*, **19**, 659–79.
- Dichter, T. W. and Harper, M. (Eds) (2007). *What's Wrong with Microfinance?* Rugby: Practical Action Publishers.
- Dosi, G. (1982). 'Technological paradigms and technological trajectories: a suggested interpretation of the determinants and directions of technical change'. *Research Policy*, **11**, 147–62.
- Douglas, E. J. and Shepherd, D. A. (2002). 'Self-employment as a career choice: attitudes, entrepreneurial intentions, and utility maximization'. *Entrepreneurship: Theory and Practice*, **26**, 81–91.
- Dunn, T. and Holtz-Eakin, D. (2000). 'Financial capital, human capital, and the transition to self-employment: evidence from intergenerational links'. *Journal of Labor Economics*, **18**, 282–305.
- Eckhardt, S. A. and Shane, S. (2003). 'Opportunities and entrepreneurship'. *Journal of Management*, **29**, 333–49.
- Eisenhardt, K. M. and Schoonhoven, C. B. (1996). 'Resource-based view of strategic alliance formation: strategic and social effects in entrepreneurial firms'. *Organization Science*, **7**, 136–50.

- Fairbourne, J. S., Gibson, S. W. and Dyer, W. G. (2008). *MicroFranchising: Creating Wealth at the Bottom of the Pyramid*. Cheltenham: Edward Elgar.
- Fishman, A. and Simhon, A. (2002). 'The division of labor, inequality and growth'. *Journal of Economic Growth*, **7**, 117–36.
- Fligstein, N. (1996). 'Markets as politics: a political-cultural approach to market institutions'. *American Sociological Review*, **61**, 656–73.
- Freeman, C. (1994). 'The economics of technical change'. *Cambridge Journal of Economics*, **18**, 463–514.
- Freeman, J. (1982). 'Organizational life cycles and natural selection processes'. In Staw, B. and Cummings, L. L. (Eds), *Research in Organizational Behavior*, Vol. 4. Greenwich, CT: JAI Press, 1–32.
- Fukuyama, F. (1996). *Trust: The Social Virtues and the Creation of Prosperity*. New York: Free Press.
- Fukuyama, F. (2002). 'Social capital and development: the coming agenda'. *SAIS Review*, **22**, 23–38.
- Garud, R. and Karnoe, P. (2003). 'Bricolage versus breakthrough: distributed and embedded agency in technology entrepreneurship'. *Research Policy*, **32**, 277–300.
- George, G. (2005). 'Slack resources and the performance of privately held firms'. *Academy of Management Journal*, **48**, 661–76.
- Gimeno, J., Folta, T. B., Cooper, A. C. and Woo, C. Y. (1997). 'Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms'. *Administrative Science Quarterly*, **42**, 750–83.
- Government of Kenya (2000). *Second Report on Poverty in Kenya: Incidence and Depth of Poverty, Volume I*. Nairobi: Ministry of Finance and Planning.
- Granovetter, M. (1982). 'The strength of weak ties: a network theory revisited'. In Marsden, P. V. and Lin, N. (Eds), *Sociological Structure and Network Analysis*. Beverly Hills, CA: Sage, 105–30.
- Granovetter, M. (1985). 'Economic action and social structure: the problem of embeddedness'. *American Journal of Sociology*, **91**, 481–510.
- Greve, H. R. (1998). 'Performance, aspirations, and risky organizational change'. *Administrative Science Quarterly*, **43**, 58–86.
- Greve, H. R. (2003). 'A behavior theory of R&D expenditures and innovations: evidence from shipbuilding'. *Academy of Management Journal*, **46**, 685–702.
- Hall, R. E. and Jones, C. I. (1999). 'Why do some countries produce so much more output per worker than others?'. *Quarterly Journal of Economics*, **114**, 83–116.
- Hannan, M. and Freeman, J. (1984). 'Structural inertia and organizational change'. *American Sociological Review*, **49**, 149–64.
- Hannig, A. and Wisniowski, S. (1999). *Mobilizing Microsavings: The Experience of Seven Deposit-Taking Institutions*. Eschborn: GTZ.
