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AN INSTITUTIONAL VIEW OF LOCAL ENTREPRENEURIAL CLIMATE

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ABSTRACT:

This paper proposes a conceptual framework on the role of formal and informal institutional factors at the sub-national level (e.g. city) in shaping the climate conducive for the growth and success of micro, small, and medium enterprises (MSMEs). Extant literature reveals that institutional analyses tend to focus on either formal or informal institutions, in narrow and fragmented ways. Likewise, previous studies focused their analysis on national or country-wide institutional frameworks, ignoring the institutional heterogeneity of regions and cities within a given country. This study attempts to develop an integrated institutional approach at the city-level and stretch the conceptual boundaries of formal and informal institutions as they shape the local entrepreneurial climate – the set of tangible and intangible institutional factors that are shaping the performance of entrepreneurial firms in a geographically and politically defined area such as a city.

Introduction

The multidimensional and multilayered construct called entrepreneurship and its conceptual derivations have been getting increased attention as subjects of scientific inquiry across a broad range of disciplines. The foci of extant literature on this subject include understanding entrepreneurship at the individual or entrepreneur level, the enterprise or firm level, or at the external environmental level (Lundstrom and Stevenson 2005). Many studies however, take an integrative perspective by considering two or all of these areas of inquiry to better understand a range of issues on the subject.

This paper aims to contribute to further understanding of entrepreneurship by proposing a conceptual framework of the institutional environment that fosters the growth of micro, small and medium enterprises (MSMEs) at the city, rather than national or regional, level. The interest on MSMEs stems from the fact that these modern-day embodiments of the Schumpeterian "agents of creative destruction" comprise over 98% of total enterprises in the Asia-Pacific region based on latest Asia Pacific Economic Cooperation (APEC) survey (APEC 2002). Entrepreneurship, as represented by MSMEs, has long been identified as an engine of economic growth in capitalist societies and an instrument of social transformation in many developing countries (APEC 2002; Kirby and Watson 2003; Klein and Hadjimichael 2003; Acs, Arenius et al. 2004; Kreft and Sobel

2005). Hence, entrepreneurship is being referred in this paper to mean the activities of firms categorised as micro, small, and medium enterprises (MSMEs).

Extant literature is replete with studies from diverse disciplines discussing the role of the external environment in supporting the emergence of MSMEs. Amongst these studies are the *new wave local economic development framework* (Bartik 1991), *entrepreneurial environment* (Gnyawali and Fogel 1994), *British model of local economic development* (Wong 1998), *entrepreneurial climate* (Goetz and Freshwater 2001), *city competitiveness* (Magdaluyo, Tecson et al. 2001), *city investability* (Begg 2002), *systemic competitiveness* (Esser, Hillebrand et al. 1995), *investment climate* (WorldBank 2004; Dollar, Hallward-Driemer et al. 2005), *inner city competitive advantage* (Porter 1995), plus a wide array of popular business climate polls conducted by various private firms and government agencies.

However, many of these previous studies tend to capture the external environment at the national or country-wide level at it shapes economic productivity and growth as surrogate measures of productivity of business firms, including MSMEs (Ahmadi 2003; Rodrik, Subramanian et al. 2004; Dollar, Hallward-Driemer et al. 2005; Wan 2005; Welter and Smallbone 2005). Literature on local economic development, regional science, and economic geography (Wong 1998; Blakely and Bradshaw 2002; Wong 2002; Eberts 2005) shows the institutional heterogeneity of regions and cities within a given a country. Whilst a national picture of the state of the socio-economic-political environment for business (i.e. business climate) helps in describing the business and investment potentials of a country, it unfairly masks the wide disparities amongst regions and cities within a country. Hence, efforts to stimulate and support entrepreneurship as part of an economic development program depends on a clear understanding of how sub-national economic conditions impact the business performance of entrepreneurs operating in that local business environment. In their preliminary attempt to measure entrepreneurial climate, Gnyawali and Fogel (1994) concludes that previous studies are deemed fragmented and lacking in focus as they fall short of establishing the explicit link between the needs of entrepreneurs and on how the external environment can help in fulfilling those needs.

the external environment of MSMEs in terms of its institutional dimensions. The basic tenets of institutionalism as applied in entrepreneurship posit that the MSMEs and their activities are embedded in an external environment which is a source of legitimization, rewards/incentives, and constraints (Baum and Oliver

1992; Hollingsworth 2002; Parto 2005). In as much as economic activities are socially instituted (Parto 2005), institutions are both the "explanantia" and "explandum" of social phenomena (Groenewegen, Kerstholt et al. 1995; Grief 1998).

However, previous empirical studies tend to reduce the concept of institutions into legal and political elements, such as laws, policies, and government programs, as they influence small firms (Henrekson and Johansson 1999; Henriquez, Verheul et al. 2001; Veciana, Aponte et al. 2002; Co 2004; Rodrik, Subramanian et al. 2004; Siu 2005; Vatn 2005; Wan 2005; Siu, Lin et al. 2006; Sui, Lin et al. 2006). This treatment of institutions is rather too restricted, as will be shown in the following review of the literature on the rich traditions of institutionalism. An incomplete institutional representation is unable to meet the goal of determining the effects of an institutional system on (??) society or a sub-sector of it (Hollingsworth 2002). It may even produce a distorted view of the system, making policy recommendations short-sighted, shallow, or even distant from or misaligned with real, felt needs. Moreover, propagating a restricted conceptual view of institutions does not serve the sublime purpose of advancing the theoretical understanding of the concept itself.

Another research gap lies on the fragmented nature of previous studies, such that these studies examined only one or few institutional factors as they relate to small firms (Veciana, Aponte et al. 2002; Wattanapruttipaisan 2002; Wijewardena and De Zoysa 2003; Gambarotto and Solari 2005; Tambunan 2005; Wilkinson 2006). This study attempts to overcome this fragmentation of empirical evidence by developing an integrated institutional landscape through the development of a model that proposes a relatively comprehensive set of institutional factors suggested by the literature on institutionalism, using an interdisciplinary perspective. The following sections present a brief review of institutional theory, the model of local entrepreneurial climate showing the institutional factors relevant to MSMEs, and the implications associated with the developmental of the model.

Theoretical Foundation: Institutional Theory

There is a rich body of literature dealing with the role of institutions in shaping human activity in general, and economic activities in particular. The concept of embeddedness is the underlying assumption in all these institutional analyses (Baum and Oliver 1992; Hollingsworth 2002). This concept suggests that

entrepreneurship, as manifested by the presence and activities of micro, small and medium enterprises (MSMEs), is embedded in an external environment. This environment is the source of legitimization, rewards or incentives and constraints on the activities of MSMEs (Clingermayer and Feiock 2001). The main paradigm of institutionalism suggests that entrepreneurship as an economic activity, is by itself, an institution that emerged from a wider set of institutions (Hodgson 1998; Parto 2005). Hence, institutions are both the "explanantia" (i.e. that which does the explaining) and "explanandum" (i.e. that which to be explained) of social phenomena (Groenewegen, Kerstholt et al. 1995; Grief 1998).

More particularly, the work of Douglas North in the field of new institutional economics significantly influences the framework of this research. North's main argument suggests that the presence of economic uncertainty makes it costly for MSMEs to transact. Institutions are formed to reduce this uncertainty by setting the "rules of the game" in the form of formal rules, informal norms, and their enforcement characteristics (North 1992; North 2005). Likewise, the same "rules of the game" provide the constraints and incentives that encourage entrepreneurs to switch from unproductive to productive activity, and ultimately improve the general economic well-being of a society (North 1990). North (2005) repeatedly refers to the non-ergodic economic world and postulated that "*the key to improved performance is some combination of formal rules and informal constraints and the task at hand is to achieve an understanding of exactly what combination will produce the desired results both at a moment of time and over time"*.

Equally relevant is the political science view of institutions in which debates revolve around issues on the role of law in governance, as well as importance of structures, such as political systems (Peters 1999). The sociological view of institutionalism could well be represented by Selznick's "natural systems model" (Scott 2001). Selznick's theory situates MSMEs in a complex social system implying that the latter's organizational structure could only be understood by examining the social structures in tandem with its non-rational dimensions such as the complex informal systems linking social participants (e.g. MSMEs) with one another and with others beyond their boundaries. This view is consistent with the Parsonian cultural-institutional theory (Parsons and Shils 1951; Scott 2001). Parson's theory explains that the value system of an organization is constantly legitimated by its connections to the "main institutional patterns" of its outside environment. This implies that an MSME as an organization acts as a subsystem of a wider social system, which is a source of meaning, legitimation, or higher level

support. In short, success of an organization depends on whether it has the necessary support from the wider system.

Furthermore, scholars in the field of organizational theory like Meyer, Rowan, Powell, DiMaggio, Berger and Luckman shed more light on the role of institutional rules that define the normative structures of organizations and their extra-organizational relations (Meyer and Rowan 1977; McKinley and Mone 2003). Conformity to these rules is rewarded with legitimacy, which opens up access to needed societal resources and ultimately leads to what DiMaggio and Powell called "institutional isomorphism". This view on institutionalism denotes that MSMEs go through the process of institutionalization by constantly seeking legitimacy from their external environment as a prerequisite of organizational survival and longevity.

The Nature of Institutions

A review of literature on institutional theory across disciplines such as economics, sociology, and political science reveal a plethora of definitions of institutions. It is important to note that there is no common definition that is accepted either within or across various social sciences (Vatn 2005). Institutions can be viewed as (a) a pattern of thoughts or actions of some prevalence and permanence,which is embedded in the habits of a group or the customs of a people, (Hodgson 1998; Argy 2002), (b) social structures (Scott 2001; Carlsson 2002), (c) formal organizations, patterns of behaviour, and negative norms and constraints (Coriat and Dosi 1998) , (d) collective action (Parto 2005) (e) rules (Parto 2005), (f) beliefs (Elsbach 2002), and (g) organizations (Hodgson 2006). North defines institutions as the rules of the game in a society, or formally, are the humanly devised constraints along with their enforcement mechanisms that shape human interaction. Consequently, they structure incentives in human exchange, whether political, social, or economic (North 1990; North 1992; North 2005). Scott (2001) argues that whilst many institutions may be intangible in nature, these institutions evolve and are transported by carriers such as culture and its artifacts, structures, and technologies. These institutional conduits could be argued as the manifestations of the enforcement mechanisms referred to by North.

In developing his theory, North highlights the presence of uncertainty in economic activities. His theory suggests that to reduce uncertainty experienced by MSMEs, an environment that increases information flow amongst the actors is of prime

importance. This environment, according to him, is a construct of rules, norms, conventions, and ways of doing things that define the framework of human interaction. North further elaborated by saying that institutions could take the form of formal rules as well as informal norms and their enforcement characteristics (North 1990). Consequently, North's theory points out that the quality of these institutions can reduce transaction costs, making economic activities more predictable. North's theory further explains that the viability, profitability and indeed survival of MSMEs, typically depend on the existing institutional matrix. This concept of institutional matrix is a kind of institutional web that governs socio-economic activities and determines the opportunities available for MSMEs. It shows the "institutional thickness" or "local milieu" of a place characterized by the presence of social, economic, and political machineries and practices and efficient contacts between and amongst institutions, mutual awareness and collectivization and corporatization of economic life (Amin and Thrift 1994; Amin and Thrift 1995; Raco 1999).