- Hansen, E. L. (1995). 'Entrepreneurial networks and new organization growth'. *Entrepreneurship: Theory and Practice*, **19**, 4, 7–19.
- Hashemi, S. M., Schuler, S. R. and Riley, A. P. (1996). 'Rural credit programs and women's empowerment in Bangladesh'. *World Development*, **24**, 635–53.
- Hayek, F. A. (1945). 'The use of knowledge in society'. *American Economic Review*, **35**, 519–30.
- Hirschman, A. O. (1970). *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA: Harvard University Press.
- Hoang, H. and Antoncic, B. (2003). 'Network-based research in entrepreneurship: a critical review'. *Journal of Business Venturing*, **18**, 165–87.
- Holtz-Eakin, D., Joulfaian, D. and Rosen, H. S. (1994). 'Sticking it out: entrepreneurial survival and liquidity constraints'. *Journal of Political Economy*, **102**, 53–75.
- Homans, G. C. (1974). *Social Behavior: Its Elementary Forms (Revised Edition)*. New York: Harcourt Brace Jovanovich.
- Hossain, M. (1988). *Credit for Alleviation of Rural Poverty: The Grameen Bank in Bangladesh*. Washington, DC: International Food Policy Research Institute.
- Humphrey, J. and Schmitz, H. (1998). 'Trust and inter-firm relations in developing and transition economies'. *Journal of Development Studies*, **34**, 32–61.
- Huntington, S. P. and Harrison, L. E. (2000). *Culture Matters: How Values Shape Human Progress*. New York: Basic Books.
- Ianchovichina, E. and Lundstrom, S. (2009). *Inclusive Growth Analytics*. Economic Policy and Debt Department Policy Research Working Paper Series No. 4851, World Bank, Washington DC.
- Jensen, M. C. (1986). 'Agency costs of free cash flow, corporate finance, and takeovers'. *American Economic Review*, **76**, 323–9.
- Kaish, S. and Gilad, B. (1991). 'Characteristics of opportunities search of entrepreneurs versus executives: sources, interests, general alertness'. *Journal of Business Venturing*, **6**, 45–61.

- Karlan, D. and Morduch, J. (2009). 'Access to finance'. In Rodrik, D. and Rosenzweig, M. (Eds), *Handbook of Development Economics*. Amsterdam: North-Holland, ch. 5.
- Karlan, D. and Valdivia, M. (2007). *Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions*. Center for Global Development Working Paper No. 107.
- Karnani, A. (2007). 'Microfinance misses its mark'. *Stanford Social Innovation Review*, **Summer**, 34–40.
- Katila, R. and Ahuja, G. (2002). 'Something old, something new: a longitudinal study of search behavior and new product introduction'. *Academy of Management Journal*, **45**, 1183–94.
- Kirzner, I. (1997). 'Entrepreneurial discovery and the competitive market process: an Austrian approach'. *Journal of Economic Literature*, **35**, 60–85.
- Laursen, K. and Salter, A. (2006). 'Open for innovation: the role of openness in explaining innovation performance among UK manufacturing firms'. *Strategic Management Journal*, **27**, 131–50.
- Lazear, E. P. (2005). 'Entrepreneurship'. *Journal of Labor Economics*, **23**, 649–80.
- Lentz, B. F. and Laband, D. N. (1990). 'Entrepreneurial success and occupational inheritance among proprietors'. *Canadian Journal of Economics*, **23**, 563–79.
- Levitt, B. and March, J. G. (1988). 'Organizational learning'. *Annual Review of Sociology*, **14**, 319–38.
- Lindsay, S. (2000). 'Culture, mental models, and national prosperity'. In Huntington, S. and Harrison, L. E. (Eds), *Culture Matters: How Values Shape Human Progress*. New York: Basic Books, 282–95.
- Loasby, B. J. (1982). 'Economics of dispersed and incomplete information'. In Kirzner, I. (Ed.), *Method, Process and Austrian Economics, Essays in Honor of Ludwig von Mises*. Lexington, MA: Lexington Books.
- Lööf, H. and Heshmati, A. (2006). 'On the relationship between innovation and performance: a sensitivity analysis'. *Economics of Innovation and New Technology*, **15**, 317–44.
- Lucas, R. E. Jr (1978). 'On the size distribution of business firms'. *Bell Journal of Economics*, **9**, 508–23.
- Martin, X., Swaminathan, A. and Mitchell, W. (1998). 'Organizational evolution in the interorganizational environment: incentives and constraints on international expansion strategy'. *Administrative Science Quarterly*, **43**, 566–601.
- Matin, I., Hulme, D. and Rutherford, S. (2002). 'Finance for the poor: from microcredit to microfinancial services'. *Journal of International Development*, **14**, 273–94.
- McKelvey, R. D. and Zavoina, W. (1975). 'A statistical model for the analysis of ordinal level dependent variables'. *Journal of Mathematical Sociology*, **4**, 103–20.
- McMillan, J. and Woodruff, C. (2002). 'The central role of entrepreneurs in transition economies'. *Journal of Economic Perspectives*, **16**, 153–70.
- McMullen, J. S. (2010). 'Perspective taking and the heterogeneity of the entrepreneurial imagination'. In Koppl, R., Horwitz, S. and Desrochers, P. (Eds), *Advances in Austrian Economics*. Greenwich, CT: JAI Press, 113–44.
- McMullen, J. S. (2011). 'Delineating the domain of development entrepreneurship: a market-based approach to facilitating inclusive economic growth'. *Entrepreneurship Theory & Practice*, **35**, 185–215.
- McMullen, J. S. and Shepherd, A. (2006). 'Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur'. *Academy of Management Review*, **31**, 131–52.
- McMullen, J. S., Bagby, D. R. and Palich, L. E. (2008). 'Economic freedom and the motivation to engage in entrepreneurial action'. *Entrepreneurship Theory and Practice*, **32**, 875–95.
- Mendoza, R. U. and Thelen, N. (2008). 'Innovations to make markets more inclusive for the poor'. *Development Policy Review*, **26**, 427–58.
- Minniti, M. and Bygrave, W. D. (2005). *Global Entrepreneurship Monitor. 2004 Report on Entrepreneurship and Women*. The Center for Women's Leadership, Babson College, Wellesley, MA.
- Mokyr, J. (1992). *The Lever of Riches: Technological Creativity and Economic Progress*. New York: Oxford University Press.
- Morduch, J. (1998). *Does Microfinance Really Help The Poor? Evidence from Flagship Programs in Bangladesh*. July draft. Hoover Institution, Stanford University.
- Morduch, J. (1999). 'The microfinance promise'. *Journal of Economic Literature*, **37**, 1569–614.
- Morduch, J. (2000). 'The microfinance schism'. *World Development*, **28**, 617–29.
- Moser, C. O. N. (2007). *Reducing Global Poverty: The Case for Asset Accumulation*. Washington, DC: Brookings Institute Press.
- Murray, C. (1990). *The Emerging British Underclass*. London: IEA Health and Welfare Unit.
- Nohria, N. and Gulati, R. (1996). 'Is slack good or bad for innovation?'. *Academy of Management Journal*, **39**, 1245–64.
- North, D. C. (1987). 'Institutions, transaction costs and economic growth'. *Economic Inquiry*, **25**, 419–28.
- Olson, M. Jr (1996). 'Distinguished lecture on economics in government: big bills left on the sidewalk: why some nations are rich, and others poor'. *Journal of Economic Perspectives*, **10**, 3–24.



- Osmani, S. R. (1989). 'Limits to the alleviation of poverty through non-farm credit'. *Bangladesh Development Studies*, **17**, 1–18.
- Parsons, H. (2007). *Entrepreneurship versus MicroFranchising*. Unpublished Thesis, Columbia University, New York.
- Patrick, H. T. (1966). 'Financial development and economic growth in underdeveloped countries'. *Economic Development and Cultural Change*, **14**, 174–89.
- Penrose, E. (1959). *The Theory of the Growth of the Firm*. New York: Wiley.
- Pfeffer, J. and Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper and Row.