Formal and Informal Institutions

North develops a typology of institutions, namely formal and informal institutions. He defines formal institutions as written policies, laws, and regulations. They also include political rules, economic rules and contracts (North 2005). North intentionally included political rules because he believes that these rules oftentimes lead to economic rules, although the causality could run both ways. By this he means that rights and contracts are specified by political decision-making but the structure of economic interests will also influence the political structure. Moreover, North argues that these formal institutions exhibit a hierarchy: "from constitutions, to statute and common laws, to specific bylaws, and finally to individual contracts". In other studies, these are called *concrete or hard institutions* (Boland 1992; Hodgson 1993).

On the other hand, informal institutions are defined by North as codes of conduct, norms of behaviour, and conventions – all these generally emanate from a society's culture (North 2005). These are mechanisms which run in tandem with formal institutions serving as tools for solving coordination problems. These informal institutions (sometimes referred to as *consensus institutions*) have arisen to coordinate "repeated human interaction" and more specifically consist of: extensions, elaborations, and modifications of formal rules; socially sanctioned

norms of behaviour; and internally enforced standards of conduct (Boland 1992; Hodgson 1993; Fiori 2002).

Local Entrepreneurial Climate: A Conceptual Framework

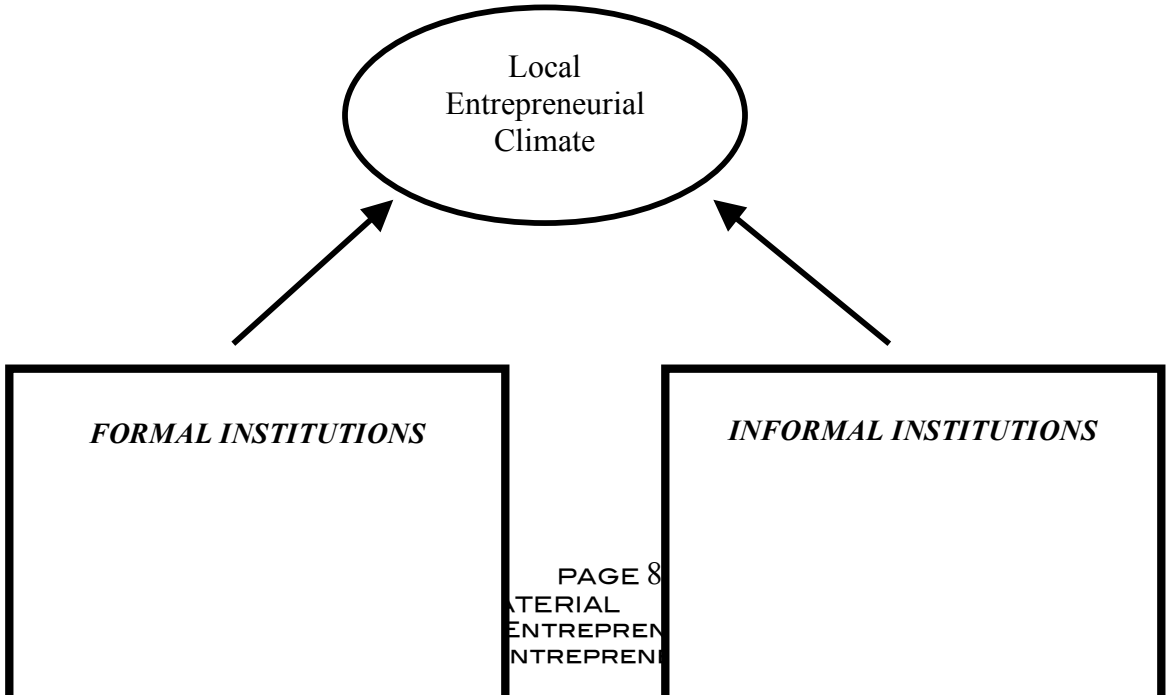
Against this backdrop of rich theoretical foundation of institutionalism, this paper proposes a conceptual framework of institutional thickness that supports the growth, success and sustainability of MSMEs, much akin to the concept of "environmental munificence" (Anderson, Drakopoulou-Dodd et al. 2000; Anderson and Tushman 2001; Goll and Rasheed 2005). This conceptual framework allows "for propositions as well as hypotheses to summarize explanations and predictions regarding the relationships or interactions of variables" (Parsons and Shils 1951). The use of frameworks in research allows the identification of the elements and the specification of the relationships amongst these elements that the researcher needs to consider for diagnostic and prescriptive analyses (Ostrom 2005). It allows the researcher to identify, as well as compare, the relevant theories shaping the framework. Furthermore, in developing this conceptual framework, careful consideration of the three requirements for a good "classification system" was observed: (a) development of mutually exclusive and exhaustive categories; (b) capturing meaningful differences of the objects being classified in a parsimonious manner; and (c) the operationability of the classification scheme (Law, Wong et al. 1998). Aiding the development of the proposed conceptual framework is the thorough review of existing models and frameworks of business and/or investment climate and city and regional development. Amongst these models and frameworks include investment climate (WorldBank 2004), inner-city development (Porter 1995), entrepreneurial environment (Gnyawali and Fogel 1994), local economic development (Wong 1998; Wong 2002), city investability (Begg 2002), entrepreneurial climate (Goetz and Freshwater 2001), city competitiveness (Magdaluyo, Tecson et al. 2001), and systemic competitiveness (Esser, Hillebrand et al. 1995).

As shown in figure 1, the environment for entrepreneurship, referred to as the local entrepreneurial climate, is shaped by two sets of forces: formal and informal institutions. These two sets of institutions provide the structure of entrepreneurial activities by determining the incentives and constraints of entrepreneurial firms. The framework addresses the dimensions of institutions: structural, process, and incentives (Adams 1993). In general, these institutional forces shape the playing

field of economic activities. The current study attempts to develop a model of a local entrepreneurial climate based on an empirical investigation of these formal and informal institutions.

The concept of an environment for productive entrepreneurship is shown to be a function of three dimensions: economic; political; and socio-cultural environments. Economic environment includes the general wealth of the society, economic stability, as well as capital availability. Political environment includes freedom, property rights, as well as decentralization of political power. Socio-cultural environment includes social and cultural norms, and beliefs (Shane 2003).

Figure 1. Components of Local Entrepreneurial Climate



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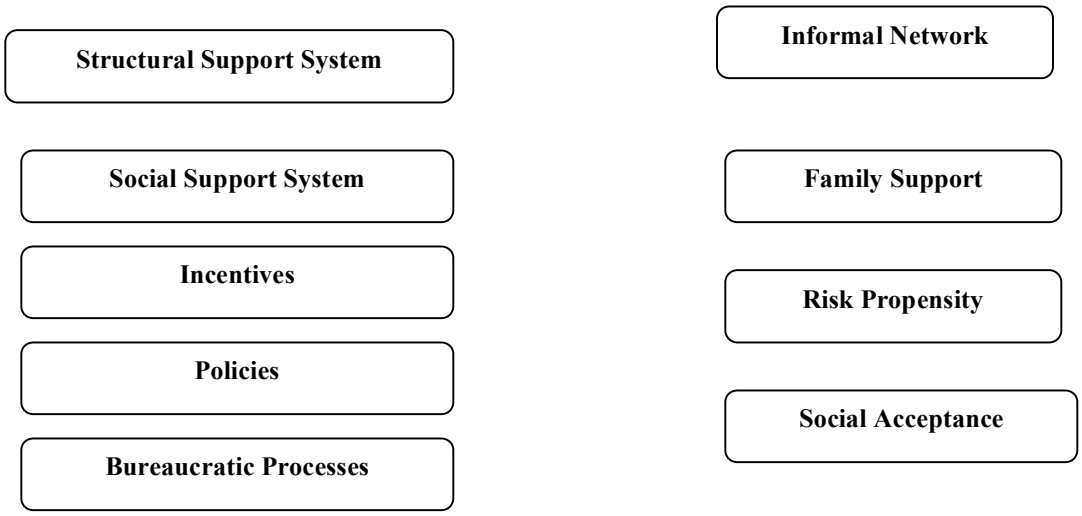

Jackson (2002), on the other hand, defines an entrepreneurial environment as consisting of the contextual environment and dynamic environment. The contextual environment is akin to the economic institutional arrangement of North, with a strong emphasis on socio-economic factors, whilst the dynamic environment takes into account the available technology, information, human resources and finance factors of business operations (Jackson 2002). These are the major sources of formal and informal institutions, as well as concrete and consensus institutions shaping the institutional thickness of a city from which entrepreneurship is argued to emerge and prosper.

Having identified the various dimensions of environment, the next crucial step is to develop the institutional framework showing the variety of institutions shaping the environment conducive for entrepreneurship. Blakely and Bradshaw (2002) argue that the key to good climate is in determining what kinds of regulatory and policy tools will facilitate business development for the type of firms that use the locality's asset base.

This section presents the model illustrating the factors that are proposed to constitute a city's *local entrepreneurial climate.* These factors are categorized into two groups: the formal and informal institutions. The grouping of these two categories reflect the "institutional framework" as characterized by (Hodgson 2006) that shows the "institutional thickness" of a city (Amin and Thrift 1995; Raco 1999). Consistent with Hollingsworth (2002), this study examines the formal

and informal institutions in terms of their influence to a given sector of society which in this case, refers to the micro, small, and medium enterprises (MSME).

The formal institutions refer to the five multidimensional constructs namely: structural support system; social support system; incentives; bureaucratic processes; and policies. The informal institutions include informal network, family support, risk propensity, and social acceptance.

Dimensions of Local Entrepreneurial Climate

Local entrepreneurial climate is defined as the set of tangible and intangible environmental factors that shape the performance of MSMEs in a geographically and politically defined area such as a city (Gnyawali and Fogel 1994; Fogel 2001; Fogel and Zapalska 2001; Goetz and Freshwater 2001; Turok 2005; Welter and Smallbone 2005). These environmental factors comprise the diverse forms or manifestations of institutions, such that they serve as constraints and/or provide incentives for MSMEs to flourish, shrink or die. They provide the structures of economic transactions occurring between and amongst socio-economic players.

a. Formal Institutions

Formal institutions are broadly defined in this study as the set of social, economic, political and legal mechanisms and collective actors that set the rules constraining the behaviour of, and offers incentives that benefit, micro, small and medium enterprises (Hodgson 1988; North 1990; Kochhar and David 1996; Henrekson and Johansson 1999; Henriquez, Verheul et al. 2001; Lam 2003; Hodgson 2006). Formality implies that there is legal basis in the way a particular institution exerts its influence on an MSME. Formality further implies the explicitness with respect to rules, legal obligations and consequences of these institutions. Explicitness could be expressed in a number of tangible, particularly written, ways, such as charters, proclamations, bylaws, legislation, policies, programs, project, symbols, and a variety of ceremonial displays and rituals which have the force of law. Organizations such as businesses and trade associations are also considered formal institutions in the context of the product or services they contribute to the economy as a matter of legal obligation by virtue of a contract, license or charter duly recognized by law. This apparently legalistic view of formal institutions stems from the understanding that legal enforceability is a prerequisite for an institutional factor to be considered formal (Co 2004; Vatn 2005). Furthermore, the action (or

inaction) of the state (i.e. local government unit) has formal institutional weight, as it forms part of the formal administrative-bureaucratic framework through which the functions of the state are disposed. The local government's role in "creating" the physical, legal and social surroundings in which firms operate could be viewed as a "stock" from which firms draw services without making direct payments (Wigren 1984).

Structural Support System. Every economic activity, regardless of scale or magnitude of operation, requires basic infrastructure which is considered as factors to production. Structural support system is defined in this study as *the physical infrastructure and geographic space that aid entrepreneurial business development*. This definition builds on the work of Wong (1999), Gordon (2005), Bingham & Mier (1993), Eberts (2005), Blakely and Bradshaw (2002), and Helmsing (2003), in the fields of modern geography and urbanization, city and regional competitiveness, local economic development, and urban & regional planning. This system includes a city's physical infrastructure, such as roads and road network, transportation system, traffic management, water and power supplies, information and communications technology infrastructure, and waste management system (Gnyawali and Fogel 1994; Wong 1998; Hallberg 1999; Magdaluyo, Tecson et al. 2001; Begg 2002). Likewise, the availability of well-defined commercial and industrial areas or zones, as well as the presence of business support services, are considered a strong signal of a positive climate for entrepreneurial business activities (Bartik 1991; Skuras, Dimara et al. 2000; Begg 2002; Audretsch and Thurik 2004; Audretsch 2004). This structural support system aids the firm as it has the capability to increase the supply of other inputs, including information, resulting in lower costs of production (such as flow of skilled labour),and facilitates activities of other firms that are essential in the industry or the value chain (Immergluck 1993).

Social Support System. The city's social support system refers to the *formally instituted social institutions along with its intangible resources forming the "social capital" of the city supporting entrepreneurial development* (North 1992; Wood 1996; Reese 1998; Feindt, Jeffcoat et al. 2002; Macpherson 2002; North 2005) This system complements the structural support system, the combination of which, provides the fundamental platform for entrepreneurial growth of the city. This support system is constituted by the following factors: (a) a proactive *local government leadership* with clear economic vision for the city, and which encourages participation of MSMEs in city development planning, has a clear city

marketing plan to attract more tourists and businesses, and all other clear cut efforts to promote MSMEs in the city (Blair 1995; Wood 1996; Reese 1998; Van Den Berg and Braun 1999; Argy 2002; Blakely and Bradshaw 2002; Wallis and Dollery 2002; Smallbone 2004); (b) *degree of safety and security* of people and their property (Begg 1999; Hopkins 2002; Taylor and Matthew 2002); (c) *human resource quality* (Acs and Audretsch 1988; Barber, Metcalfe et al. 1989; Levy 1991; Gnyawali and Fogel 1994; Ward, Duray et al. 1995; Wong 1998; Goetz and Freshwater 2001; Batra and Tang 2002; Begg 2002; Zapalska, Perry et al. 2003); (d) *formal business networks* such as trade or business associations and linkages with other firms in the supply and distribution chains (Barber, Metcalfe et al. 1989; Peng and Vellenga 1993; Cooke and Wills 1999; Huggins 2000; Lall 2000; Feindt, Jeffcoat et al. 2002; McCormick and Atieno 2002; Wattanapruttipaisan 2002; Terziovski 2003; Kingsley and Malecki 2004; Rocha 2004; Gordon and McCann 2005; Yue-Ming 2005); and (e) *research and development* manifested by the presence of public or private institutions engaged in R & D including colleges and universities (Sripaipan 1993; Gnyawali and Fogel 1994; Wong 1998; Goetz and Freshwater 2001; Magdaluyo, Tecson et al. 2001; Carlsson 2002; Macpherson 2002).

Incentives. In the Northian institutional context, incentives refer to a set of institutional factors that encourages or supports specific behaviours or activities (in this case, entrepreneurial activities). As North (1990) puts it, formal institutions have two fundamental functions: to discourage unproductive behaviour through the use of rules; and to promote productive behaviour through the use of incentives. These incentives take the form of financial and non-financial business development services and assistance provided by either the government, private sector or both. These incentives that promote entrepreneurship include *financial* (Fogel and Zapalska 2001; Zinger, LeBrasseur et al. 2001; Jenssen and Havnes 2002; Ayyagari, Beck et al. 2003; Shane 2003; Audretsch 2004), *marketing* (Sharma and Fisher 1997; Mead and Liedholm 1998; Wren and Storey 2002; Swierczek and Ha 2003; Barrios and Barrios 2004; Arinaitwe 2006), *production* (Ariss, Raghunathan et al. 2000; Romijn and Albaladejo 2002; Visscher, Becker et al. 2004; Arinaitwe 2006; Guan, Yam et al. 2006), *human resource management* (Hadjimanoulis 2000; Skuras, Dimara et al. 2000; Jenssen and Havnes 2002; Audretsch 2004; Co 2004) , *management development* (Miller and Kirschstein 1988; Zapalska, Perry et al. 2003; Visscher, Becker et al. 2004; Ramsden and Bennet 2005; Berry and Sweeting 2006), *export promotion* (Becchetti and Trovato 2002; Leonidou 2004; Wilkinson 2006; Wilkinson and Brouthers 2006), and *public*

procurement incentives (i.e. participation of MSMEs in bidding for government contracts (McGrudden 2004; DTI 2005).

Policies. The policy framework forms a crucial part of the set of local governance factors to nurture an entrepreneurial climate. Clarity and coherence of policies are crucial in setting the tone for small business development (OECD 2004). The policies in place which could be reinforcement of a country's national policies, as well as policies indigenous to the city, are important ingredients of this entrepreneurial climate (Gnyawali and Fogel 1994; Reynolds, Hay et al. 1999; Lall 2000; Kirby and Watson 2003; Lam 2003; Audretsch 2004). These are the clear-cut examples of North's concept of formal institutions as "rules of the game" designed to shape the behaviour of economic players.

Bureaucratic Processes. Small businesses are likely to have a number of encounters with local government authorities as a matter of legal obligation, such as application or renewal of business registration, permits or licenses. These encounters reveal the level of efficiency, as well as transparency of rules and policies governing the transactions between the business owner and the local authorities (Ollinger and Fernandez-Cornejo 1998; Ayyagari, Beck et al. 2003; Turner 2003; Park 2006). The length of time involved in these transactions, as well as the necessary degree of complexity, are indicators of the responsiveness of the local governance system to the needs of small businesses. Bureaucratic rigidities are likely to dampen the entrepreneurial spirit of MSMEs as they suffer from unnecessary delays, unofficial fees, as well as frustration.

INFORMAL INSTITUTIONS

The development of an entrepreneurial climate does not depend solely on the installation of formal institutions. It also requires nurturing the informal institutions that may be as influential as that of the formal legal framework. Despite the lack of legal enforcement mechanisms, such as penalties and sanctions, informal institutions and their enforcement characteristics, including traditions, customs, moral values, religious beliefs, social conventions, and generally accepted ways of thinking and doing, are able to impose restrictions on the behaviour of individuals belonging to relevant social groups. These informal institutions, or unwritten rules, are created, communicated, and enforced outside officially sanctioned channels (Helmke and Levitsky 2004). Their enforcement takes place by way of sanctions, such as expulsion from the community, ostracism by friends and

neighbours, or loss of reputation (Pejovich 1999). The current study looks at four forms of informal institutions which the extant literature considers to be influential in shaping the potential, capabilities and activities of entrepreneurs: informal network; family support, risk propensity, as well as social acceptance.

Informal Network. Research has identified that the most important business reason that small firms turn to informal networks for assistance is to secure information about their operating environment (Carlsson 2002; Kopicki 2002; McCormick and Atieno 2002; Kingsley and Malecki 2004; Gordon and McCann 2005). As MSMEs typically suffer from information asymmetry, this type of network nurtures friendships which provide regular, inexpensive, and swift routes both to customers via referrals (market access) and to reliable marketing information, as ideas are "bounced off" friendly contacts (Feindt, Jeffcoat et al. 2002). Social networks capture local knowledge and circulate it within the communities, enhancing the knowledge useful for business development.

Family Support. The relevance of family influences in small business creation is well-established in the literature (Finnerty and Krzystofik 1985; Davidsson and Honig 2003). This study extends the argument that the family support could well nurture existing MSMEs as they navigate through the ocean of business opportunities. The degree to which families welcome and appreciate the idea of business venturing as a career option, as opposed to seeking corporate employment, increases the chances of an individual to be successful in his/her business undertaking (Plaschka 1990; Leaptrott 2005). The influence of the family becomes stronger if entrepreneurship is a family tradition or if there is an entrepreneur family member who serves as a role model (Lundstrom and Stevenson 2005; Van Auken, Fry et al. 2006). Finally, the family provides further support by expanding the entrepreneur's network and referring formal and informal business contacts (Sui, Lin et al. 2006).

Risk Propensity. Studies have shown that some cultures are more conducive to entrepreneurship than others (Casson 1990; Mueller 2001). For instance, uncertainty avoidance, as popularized by the work of Hofstede (Hosfstede 1980), is a cultural attribute that has been found to be a strong force influencing the motivations of a society to engage in risky behaviours. The intention to become an entrepreneur and start up a business is characterized as a risky behaviour compared to establishing an employment career with predictable and steady flow of income (Stewart and Roth 2004; Petrakis 2005). There is a significant amount of ambiguity

and anxiety in one's intention to engage in a business venture,regardless of the size. The fear of failure (usually operationalized by an individual's risk aversion) is a particularly critical issue for an entrepreneur, due to the small separation between business and personal risk in an entrepreneurial venture (Watson and Robinson 2003). In this case, entrepreneurship can be characterized as requiring a fair degree of tolerance to ambiguity, a locus of control that is more internal than external, as well as a willingness to take risks that are relatively well calculated (Shabbir and Di Gregorio 1996; Pitt and Kannemeyer 2000; Fielden and Dawe 2004). This indicates that willingness to take on risks is an important variable determining success of small business owners.

Social Acceptance. Closely related to risk propensity is the level of "social acceptance" for venturing into a business as a career (Jackson and Rodkey 1994). Birch et al (1991) argue that tolerance and recognition of new and different people doing new and different things are hallmarks of entrepreneurs starting and growing companies. Likewise, De (2001) in Lundstrom and Stevenson (2005) underscores the importance of social acceptance of entrepreneurship and highlights the need to nurture the associated "social capital", in order to increase the likelihood of a potential entrepreneur to start a business. It has been shown that the higher the level of acceptance of entrepreneurship, the higher the level of propensity to engage in business ventures in a given society (Shane 2003). By extension, the higher the level of support of an MSME and its products or services from the local community, the higher the chance of success of the business. Furthermore, social praise for entrepreneurs and social prestige and status that entrepreneurs receive can act as important non-pecuniary rewards for entrepreneurship, and therefore affect the opportunity cost of becoming or succeeding as an entrepreneur (Gifford 1998).

Implications for Further Research and Conclusion

The development of the conceptual framework showing the institutional dimensions of a city's local entrepreneurial climate serves as the springboard on which further research is grounded. Based on the preceding discussion, three main propositions could be drawn. First, the presence of these formal and informal institutions defines the local entrepreneurial climate of a city. The more pronounced their presence, the more favourable the climate will be. Second, formal and informal institutions exert different, but equally similar level of, influence in shaping the local entrepreneurial climate. Third, in as much as these two types of

institutions are complementary, one can further argue that the absence of one reduces the positive influence of another.

However, tThe utility of this proposed framework depends on subsequent research examining these propositions and the overall validity and reliability of the framework. One basic challenge is to determine the sources of data that will be used in gauging the presence or absence of these institutions. Another key challenge is determining how to establish the link between local entrepreneurial climate and entrepreneurship, particularly as the latter relates to the economic performance of MSMEs and cities. One approach would be to investigate the presence of these institutions and link these results with some indicators of aggregate economic performance of a city. Another approach is to determine if the framework correlates with the performance of MSMEs.