- Pitt, M. M. and Khandker, S. R. (1998). 'The impact of group-based credit programs on poor households in Bangladesh: does the gender of participants matter?'. *Journal of Political Economy*, **106**, 958–96.
- Polak, P. (2009). *Out of Poverty*. San Francisco, CA: Berrett-Kohler.
- Polanyi, M. (1966). *The Tacit Dimension*. New York: Anchor Day Books.
- Powell, B. (Ed.) (2008). *Making Poor Nations Rich: Entrepreneurship and the Process of Economic Development*. Stanford, CA: Stanford University Press.
- Prahalad, C. K. (2009). *The Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits*. Upper Saddle River, NJ: Wharton School.
- Quigley, W. P. (2003). *Ending Poverty As We Know It: Guaranteeing a Right to a Job at a Living Wage*. Philadelphia, PA: Temple University Press.
- Rank, M. R. (2004). *One Nation, Underprivileged: Why American Poverty Affects Us All*. New York: Oxford University Press.
- Redding, S. G. (1996). 'Weak organizations and strong linkages: managerial ideology and Chinese family business networks'. In Hamilton, G. (Ed.), *Asian Business Networks*. New York: Walter de Gruyter, 30–47.
- Rees, H. and Shaw, A. (1986). 'An empirical analysis of self-employment in UK'. *Journal of Applied Econometrics*, **1**, 95–108.
- Reuber, A. R. and Fischer, E. M. (1993). 'The learning experiences of entrepreneurs'. In Churchill, N. C., Birley, S., Doutriaux, J., Gatewood, E. J., Hoy, E. S. and Wetzel, W. E. (Eds), *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson Center for Entrepreneurial Studies, **234**, 234–45.
- Roberts, E. B. (1991). *Entrepreneurs in High Technology: Lessons from MIT and Beyond*. New York: Oxford University Press.
- Rodrik, D. (2000). 'Institution for high-quality growth: what they are and how to acquire them'. *Studies in Comparative International Development*, **35**, 3–31.
- Romer, P. M. (1990). 'Endogenous technological change'. *Journal of Political Economy*, **98**, Part 2, 71–102.
- Rosen, S. (1997). 'Austrian and neoclassical economics: any gains from trade?'. *Journal of Economic Perspectives*, **11**, 139–52.
- Rosenbaum, M. (1988). 'Learned resourcefulness, stress, and self-regulation'. In Fisher, S. and Reason, J. (Eds), *Handbook of Life Stress, Cognition and Health*. Chichester: John Wiley, 483–96.
- Ruef, M. (2002). 'Strong ties, weak ties and islands: structural and cultural predictors of organizational innovation'. *Industrial and Corporate Change*, **11**, 427–49.
- Sahn, D. E. and Stifel, D. (2003). 'Exploring alternative measures of welfare in the absence of expenditure data'. *Review of Income and Wealth*, **49**, 463–89.
- Sarason, Y., Dean, T. and Dillard, J. F. (2006). 'Entrepreneurship as the nexus of individual and opportunity: a structuration view'. *Journal of Business Venturing*, **21**, 286–305.
- Sarasvathy, S. D. (2001). 'Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency'. *Academy of Management Review*, **26**, 243–88.
- Sarasvathy, S. D. and Dew, N. (2005). 'New market creation through transformation'. *Journal of Evolutionary Economics*, **15**, 533–65.
- Sarasvathy, S. D., Dew, N., Velamuri, R. and Venkataraman, S. (2003). 'Three views of entrepreneurial opportunity'. In Acs, Z. J. and Audretsch, D. B. (Eds), *The International Handbook of Entrepreneurship*. Dordrecht: Kluwer Academic Publishers, 141–60.
- Schumpeter, J. A. (1934). *The Theory of Economic Development: An Inquiry Into Profits, Capital, Credit, Interest, and the Business Cycle*. Cambridge, MA: Harvard University Press.
- Schumpeter, J. A. (1939). *Business Cycles: A Theoretical, Historical and Statistical Analysis of the Capitalist Process*. New York: McGraw-Hill.
- Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.