Another issue deals with the challenge of operationalizing the constructs under each category. Since one goal of proposing this research framework is to develop an integrated institutional approach to defining local entrepreneurial climate, the need to establish content validity is essential, such that all relevant factors are given due consideration. Construct validity is of paramount concern if the goal is to ensure that the model depicting local entrepreneurial climate is the closest approximation of reality. To check the possibility that constructs under each category of institutions overlap with each other, discriminant validation may be of help, depending on the type of measures or data that will be gathered. Moreover, a significant portion of the relevant literature which formed the basis of conceptual framework development has a Western context; future empirical investigations may be geared towards determining the generalizability of the framework in the context of non-Western countries, particularly amongst the developing countries in the Asia Pacific region. Even then, there is a further need to validate if this model of local entrepreneurial climate is generalizable across cities in one given country.

Furthermore, empirical investigation may include the role of the public and private sectors in fostering a positive entrepreneurial climate. For instance, a question may be asked regarding the kind of government-business relationship required in pursuit of such entrepreneurial climate? What would be its implication in terms of the praxis of management in both the government and business sector? In as much as MSMEs are institutions themselves, they cannot be taken as passive beneficiaries of an entrepreneurial climate. Hence, investigating the role that

MSMEs play in shaping such a climate may also be of interest for research and policy-making purposes.

Nonetheless, tThe proposed conceptual framework is an attempt at deconstructing the conventional notions of institutions by providing a synthesis of the various strands of institutionalism as a school of thought cutting across disciplines. It extends the typical conceptual definitions of institutions and provides opportunities to establish their relevance in creating a local entrepreneurial climate. Finally, the conceptual framework provides the basis on which to further test the theoretical assumptions regarding the role of institutions in promoting entrepreneurship, in particular, and MSME and economic development, in general.

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ATTITUDES OF THE YOUTH TOWARDS ENTREPRENEURS AND ENTREPRENEURSHIP: A CROSS-CULTURAL COMPARISON OF INDIA AND CHINA

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Abstract

This study argues that social support is an important enabler in entrepreneurial activity in a country or a region. One untested assumption in policy making has been that all regions are equally desirous of entrepreneurial activity and one policy could address issues in all regions. It was argued that attitudes towards entrepreneurs and entrepreneurship are important determinants for future entrepreneurial activity. These attitudes would be impacted by the familial occupational background of an individual and entrepreneurial development of the region which he/she comes from. It was hypothesized that more positive attitude would be seen in (i) people form entrepreneurial backgrounds, and (ii) entrepreneurially more developed regions.

These hypotheses were tested on more than 5,000 respondents in India and China. The results for familial occupational background's influence on attitudes found strong support in both India and China. Regional development showed stronger influence on attitude in India than in China. The findings, issues around measurement of attitudes in cross-cultural study, and implications for policy making are discussed.

Keywords: ATTITUDE, ENTREPRENEURSHIP, YOUTH, INDIA, CHINA, CROSS-CULTURAL

Introduction

Entrepreneurs and entrepreneurship are arguably the pillars on which economic health of societies was built. Their role has been highlighted in opportunity creation through new ventures and maintenance of existing ones (Evans, 1942; Leibenstein, 1968). Entrepreneurship has been identified as the fourth factor of production that helps discover new frontiers leading to all round economic growth (Harper, 1991; Leff, 1979), and a resource that needs to be tapped by developing countries to enable them to compete in a globalizing market economy (Kanungo, 1998; Khandwalla, 1998). More recently, The Commission of European Communities (2005) reported that entrepreneurship is very important for further social development through increased job opportunities and consequent economic prosperity. Several developing countries have identified promotion of entrepreneurship as a focus area for governments, financial institutions, and academic institutions.

The importance of entrepreneurial ventures in creating new job opportunities is highlighted well in Indian Information Technology (IT) sector. In Indian IT sector alone, Small and Medium Enterprises (SMEs) in aggregate turned out to be largest employers in the country in the last 10 years ("SMEs largest employers: Skoch," 2002). Similarly in China, in 2002, SMEs were responsible for about 60% of China's industrial output and employed about 75% of the workforce in cities and towns (China's small and medium enterprises: room to grow with WTO, http://www.usembassy-china.org.cn/econ/smes2002.html). High entrepreneurial activity is clearly the driving force behind the growth in India and China, both countries with large young employable population.

Global Entrepreneurship Monitor (GEM) carried out studies to measure entrepreneurial activities, their drivers and impact in several countries. It reported that India and China have consistently registered high entrepreneurial activities though the two countries had different patterns of support and investments in entrepreneurship (*GEM Hong Kong and Shenzhen Report, 2003;* Manimala, 2002). Despite differences in terms of government structure and political contexts in India and China (Malenraum, 1959), there are many similarities. Both countries have billion plus populations, rich cultural heritage of their own, large natural resource base, and are fast growing economies. Given that culturally they are quite similar (Hofstede, 1980) it would be interesting to study as to how entrepreneurs and entrepreneurship are perceived by youth in these two similar looking yet different societies.

Promoting Entrepreneurship in India and China

Successive government regimes in India have attempted to create conducive environment for entrepreneurs and make the proposition for entrepreneurship attractive by providing support in three formats; (i) government policies favoring promotion of entrepreneurial activity; (ii) making financial support available; and, (iii) setting up of academic or institutional support for imparting entrepreneurial and business skills. Similarly, in China multi-pronged strategies for promoting SMEs have been formulated by the government. Such strategies have been supported by academicians and researchers' insights and advice (Gnyawali & Fogel, 1994).

First, at the macro level the government policies shifted from the promotion of state owned enterprises and strict licensing for private business promoters to encouraging private ownership of business in early 1990s. Reported experiences from the earlier regime suggested that difficulties in starting up businesses and handling the pressures of entrepreneurship in the initial phases deterred people from taking up entrepreneurship as means for livelihood. The grant of licenses, controls and taxations had been cited as one of the major hurdles in the setting up and running of new businesses (Awasthi & Sebastian, 1996; Gautam, 1979; Mokry, 1988; Sadhak, 1989; Singh, 1985). However, since liberalization of the Indian economy in the early 1990s, entrepreneurship had been encouraged in India by systematic attempts at removal of state imposed structural and regulatory roadblocks. More progressive governments had tried to make it easy for entrepreneurs to set up businesses. The growth of Bangalore and Hyderabad as hubs for organizations engaged in Information Technology business was direct outcomes of government's support in form of tax holidays to start-ups and other sector-region specific concessions to start new ventures.

Second, there were attempts to make finances available to businesses. In the earlier banking paradigm it was not so easy to get loans for starting new ventures or expanding current businesses. The Reserve Bank of India changed its outlook and urged banks to consider easier lending to small and new businesses ("Banking not equipped to promote SMEs: RBI," 2002). The Government of India also increased efforts in this direction. Small Enterprise Development Bill of 2003 included guidelines for banks and other government agencies to ensure easy disbursement of loans to new ventures (Gopalakrishnan, 2004). Subsequently, lowering of borrowing rates from the banks also made it easy for entrepreneurs to run profitable business.

The third form of support and development of entrepreneurial talent by various institutions came in the form of setting up training institutions for entrepreneurs. Setting up of national institutions such as the Entrepreneurship Development

Institute at Ahmedabad is indicative of such thinking at the government level in India. Technical and management institutions such as the IITs and IIMs have set up special centers to support 'technopreneurs' and other innovators. These institutions provide basic technological and management know how and understanding of how to start and run a business, and also incubate new businesses till they are able to sustain themselves.

China has witnessed an economic history very similar to India in a broad sense though it has advanced much further than India (World Development Indicators, 2002). There has been a shift in Chinese government's philosophy of the state from being the sole care-taker of its people to becoming a partner and resource provider to the businesses by investing in the education of its youth and help in starting enterprises. The efforts got a further boost with a five-pronged strategy to promote SMEs in China under provisions of the Small and Medium Enterprise Promotion Law of 2003. The support came in the form of incubation support by government and its nodal agencies, directive to banks to provide easier lending to start-ups, easier funding from a new SME development fund, market development by networking of SME with large firms, transfer of new technologies to SME on a favorable basis, and provision of information services to SME by government agencies.

Societal Influence on Attitude

In both these context, the structural interventions were clearly made, but little was understood about the necessary cultural interventions to make a countrywide impact (Davidsson, 1995). At the heart of all these attempts of governments in the two countries there is an assumption that entrepreneurship is good and society, families and individuals at large view entrepreneurship as beneficial, and given the right incentives people would engage in entrepreneurship. This assumption, however, remains largely untested in these contexts. There is little work on studying the influence of societal attitude as an *a priori* factor on attitude towards entrepreneurs and entrepreneurship (Autio, 2005).

It has been shown in earlier work that attitudes of people are precursors to their behaviors (Ajzen & Fishbein, 1980). Past work in development of attitude has indicated that exogenous factors like social milieu have an impact on attitude and intentions of individuals (Ajzen, 1991; Kanungo, 1990; Kiggundu, Jorgenson, & Hafsi, 1983; Krueger, 1993). Negative attitude of people towards government policies have resulted in failure of attempts to promote entrepreneurship (Gnyawali & Fogel, 1994). This linkage between attitude and subsequent behaviors has been established in entrepreneurial behaviors as well (Krueger & Carsurd, 1993; Lee, Chua, & Chen, 2004). This study argues that it is possible that if the family and

society at large views entrepreneurship as valuable and positive, youth will be encouraged to opt for entrepreneurship as a career.

As most policy making attempts are based on anecdotes, success stories and prescriptions documented elsewhere (Thomas & Mueller, 2000), a better understanding of societal attitudes would give insights for policy making towards promotion of entrepreneurship. In case, there is a positive attitude towards entrepreneurs and entrepreneurship it would be easier for policy makers to encourage entrepreneurship. They only need to offer programs that would encourage entrepreneurial activity in the society. On the other hand if the attitude is negative, policies would only be successful once the society is willing to accept entrepreneurial activity as something that is positive. In such cases wide-spread attitude change programs would have to be initiated.

Effect of Familial Occupation

It has been found that socialization impacts an individual's attitude towards entrepreneurship (Brockhaus & Horwitz, 1986; Jackson & Rodkey, 1994). An individual's socialization takes place at home, at the place of education, and in other spheres of interaction. Socialization includes messages about what is good and positive, what lends status, what is valued by others etc. Family background and parental role-modeling has been found to be the most prominent factor that affects early socialization and hence formation of attitude towards entrepreneurship (Matthews & Moser, 1995; Scott & Twomey, 1988). Early communication received and imbibed by an individual from the family would impact career choices by inducing individuals to choose a career in which they are viewed positively by society. In Singapore, Lee and Wong (2003a, b) found that those showing more interest during programs on entrepreneurship were more likely to engage in entrepreneurial activity. The desire to study in entrepreneurship programs was, in turn, found to be higher in people coming from families with business as major family occupation. Together, these suggest that family's occupational background is likely to impact the preferences of individuals towards entrepreneurs and entrepreneurship. It is therefore hypothesized that

H1A: Familial occupational background of an individual will have an impact on individual's attitude towards entrepreneurs and entrepreneurship. Therefore, individuals coming from business or entrepreneurial familial occupational background will be more positive towards entrepreneurs and entrepreneurship.

Given that the two countries are culturally similar (Hofstede, 1980),

H1B: It is hypothesized that there will be no difference in the influence of familial occupational background on individual's attitude towards entrepreneurs and entrepreneurship in China and India.

Effect of Economic Development of Region

The extent of economic activity could also impact availability of resources necessary for entrepreneurship. Different levels of economic activity in a region give rise to a differential resource base for entrepreneurial activity that influence in the kind of entrepreneurial activity that could take place in that region (*e.g.,* Davidsson, 1995, Lavoie & Chamlee-Wright, 2000). Regional development has also been posited to affect occupational choices (Parker, 2005) and formation of societal attitude towards entrepreneurship. Both India and China have regional imbalances in the economic growth leading to increase in regional divergence (Chaudhuri & Ravllion, 2007; Jian, Sacks, & Warner, 1996; Kanbur & Zhang, 1999; Sun & Dutta, 1997). Table-1A summarizes regional activity and contribution to India's GDP for different regions. The western and southern regions in India are entrepreneurially more active and economically more advanced; the eastern region is least active. Table-1B presents the regional economic activity in China. East China is the biggest contributor to Chinese GDP followed by South, North, West, Central regions respectively.

Table 1A India - Region's GDP Share (%) for 1993-94 to 2002-03

	1993-94	**1994-95**	**1995-96**	**1996-97**	**1997-98**	**1998-99**	**1999-00**	**2000-01**	**2001-02**	**2002-03**
North	23.26	23.09	22.76	23.23	22.81	22.46	22.47	22.88	22.36	21.65
South	24.91	25.14	25.10	24.75	24.57	25.38	25.31	26.51	25.81	26.33
East	19.94	19.68	19.15	18.82	19.27	19.17	18.86	19.55	19.70	20.13
West	31.88	32.09	32.99	33.19	33.35	33.00	33.36	31.06	32.12	31.89

Source: Central Statistical Organisation

Table 1B China – Region's GDP Share (%) for 1995-96 to 2003-2004

	1995-96	**1996-97**	**1997-98**	**1998-99**	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**
North	14.63	14.48	14.47	14.38	14.39	13.95	13.67	11.28	12.93
South	33.86	34.03	34.10	34.29	34.54	35.35	35.62	45.75	35.73
East	33.67	33.68	33.70	33.88	34.01	33.92	34.10	29.16	35.06
West	10.46	10.42	10.44	10.18	9.96	9.53	9.36	7.73	9.09
Central	7.38	7.39	7.29	7.27	7.09	7.25	7.25	6.07	7.19

Source: China Statistical Bureau

These regions also have different growth rates depending on the levels of economic activity in them. Table-2A presents average annual growth rates in per capita state income for India at 1993-94 prices for the period of 1993-94 to 2000-

01. The southern region has shown highest average increase in income, followed by western region. The eastern India shows the least growth.

Table 2A India- Region wise % growth in income (1993-94 to 2000-01)

Region	**Annual Growth Rates* (%)**
North	5.25
South	6.2
East	4.025
West	5.275
India	6.3

*At Constant (1993-94) Prices

Source: Economic Survey of Maharashtra 2002-03, Directorate of Economics & Statistics, Planning Department, Govt. of Maharashtra.

Table 2-B presents the annual growth rate for per capita income in different regions in China. The trends of growth are similar to those of contributions to country's GDP. The biggest contributor, East China region is also the fastest growing region in the country, whereas the smallest contributor (West region) is the slowest growing region within China.

Table 2B China- Region wise % growth in income (1995-96 to 2003-04)

Region	**Annual Growth Rates* (%)**
North	9.80
South	10.0
East	11.5
West	9.80
Central	9
China	8.9

Source: China Statistical Bureau

The divergence also impacts the resource availability for setting up and running new businesses. For example, in India there is divergence in entrepreneurial and economic activity. Consequently, the regional imbalances in GDP share and growth were also evident in the number of registered companies in a region (Table 3) lending support to the argument that more developed regions are also entrepreneurially more active. In India, for example, the western region had the highest number of registered companies in the country and the eastern region has the least number of registered companies. Similar data was not available for China.

Table 3 India – Regionwise breakup of registered companies (2000)

Region	N	%
North	128410	27.40
South	100257	21.40
East	76625	16.35
West	163280	34.85
TOTAL	**468572**	**100.00**

Source: Indiastat.com

Past research in India has argued that there is a circular relationship between culture of a region and economic development. The economic activity in a region is a function of a normative pattern guided by the cultural milieu of a region. Moreover, developmental activity in a region gave rise to a positive spiral in the beliefs and values of the more active area compared to an area where no developmental activity was taking place (Alexander & Kumaran, 1992). Therefore, from Tables 2 and 3, it is quite evident that regional imbalances in economic activity are likely to grow further. It is also likely that regions having greater entrepreneurial developement activity would have more success stories, have presence of informal networks to support entrepreneurship, exhibit more resilience in case of failure, benefit from informal learning from social channels of communication, and encourage entrepreneurial activity (Lavoie & Chamlee-Wright, 2000). Together, they give rise to a positive spiral in favor of promoting entrepreneurship and entrepreneurial activity, thereby making the attitude towards entrepreneurs and entrepreneurship more positive in more developed regions. On the other hand, in less developed regions, there is lack of evidence of entrepreneurial success and therefore lesser examples from where one can learn about entrepreneurs and entrepreneurship. Together they result in a negative spiral that may lead to negative attitude towards entrepreneurs and entrepreneurship in lesser developed regions. Therefore, one can expect that the attitude towards entrepreneurs and entrepreneurship would be more positive compared to lesser developed regions.

Given the regional development and growth scenarios the attitude was expected to be most positive for West region and least positive for Eastern region in India. The North and South India were expected to fall in middle with not many differences. For China, Eastern China was expected to be the most positive in its attitude towards entrepreneurship followed by South and North regions. The Central and West China regions were the least developed and were expected to be least positive in their attitude within China. It is therefore hypothesized that

H2A: Within a country, regions with higher entrepreneurial activity would have more positive attitude towards entrepreneurs and entrepreneurship when compared to lesser developed regions.

Given that China and India both have regional imbalances in GDP and entrepreneurial development it is hypothesized that,

H2b: The trend will be similar in China and India.

Method

Operational Definition of Entrepreneur and Entrepreneurship

Despite the interest in the characteristics and phenomenon, there is little clarity on who is an entrepreneur and what entrepreneurship is (Cunningham & Lischeron, 1991; Kuratko & Hodgetts, 2004). An entrepreneur has been characterized as a leader manager (McClelland, 1961), innovator (Schumpeter, 1934), a risk taker (Brockhaus & Horwitz, 1986), an initiator and creative thinker (Hisrich, 1989, 1990) having internal locus of control (Rotter, 1966; as in Brockhaus & Horwitz, 1986), and different from managers (Penrose, 1995). It is still difficult to answer the question looming large for more than six decades now – who an entrepreneur really is (Evans, 1942)? It has been suggested that the definition of entrepreneur and entrepreneurship has to be conceptualized beyond setting up of new businesses (Shane & Venkataraman, 2000). Moreover, in developing countries, the boundary between small business owners and entrepreneurs is often blurred (Thomas & Mueller, 2000).

It has also been suggested that a broad phenomenon like entrepreneurship be understood in conjunction with its context rather being drawn from it (Lavoie & Chamlee-Wright, 2000). Therefore, a workable definition that spans across levels of success, size of activity, or social stratum in which such activity takes place was developed and used in this study. An entrepreneur is *an individual who establishes and manages a business for profit and growth. The business is the primary source of income and it consumes majority of the time and resources of the entrepreneur.*

Consequently, *the activity of establishing and managing a business for profit and growth is called entrepreneurship.*

Instrument Preparation

A questionnaire was developed to assess attitudes of college youth towards entrepreneurs and entrepreneurship. Sixty four items were generated on the basis of past studies by GEM and discussion with entrepreneurs about their perceptions of people's reactions towards them. A 5-point Likert scale was used to measure the level of agreement. It was administered to 35 volunteers in a city in western India. These volunteers were asked to mark their agreement and also report difficulties in answering any of the items. Based on these responses twenty eight items were

dropped because of the difficulties reported by the respondents in understanding the items or the inability of the items to yield differentiated responses. Also, respondents reported that they were more comfortable choosing the neutral mid-point option because it did not require them to commit to either side of the scale. The scale was therefore changed to a four-point one with strongly disagree, disagree, agree, and strong agree as the four anchor points in the next phase. Reflecting on the findings from discussions with entrepreneurs in the initial phase and failure to obtain important aspects of attitude in Likert type of items, the questionnaire was modified to include semi-projective items (Puhan, 1982). The modified questionnaire had 36 statements to measure attitudes on a five-point scale, two items for ranking various career choices to represent preference in a portfolio of careers (Henderson & Robertson, 1999), and three semi-projective items that required participants to choose one or more options as were found suitable to the situation.

The modified questionnaire was pilot tested on 80 undergraduate students in a city in west India, and to 120 undergraduate students in an East Indian city. Analysis of these responses resulted in dropping of 27 attitude measurement statements and minor modifications in the remaining nine statements. One negative item was reverse coded at the time of analysis. Out of three semi-projective items in the pilot questionnaire, one was dropped after the pilot test. The use of a 4-point scale was also tested and it showed that it made the respondents to show their agreement or disagreement with the item and they did not seem unduly pressured in choosing one of the four options. Thus it was decided to retain a four-point scale to allow better measurement of attitudes towards a particular item/statement. These nine items were presented in the final questionnaire as Part A. The two items that required participants to rank order career choices and perception of corruption among professions were retained with minor editing in the final questionnaire as Part B. For the first item on rank order about career preference, marking rank 1 indicated highest preference for that career and so son. For the second item on perception of corruption levels in various professions, rank 1 indicated that the profession was perceived to be the most corrupt among the set.

Part C had two semi-projective items. The first semi-projective question was about evaluation of an individual's decision to leave a well-paying job to become an entrepreneur and what did the individual wish to convey through such an action. Entrepreneurship has traditionally been associated with own progress and contribution to the society by way of employment generation. If the general view upheld that progress of entrepreneurs was built upon exploitation of others, it would mean a negative attitude towards entrepreneurs. However, if the prosperity

of entrepreneurs is believed to stem from their hard work and some other support, it would mean a more positive stance towards entrepreneurs and entrepreneurship. To clarify these, participants were asked to mark their perceived reasons for entrepreneurs being rich in the second semi-projective item. Participants were briefed that they could choose more than one reason if they felt the need for doing so. The choices included had positive and negative valences. Thus, if a respondent viewed entrepreneurs/entrepreneurship negatively, the instrument would be able to record such responses. Finally, Part D had items related to demographic information of the participant. The demographic information asked for information about the degree program the participant was in, parents' highest educational qualification, major occupation(s) in their families, socio-economic status, and geographical region where the respondent had spent most of his/her life. The questionnaire had another section with some items for studying a different construct.

The questionnaire was developed and extensively tested in India. The final version of the Indian questionnaire was translated to Chinese and then back translated following the procedure suggested by Brislin (1986) to English by two independent Chinese Professors of English in Tianjin University. One of the items was found ambiguous and it was subsequently dropped.

Sampling Procedure and Administration

The most probable source of future entrepreneurs is the youth of a country. They are the product of the society and reflect the prevalent attitudes (Scott & Twomey, 1988; Veciana, Aponte, & Urbano, 2005). Therefore it was decided to study the youth studying in colleges. This was also more practical as students in colleges are more accessible and with the help of colleagues in other colleges similar testing environment could be assured (Thomas & Mueller, 2000). All participant students in this study were volunteering college students. Participants were administered the questionnaire in a group setting both in India and China. The participants were told that it would take about 10 minutes to fill in the questionnaire. The administrator also read out the definition of entrepreneurship given in the questionnaire after handing out the questionnaire to the participants and clarified any doubts about the definition. They were assured of their anonymity and were requested to give spontaneous and candid responses.