- Shane, S. (2003). *A General Theory of Entrepreneurship*. Northampton, MA: Edward Elgar.

- Shane, S. and Venkataraman, S. (2000). 'The promise of entrepreneurship as a field of research'. *Academy of Management Review*, **25**, 217–36.
- Shannon, C. E. and Weaver, W. (1963). *The Mathematical Theory of Communication*. Urbana, IL: University of Illinois Press.
- Shepherd, D. A., McMullen, J. S. and Jennings, P. D. (2007). 'Formation of opportunity beliefs: a coherence theory perspective'. *Strategic Entrepreneurship Journal*, **1**, 75–95.
- Starr, J. A. and MacMillan, I. C. (1990). 'Resource co-optation via social contracting: resource acquisition strategies for new ventures'. *Strategic Management Journal*, **11**, 79–92.
- Stifel, D. and Christiaensen, L. (2007). 'Tracking poverty over time in the absence of comparable consumption data'. *World Bank Economic Review*, **21**, 317–41.
- Stinchcombe, A. (1965). 'Social structure and organizations'. In March, J. G. (Ed.), *Handbook of Organizations*. Chicago, IL: Rand McNally, 153–93.
- Strang, D. and Meyer, J. W. (1993). 'Institutional conditions for diffusion'. *Theory and Society*, **22**, 487–511.
- Teece, D. J. (1987). 'Profiting from technological innovation: implications for integration, collaboration, licensing, and public policy'. In Teece, D. J. (Ed.), *The Competitive Challenge*. Cambridge, MA: Ballinger, 185–220.
- Tzannatos, Z. (1999). 'Women and labor market changes in the global economy: growth helps, inequalities hurt and public policy matters'. *World Development*, **27**, 551–69.
- Valentine, C. A. (1968). *Culture and Poverty: Critique and Counter-Proposals*. Chicago, IL: University of Chicago Press.
- Venkataraman, S. (1997). 'The distinctive domain of entrepreneurship research: an editor's perspective'. In Katz, J. and Brockhaus, R. (Eds), *Advances in Entrepreneurship, Firm Emergence, and Growth*, Vol. 3. Greenwich, CT: JAI Press, 119–38.
- Von Hippel, E. (1988). *The Sources of Innovation*. New York: Oxford University Press.
- Webb, J. W., Tihanyi, L., Ireland, R. D. and Sirmon, D. G. (2009). 'You say illegal, I say legitimate: entrepreneurship in the informal economy'. *Academy of Management Review*, **34**, 492–510.
- Webb, J. W., Kistruck, G. M., Ireland, R. D. and Ketchen Jr, D. J. (2010). 'The entrepreneurship process in base of the pyramid markets: the case of multinational enterprise/nongovernment organization alliances'. *Entrepreneurship Theory and Practice*, **34**, 555–81.
- Wheale, P. R. and Amin, L. H. (2003). 'Bursting the dot.com "bubble": a case study in investor behaviour'. *Technology Analysis & Strategic Management*, **15**, 118–36.
- Woolcock, M. (1998). 'Social capital and economic development: toward a theoretical synthesis and policy framework'. *Theory and Society*, **27**, 151–208.
- World Bank (2000). *World Development Report 2000/2001: Attacking Poverty*. New York: World Bank.
- World Bank (2010). *Innovation Policy: A Guide for Developing Countries*. Washington, DC: World Bank Publications.
- Yunus, M. (1999). *Banker to the Poor: Micro-Lending and the Battle against World Poverty*. New York: Public Affairs.
- Yunus, M. (2008). *Creating a World without Poverty*. New York: Public Affairs.
- Zacharakis, A. L., McMullen, J. S. and Shepherd, D. A. (2007). 'Venture capitalists' decision policies across three countries: an institutional theory perspective'. *Journal of International Business Studies*, **38**, 691–708.
- Zeller, M., Sharma, M., Henry, C. and Lapenu, C. (2006). 'An operational method for assessing the poverty outreach performance of development policies and projects: results of case studies in Africa, Asia, and Latin America'. *World Development*, **34**, 446–64.