Undergraduate students studying humanities, languages, and pure sciences in various colleges participated in this study. Students pursuing undergraduate degree in commerce streams and professional courses such as medicine, engineering, computer sciences were not included in this study. It was assumed that students in professional courses and commerce streams may be more favorably inclined to

entrepreneurship because of their own readiness to become an entrepreneur after receiving a relevant degree. Thus their responses may be biased favorably towards entrepreneurs and entrepreneurship and may not be representative of general population.

In India responses were collected from five non-metropolitan cities each in the north, south, east, and west regions of the country by one of the authors or faculty colleagues in respective colleges. The cities were selected from RKSwmayBBDO database classified on the basis of living standards, facilities, and buying power of the city. The profiles of the cities were similar and representative of urban centers in the region. These cities were also study hubs for those who desired to opt for higher studies within the region (see appendix for list). Various colleges were contacted in each city, and the questionnaire was administered to volunteer participants in classroom settings. Therefore, the sample presented here is representative of the educated urban youth in India. A total of 3,208 responses were collected in India.

The selection process to higher education in China ensures that students from all regions are represented in a single university. A nationwide entrance test is held and for every program in all national Chinese universities students are awarded a seat based on their rank and ranking of the university in the desired field of study. Participants in the selected disciplines (humanities, languages, and pure sciences) at four universities in Tianjin city of China were administered the questionnaire by a faculty member in a classroom setting. 3,000 responses in all were collected in China. The instructions and method of collecting data was similar in both countries.

Data Analysis

The family occupations were initially divided into four categories of agriculture, business, service, and more than one occupation. If a participant spent most of his/her life in a region other than the region of data collection the response was dropped. Similarly, if a participant had left three or more responses blank the data was dropped. The data cleaning exercise resulted in 2,625 usable responses from India and 2,577 responses from China. The breakup of responses is shown in Table 4.

Table 4 Respondent profile breakup for China and India

	China		**India**	
	%	N	%	N
TOTAL	**100**	**2577**	**100**	**2625**
Males	41.95	1081	46.84	1229

Females	51.34	1323	52.02	1365
Did not report	6.71	173	1.14	31
More than One Occupation	10.21	263	5.74	151
Business	7.02	181	26.74	702
Agriculture	18.24	470	12.11	318
Service	59.80	1541	54.17	1422
North	17.35	447	22.13	581
South	16.84	434	34.02	893
East	43.77	1128	19.43	510
West	8.65	223	24.42	641
Central	13.39	345	NA	NA

For respondents choosing "more than one occupation" for the family, several combinations were possible. Analysis of such responses became very complicated in respective occupation categories. Therefore, such responses were used for analyses only at aggregate and regional levels. These were excluded from analysis of family occupational background. 263 Chinese and 151 Indian responses were therefore lost for this category for analysis of major family occupation. Given the large sample size this did not influence analysis and interpretation. Agreement of respondents was measured for each statement in Section A in both China and India. The agreement reported here is a combination of "strongly agree" and "agree" choices. Similarly disagreement was calculated by combining "strongly disagree" and "disagree" options.

Results

Table 5 presents the results at aggregate and regional level for agreement with nine statements in first section about attitudes towards entrepreneurs and entrepreneurship.

Table 5 Agreement with statements about entrepreneurs and entrepreneurship for the entire country and regional classification

Description & Classification basis	**China**		**India**		**Significance**
	%	N	**%**	N	
Entrepreneurship is better than working for others	**66.97**	1,717	**75.90**	1,946	*t* stat=5.470***
North	**65.77**	292	**70.82**	398	China $\chi^2 = 44.179^{***}$
South	**70.97**	308	**77.36**	687	
East	**63.85**	717	**80.84**	405	India $\chi^2 = 45.470^{***}$

West	**70.72**	157	**74.39**	456	
Central	**71.26**	243	NA	NA	
Entrepreneurs are popular among my friends and my family members	**35.60**	910	**64.10**	1,630	*t* stat=19.319***
North	**34.55**	152	**66.73**	373	
South	**39.49**	171	**64.74**	571	China $\chi^2 = 34.543^{***}$
East	**37.35**	418	**57.54**	290	
West	**34.84**	77	**66.22**	396	India $\chi^2 = 31.445^{***}$
Central	**26.82**	92	NA	NA	
When looking for a life partner for my sister/ cousin sister (myself) we would prefer an entrepreneur over a person who has a job	**52.22**	1,338	**53.98**	1,378	*t* stat=0.576
North	**50.56**	224	**50.45**	282	
South	**50.92**	221	**58.60**	518	China $\chi^2 = 14.721$
East	**52.63**	590	**47.33**	239	
West	**57.40**	128	**56.03**	282	India $\chi^2 = 32.293***$
Central	**51.32**	175	NA	NA	
Entrepreneurs have good family life	**43.75**	1,121	**64.95**	1,664	*t* stat=14.232***
North	**44.14**	196	**64.35**	361	
South	**46.77**	203	**65.88**	587	China $\chi^2 = 28.102^{**}$
East	**43.25**	484	**63.13**	315	
West	**37.22**	83	**65.63**	401	India $\chi^2 = 15.582$
Central	**45.32**	155	NA	NA	
Rewards from entrepreneurship are more in comparison to the hard work required	**44.93**	1,151	**58.78**	1,480	*t* stat=9.367***
North	**42.50**	187	**57.14**	312	China $\chi^2 = 31.447^{**}$
South	**46.31**	201	**70.43**	612	
East	**43.01**	483	**46.59**	232	India $\chi^2 = 100.560^{***}$

West	**44.14**	98	**53.55**	324	
Central	**53.06**	182	NA	NA	
Entrepreneurship is respected in my society	**82.85**	2,125	**79.42**	2,015	*t* stat=0.504
North	**80.22**	357	**80.72**	448	
South	**83.64**	363	**84.79**	747	China $\chi^2 = 20.604$
East	**83.13**	931	**70.22**	349	India $\chi^2 = 88.617^{***}$
West	**82.96**	185	**77.98**	471	
Central	**84.26**	289	NA	NA	
Entrepreneurs pay their employees well	**62.71**	1,608	**60.35**	1,519	*t* stat=0.153
North	**59.95**	265	**57.30**	314	
South	**62.36**	270	**66.29**	582	China $\chi^2 = 11.926$
East	**63.79**	717	**55.42**	276	India $\chi^2 = 34.144^{***}$
West	**65.77**	146	**58.52**	347	
Central	**61.22**	210	NA	NA	
My friends and I need to become entrepreneurs to make India (China) prosperous	**67.34**	1,722	**72.26**	1,831	*t* stat=6.627***
North	**65.53**	289	**70.81**	393	
South	**68.82**	298	**75.42**	666	China $\chi^2 = 32.760^{***}$
East	**64.11**	718	**72.60**	363	India $\chi^2 = 25.529^{**}$
West	**74.21**	164	**68.62**	409	
Central	**73.98**	253	NA	NA	
Entrepreneurs are rich	**50.94**	1,304	**64.69**	1,656	*t* stat=9.408***
North	**51.58**	228	**76.07**	426	
South	**49.31**	214	**58.20**	518	China $\chi^2 = 19.674$
East	**48.39**	542	**59.96**	301	India $\chi^2 = 76.121^{***}$
West	**59.64**	133	**67.60**	411	
Central	**54.84**	187	NA	NA	

** Significant at $p<.01$; ***Significant at $p<.001$

Overall, the results for Indians show a significantly more positive attitude than the Chinese for majority of the items. The difference in attitude of youth from different

regions was significant in India for eight of the nine items. For two of the items – entrepreneurship is better than working for others, and we must become entrepreneurs to make our country prosperous, the youth from lesser developed eastern region were more positive. In China the differences according to region were significant for five of the nine items. Of these five significantly different items, for three of them (better than working for others, popularity among friends and family and need to become entrepreneurs for our country), the youth from the poorest West and Central regions were more positive.

Thus, both in India and China the hypothesis that attitudes would be influenced by the region was only partially supported. Also the expectation of more developed regions being more positive got limited support.

Table 6 shows item wise results for the statements related to attitudes towards entrepreneurs and entrepreneurship classified by major family occupation in China and India.

Table 6 Agreement (in %) with statements about entrepreneurs and entrepreneurship for different occupations in China and India

Description / Classification basis	**China**		**India**		**Significance**
	%	N	**%**	N	
Entrepreneurship is better than working for others					China $\chi^2 = 15.738$
Business	**70.00**	126	**78.02**	536	India $\chi^2 = 16.311$
Agriculture	**65.64**	447	**77.64**	243	
Service	**67.39**	775	**75.40**	1045	
Entrepreneurs are popular among my friends and my family members					China $\chi^2 = 116.908^{***}$
Business	**63.54**	115	68.84	**464**	India $\chi^2 = 20.096^{*}$
Agriculture	**26.87**	183	62.50	**195**	
Service	**34.53**	395	62.07	**856**	
When looking for a life partner for my sister/ cousin sister (myself) we would prefer an entrepreneur over a person who has a job					China $\chi^2 = 10.530$
Business	**60.77**	110	**63.61**	430	India $\chi^2 = 48.534^{***}$
Agriculture	**49.78**	339	**58.44**	180	
Service	**52.35**	601	**48.31**	672	

Entrepreneurs have good family life					China $\chi^2 = 17.871^*$
Business	**51.67**	93	**67.69**	461	India $\chi^2 = 17.006^*$
Agriculture	**43.40**	296	**68.69**	215	
Service	**43.61**	502	**63.19**	879	
Rewards from entrepreneurship are more in comparison to the hard work required					China $\chi^2 = 17.961^*$
Business	**51.38**	93	**63.16**	420	India $\chi^2 = 23.510^{**}$
Agriculture	**44.12**	300	**60.77**	189	
Service	**45.60**	521	**56.88**	777	
Entrepreneurship is respected in my society					China $\chi^2 = 19.067^*$
Business	**85.64**	155	**82.39**	552	India $\chi^2 = 16.467$
Agriculture	**81.50**	555	**81.15**	254	
Service	**82.28**	947	**77.69**	1069	
Entrepreneurs pay their employees well					China $\chi^2 = 18.791^*$
Business	**64.09**	116	**65.20**	429	India $\chi^2 = 21.342^{**}$
Agriculture	**62.81**	429	**55.70**	171	
Service	**60.96**	701	**58.71**	809	
My friends and I need to become entrepreneurs to make India (China) prosperous					China $\chi^2 = 11.557$
Business	**66.30**	120	**76.97**	518	India $\chi^2 = 27.444^{***}$
Agriculture	**66.52**	451	**73.55**	228	
Service	**68.55**	787	**70.45**	968	
Entrepreneurs are rich					
Business	**53.89**	97	**65.49**	444	China $\chi^2 = 14.741$
Agriculture	**49.05**	334	**63.14**	197	India $\chi^2 = 7.568$
Service	**52.26**	600	**64.94**	904	

* Significant at $p<.05$; ** Significant at $p<.01$; ***Significant at $p<.001$

For China, those from families with business as major occupation were more positive in their attitude on all items except for the need to become entrepreneur to make China prosperous. The differences between various categories were, however, not significant in China (p = .05) for items on entrepreneurship being better than working for others, need to become an entrepreneur, preference to an entrepreneur as a life partner and viewing entrepreneurs as rich. Indian results

showed youth from business families to be more positive in attitude for all items than those from families with service as the major family occupation. The differences between the three occupational classes were significant at $p = .05$ or lower for seven of the nine statements. The hypothesis that family's occupational background would influence attitudes towards entrepreneurs and entrepreneurship was supported both in China and India.

In the second section the country level preferences for taking up entrepreneurship as a career were slightly different. Table 7 shows career preference ranking for various professions in China and India.

Table 7 Career preference ranking (1= Most preferred)

	China							India						
	MNC	Large Domestic	Small Firm	Bank	Government	Business	Academic	MNC	Large Domestic	Small Firm	Bank	Government	Business	Academic
Aggregate	**1**	**2**	**7**	**4**	**5**	**3**	**6**	**1**	**5**	**7**	**3**	**2**	**4**	**6**
Occupation														
Business	1	2	6	4	5	3	7	1	5	7	4	3	2	6
Agriculture	1	2	7	4	5	3	6	2	5	7	4	1	3	6
Service	1	2	7	3	5	4	6	1	4	7	3	2	5	6
Region														
North	1	2	7	4	5	3	6	1	5	7	3	2	4	6
South	1	2	7	3	5	4	6	1	5	7	4	2	3	6
East	1	2	7	3	5	4	6	1	3	7	4	2	5	6
West	1	2	7	4	5	3	6	1	5	7	4	2	3	6
Central	1	2	7	4	5	3	6	NA	NA	NA	NA	NA	NA	NA

Kruskal-Wallis test showed that all differences at occupational and regional levels are significant at $p<.001$.

Both Chinese and Indians showed strongest preference towards working in an MNC. The second ranking career preference was to work with a large domestic firm in China and to have a government job in India. Business was the third preferred option for the Chinese and ranked fourth for the Indians, who preferred working in a bank over owning a business.

There were no major differences in people's career preference ranking for various professions in China and India when analyzed according to region. In India, the more developed West and South India regions showed entrepreneurship or starting up an own business as the third most preferred option, whereas the North Indians

ranked it fourth and the East Indians ranked entrepreneurial career preference in the fifth place. This trend for India was as expected in the hypotheses about regional differences in attitude towards entrepreneurs and entrepreneurship.

Classification of responses on familial occupation basis suggested that youth from business familial occupation background preferred being an entrepreneur compared to a person from service background in both countries. Chinese from a business families rated entrepreneurship as the third most preferred career choice and those from service background preferred it at the fourth place. Indian youth from business families preferred entrepreneurship in the third spot and those from service background preferred entrepreneurship fifth in their career choice. The results for career preference supported the alternate hypothesis that family's occupational background influences the attitude towards entrepreneurs and entrepreneurship in both India and China.

Table 8 presents the results for semi-projective item on the evaluation of the decision of a well qualified individual who leaves a well paying job to become an entrepreneur.

Table 8 Evaluation of choice of becoming an entrepreneur (Agreement figures in %)

	Good		Bad		Realize potential		Become independent		More Money		Family Not served	
	China %	India %	China %	India %	China %	India %	China %	India %	China %	India %	China%	India%
Aggregate	51.96	35.81	6.25	15.12	82.23	42.51	68.10	40.38	50.76	35.31	5.08	5.87
Occupation												
Business	57.46	43.45	5.52	12.39	73.48	44.73	62.98	37.04	46.41	32.48	5.52	5.56
Agriculture	51.32	37.11	4.97	12.58	83.92	38.05	68.57	41.19	50.15	32.39	4.24	6.29
Service	48.79	31.15	7.17	16.60	82.90	41.63	67.10	40.79	48.70	35.51	4.92	5.27
Region												
North	52.13	32.19	6.49	19.62	79.64	42.51	67.79	46.13	48.32	39.76	5.15	3.10
South	51.38	38.1	5.07	13.1	82.7	48.4	65.4	40.2	47.4	31.	6.22	5.94

		9		0	2	9	4	0	7	58		
East	51.51	28.82	7.09	15.10	81.74	41.96	68.71	43.53	51.42	40.00	5.14	8.82
West	57.85	41.34	4.04	13.88	80.72	34.63	69.51	32.92	56.50	32.76	4.93	5.93
Central	50.14	NA	6.09	NA	87.54	NA	68.99	NA	52.17	NA	3.48	NA

All background and regional differences for positive items were significant (*p<.01)* At an aggregate level both the Chinese and the Indian respondents have consistently agreed that the decision to become an entrepreneur was a good decision rather than a bad decision. Both the Chinese and Indian youth see becoming an entrepreneur primarily as a means to realize potential (82.23%; 42.51%), becoming independent (68.1%; 40.38%), and as an opportunity to earn more money (50.76%; 35.31%). The differences in choices about entrepreneurship are spread across regions and it is difficult to clearly decipher a trend in the attitude across regions in China. For India, the most developed west region was also most positive about viewing the decision to take up entrepreneurship with 41.34% respondents saying that it was a good decision. Only 28.82% respondents from least developed East Indian region marked this to be a good decision. Similarly the East Indian respondents turned out to be more negative than the western region respondent for the negative option of family not being served with such an action. Thus the hypothesis of regional development affecting attitude towards entrepreneurs and entrepreneurship in the region for Indian sample was supported.

Youth from business occupational background in both China (57.46%) and India (43.45%) agreed that the action of becoming an entrepreneur after leaving a well paying job was a good decision as compared to those from service background. The negative choices of entrepreneurial action being a bad decision and this action leading to dis-service to the family were rated lower by respondents from business occupational background than those from service occupational background.

The second semi-projective item was based on respondent's attribution of reasons for entrepreneurs being rich. Table 9 presents the results for the item.

Table 9 Percentage agreement for attributions of reasons for entrepreneurs being rich

	Hard Work		**Capable**		**Family**		**Exploit**	
	China %	**India %**	**China %**	**India %**	**China %**	**India %**	**China %**	**India%**
Aggregate	76.06	67.28	80.17	43.92	18.16	27.70	18.43	14.10
Occupation								

Business	74.59	71.94	77.90	45.87	16.57	25.64	13.26	13.25
Agriculture	75.58	66.67	80.99	41.19	16.96	25.47	18.27	13.52
Service	74.96	64.35	78.15	42.41	18.91	28.62	19.34	12.87
Region								
North	73.38	65.92	77.85	35.97	18.34	30.81	18.12	14.29
South	79.26	74.24	82.49	49.72	17.05	21.50	16.82	14.00
East	73.58	67.45	77.75	44.51	19.95	27.45	20.39	11.76
West	84.75	58.66	87.00	42.59	13.45	33.70	13.45	15.91
Central	77.97	NA	83.77	NA	16.52	NA	17.68	NA

χ^2 values were significant for first three differences between business and service class backgrounds for India ($p<.01$).

Attribution to internal factors such as hard work and capability would indicate positive attitude toward entrepreneurship and attribution to external factors such as exploitation of employees and family background would reveal negative attitudes (Weiner, 1974, 1980). At the aggregate level most Chinese (80.17%) attributed the richness of entrepreneurs to their capability followed closely by hard work put in by entrepreneurs (76.06%). Attribution to hard work was favored response in India (67.28%) over other attributions available.

Analysis of youth responses based on region and occupation did not yield any significant trend for China. However, there were some differences between regions in India. The west region showed less attribution to hard work and more attribution to capability and family compared to any other region indicating a strong influence of family background within the region.

On familial occupation basis, more people from business occupational background than from service occupational background attributed richness to hard work (71.94% versus 64.35%) and capability (45.87% versus 42.41%). On the other hand, more people from service occupational background attributed richness of entrepreneurs to their inheritance from famly (28.62%) compared to those from business occupational background (25.64%). Together, these indicated that those coming from business class background were more positive about entrepreneurship than those from service background. Therefore the hypothesis that family background would influence attitude was supported for this item in India but rejected for China.

Table 10 shows the results for the item on perception of corruption levels in various professions. *Table 10 Ranking based on perception of corruption levels in various professions (1=Most Corrupt)*

China	**India**

	Doctors	Government Officers	Corporate Entrepreneurs	Bank Managers	Academicians	Doctors	Government Officers	Corporate Entrepreneurs	Bank Managers	Academicians
Aggregate	**3**	**1**	**4**	**5**	**2**	**6**	**3**	**1**	**2**	**5**	**4**	**6**
Occupation												
Business	2	1	4	5	3	6	3	1	2	5	4	6
Agriculture	3	1	4	5	2	6	3	1	2	5	4	6
Service	3	1	4	5	2	6	3	1	2	5	4	6
Region												
North	3	1	4	5	2	6	3	1	2	5	4	6
South	3	1	4	5	2	6	3	1	2	5	4	6
East	3	1	4	5	2	6	3	1	2	5	4	6
West	4	1	3	5	2	6	3	1	2	5	4	6
Central	3	1	4	5	2	6	NA	NA	NA	NA	NA	NA

All differences at occupational and regional levels are significant at $p<.001$.

In China as well as in India, government officials were perceived to be the most corrupt and the academicians were perceived to be the least corrupt of all professions. Entrepreneurs were considered to be the second least corrupt indicating a positive attitude compared to other professions. The results showed no differences in preferences across regions or occupational backgrounds.

Discussion

There is no data available from the past to be able to compare the attitudes of youth now to the past when the economies of both countries were in different stages of development to be able to make a referent comparison of how development has affected attitudes. This study reveals that by and large there is a positive attitude among the youth towards entrepreneurship both in China and India. The youth perceived entrepreneurship to be respected, rewarding, and a desirable profession for contributing to the country's development. However, from the rankings it emerged that entrepreneurship was preferred much less than jobs with multinational companies, government, banks etc.

In the survey there were two sets of questions. One set of items were *proximal* to the self or extended self with items like entrepreneurship being better than working for others, popularity among friends and family members, and choosing an entrepreneur as a life partner, ranking the career preference, and one semi-projective item about evaluating the action of taking up entrepreneurship. The results show that the proximal items were better able to draw out differences between the two countries and occupational bases. The youth showed overall positive but cautious agreement with proximal items.

The second set comprised of *distal* items, i.e. items beyond self or extended self and related to understanding about entrepreneurs or entrepreneurship such as associating with a good family life, more rewarding, drawing respect, non-exploitative, and riches, the item about corruption levels in various professions, and one semi-projective item on the reasons for entrepreneurs to be rich. The results suggest that distal items were comparatively less effective in bringing about differences between the two countries at aggregate level, between regions and among occupational classes. They also were responded to more positively than the proximal items. These have implications for both theory and policy making.

It is evident from data analysis that as the questions became more specific to individual's actions and direct in measurement of attitudes attitudes were becoming less favorable. This possibly means that the youth find it good when someone chooses to be an entrepreneur and believe that entrepreneurs are good and entrepreneurship is positive. However, when it comes to their own actions they would prefer to possibly choose not become an entrepreneur and they may not even wish to work for a small enterprise.

Influence of Familial Occupation Background

The findings of this study suggest that in both China and India those coming from a business occupational background have a more positive attitude towards entrepreneurial activity. In both countries all measures of attitude towards entrepreneurs and entrepreneurship those coming from business family background were found to be more positive. Even in career choices and their understanding of why entrepreneurs are rich, those from business background chose positive options more often. In developing countries especially like India the family or clan that an entrepreneur belongs to may influence success in entrepreneurial attempts by way of greater familiarity with entrepreneurs and better access to resources to start and run an enterprise (Sharma & Manikutty, 2005; Khanna & Palepu, 1997). This knowledge and resource advantage positively predisposes the youth towards entrepreneurship.

Greater knowledge of entrepreneurship may also be the reason for the trend in the semi-projective item of evaluating the action of an individual who left a well-paying job to start own business (Table 8). Those from business familial occupation background agreed lesser than service occupation background people to options such as greater entrepreneurial action leading to greater independence, as a means to realize potential or make more money. However, they were most positive about the decision to become an entrepreneur. It is possible that people from business occupational background have a better exposure to entrepreneurial efforts and do not romanticize it. They may be aware of the challenges of starting their

own enterprise. For service background people, on the other hand the knowledge is second hand and therefore their perception is likely to be based on success stories published about entrepreneurs. These results clearly point to the influence of early exposure to entrepreneurship. In setting up programs and designing intervention to encourage entrepreneurship it may be best to provide inputs at higher secondary school level rather than after the person has completed professional/graduate level education or when the person has failed to get a job, which is unfortunately the target of most entrepreneurship development institutions.

The *macro* level results about regional growth differences leading to difference in entrepreneurial activity found little support in China, but moderate support in India. There could be several reasons for the weak support for regional development hypothesis. *First,* historical economic trends were not good enough variable given the intensity of high activity and growth typically in South India and West China at the time of data collection for this study (year 2005). The youth from both these regions were positive in attitude beyond expected trends. This could be indicative of regional "mood" of development and economic activity.

Secondly, since China has been on a growth and high entrepreneurial activity path for almost three decades now, the high entrepreneurial activity and attendant success in some economically more active regions of China may be inspiring people in less active regions to also view entrepreneurship as positive. Thus youth who grew up in the much lesser developed West China area showed positive attitude towards entrepreneurship.

Thirdly, the Chinese data was collected in a university in China that is located in the North East region. Though the students were from different parts of the country, the fact that the students from the west had been living close to Beijing in Northern China may also have influenced the positive responses. That is, even though their own region was less developed they viewed entrepreneurship as a positive driver to growth of their region having witnessed the economic development of Northern China.

Mere economic activity in geographic region may have been a poor measure of exposure to entrepreneurship. Thus in future research better measures may be used. For example, in India collecting data separately from communities who had traditionally been engaged in enterprise (e.g., *Marwaris* of Rajasthan, *Kumutis* of Andhra Pradesh, *Patels* of Gujarat) may be a better basis for the study of influence of region in attitude towards entrepreneurship.

Issues around Measurement of Attitudes

The results bring out two important factors in the measurement of attitudes. Firstly, there is support for the classic argument about triangulation of measures of

the independent variable (Bickman & Rog, 1998; Cook & Selltiz, 1967) in the case of measurement of attitudes. The results show that for measurement of attitudes it is best not to rely solely on few direct items using the Likert scale to measure attitudes. Such measures are susceptible to social desirability. Greenwald (1990) and Greenwald and Banaji (1995) have argued that certain attitudes are so covert that they are difficult to measure in a direct of response using Likert-type items and thus other measures such as implicit association tests must be used to access such attitudes. This study also found that use of various types of measures that ask the question directly as well as indirectly are able to measure attitudes more accurately. If the study had used only the first nine items in Section A, the finding would have lead to the conclusion that the attitudes of Chinese and Indian youth were extremely positive towards entrepreneurs and entrepreneurship. However, rank order and projective items revealed that entrepreneurship was good for others but is not necessarily good if one were to take it up himself or herself.

Secondly, the value of asking the respondents to express their opinions when assuming various roles is established. For example, asking the respondent to evaluate the other group as an observer is different from asking them to think of different facets of the life of the other group as it requires them to express willingness to be part of the other group as a participant. In each of the roles there is a different degree of intimacy and distance between the evaluated group and the evaluator. As the intimacy progresses the true nature of attitude is revealed (Singer, 1980) and one can get a clear picture of the actual nature of attitudes of the respondents.

Issues in Cross-Cultural Study

The study also offered several interesting insights for researchers engaged in cross-cultural surveys. Collecting of quantitative data on economic parameters in China posed challenges on several dimensions. The data on economic activity was easily available on public websites for India with different parameters carefully identified in the databases. The available economic data on China was not easily interpretable. Similarly, dividing India on regional basis was easy because of the commonly held categorization among researchers and practitioners about how regions are divided. However, it was difficult to obtain the same data for China. There are several existing conventions among Chinese economists and scholars of dividing the country into regions. The administrative and geographic divisions are drastically different. It required intense discussions with the Chinese author to arrive at a defensible geographical/regional categorization.

There were also challenges in collecting data across countries where language of the respondents and the authors was different. The authors from India were fluent

in English but did not understand a word of Chinese. The author from China was fluent in English but when it came to expressing some of the technical concepts she would find it difficult to explain them to the Indian authors. The team had to depend completely on her judgment to accept the final version of the translated questionnaire. In addition to translation which was done using the procedure suggested by Brislin (1986), there was the issue of the items being relevant and meaningful in both cultures. For example, there was an item that the Indian researchers had found to be relevant in India -"When looking for a life partner for my sister/ cousin sister we would prefer an entrepreneur over a person who has a job". In India this item was relevant because it is common for the entire family to be involved in choosing a partner and arranging the marriage in India. In China youth marry out of their choice and the family has a smaller role in the choice of the partner. This item would not be relevant in China thus it was changed to mean, "I would choose an entrepreneur as my life partner over a person who has a job".

Another issue in terms of questionnaire design was related to the responses towards negatively worded items. From the pattern of responses received both in India and China it was clear that the respondents had difficulty in interpreting the negatively worded items. Such difficulties in responding to negatively worded items by non-native language speakers have been found in other studies as well (e.g., Cordery & Sevastos, 1993; Peterson, Speers, & Hughey, 2006). Thus we had to drop negative items or change most items to be positively worded.

In spite of accepting a template for data entry there were several mistakes and misunderstandings in data entry itself. In the interpretation of the trends each country group had to solely depend on the other group for the respective country's data interpretation. Having three researchers from one country meant they could argue and discuss among themselves about the meaning of the data from India but the Chinese author did not have that luxury. In both countries there was very little country-specific literature to refer to validate the interpretations. Thus, it had to be either validated using studies from other countries or intuitive understanding of researchers within each country and context.

As highlighted above, great care was taken to explain the issues and the finer nuances, but like most cross-cultural research, this project too was not "etic-error" free. This study was designed and developed by the Indian team who could understand the social milieu in India. Like their Chinese counterparts they had little or no idea about the exact picture of regional development in China and how it could impact attitudes of the youth. Though the design was explained to the Chinese side in detail and they agreed to the hypothesis for China, there is still a

possibility that the regional classification was imposed on China and thus it found support in India and not in China.

Policy Implications

The results of this study will help strengthen the argument that entrepreneurship is influenced by the past activities in the target region. Simple announcement of concessions and other policies may not lead to entrepreneurial activity unless people are convinced about the benefits of becoming entrepreneurs. The comfort level with entrepreneurship comes from exposure, presence of role models, a vibrant economy which is able to absorb risks and encourage risk-taking etc. Therefore, existing entrepreneurs and tacit knowledge about running enterprises would be a good source of motivation and information for people who would be interested in entrepreneurial activity.

These results here indicated that attitude to action linkage also needs to account for whether the attitude influencers are internal or external to the person whose behaviors are under study. For influencing attitudes towards increasing entrepreneurial efforts, institutional and other forms of support have to be more directed to the individual to bring them out of mindset of not taking up such activity. In areas where the development and entrepreneurial activity are low, the policy interventions have to work at two levels. First, they need to create enough influence through distal means that would result in more efforts from the target region. The second step then is to create conducive environment and incentive structure for the individuals to take up entrepreneurship as a means for self-sustenance and other members of the community. The other caution is against finding or use of a blanket approach to improve entrepreneurship in all regions. Different developmental climates in different regions coupled with differential perception of entrepreneurs and entrepreneurship with different familial occupational backgrounds present a strong case of using differentiated approaches for regions and the familial background that an entrepreneur comes from. Entrepreneurial efforts of those coming from service familial occupation background need more support in order to attain success.

One common finding in India and China was preference of a stable well paying job over a riskier profession like entrepreneurship. The risk associated with entrepreneurship could be brought down with proper policy interventions designed to address relevant problems in the support structure in a particular region. This would require an all-round support from various stakeholders including government, planning agencies, supportive families, and willing would be entrepreneurs. Though entrepreneurship is seen as risky, this study shows that the

youth is positive about it. Given the right boost and appropriate climate we may see more entrepreneurial activity.

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Appendix

List of Indian cities with their region for data collection

S.No.	City	State
NORTH		
1	Amritsar	Punjab
2	Jammu	Jammu and Kashmir
3	Rohtak	Haryana
4	Dehradun	Uttaranchal
5	Lucknow	Uttar Pradesh
SOUTH		
6	Ernakulam	Kerala
7	Coimbatore	Tamil Nadu
8	Mangalore	Karnataka
9	Secunderabad/Hyderabad	Andhra Pradesh
10	Madurai	Tamil Nadu
EAST		
11	Bhubaneswar	Orissa
12	Raipur	Chhatisgarh
13	Ranchi	Jharkhand
14	Patna	Bihar
15	Guwahati	Assam
WEST		
16	Rajkot	Gujarat
17	Ajmer	Rajasthan
18	Pune	Maharashtra
19	Indore	Madhya Pradesh
20	Nagpur	Maharashtra

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Transforming China in the 21st Century Through Entrepreneurship

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Abstract

China's 11th Five Year Plan, ratified in March 2006, contains a self-innovation strategy based on science and technology development that aims to transform China from being the world's low-cost manufacturer to a leading country in innovation. Promoting the development of entrepreneurship and small- and medium-sized firms are central to the plan. This paper evaluates the self-innovation strategy relative to entrepreneurship in Western economies in terms of opportunities, resources, and entrepreneur/team. Recommendations include improving government policies, procedures, and oversight; developing internal Chinese capital markets; and instituting entrepreneurship education.

Keywords: *scientific and technical development; innovation; entrepreneurship; private equity*

Introduction

"A housekeeper can never replace a master."
-Wang Xiaoqiu, General Manager, SAIC Motor

China's Gross Domestic Product (GDP) tripled over the preceding 10 years to exceed $2.27 trillion in 2005. But China ranked 118 in GDP per capita and is known as "the factory of the world" that exports a huge volume of labor-intensive merchandise. China's 11th Five Year Plan, ratified by the National People's Congress in March 2006, aims "to transform the country from a workshop of cheap exports into a manufacturer of homegrown global brands" (China Internet Information Center 2006) by emphasizing *self-innovation* and internal science and technology development.

This paper examines objectives and challenges inherent in China's self-innovation strategy. Entrepreneurship development will play a central role in the strategy's success. The knowledge spillover theory of entrepreneurship "suggests that entrepreneurship is the missing link in the process of economic growth because it facilitates the spillover of knowledge from universities and private firms, resulting in the commercialization of ideas that otherwise might remain uncommercialized" (Audretsch 2005, p.37). The 11th Five Year Plan also aims at developing strong Small- and Medium-Sized Enterprises (SMEs) and creating conditions for entrepreneurial development. However, given the nature of China's economy, moving from conceptualizing self-innovation to implementing the strategy is like

crossing a chasm (Moore 2002). This paper also examines "chasms" in business opportunities, entrepreneurship, and financing arrangements that must be overcome if China is to move from being only a "make here, sell there" economy.

In the knowledge spillover theory of entrepreneurship (Audretsch 2005), individuals endowed with new economic knowledge—scientists, engineers, and other knowledge workers—become entrepreneurs by commercially exploiting the new knowledge. To Schumpeter (1911), the entrepreneur, inherently a risk-taker, is an innovator rewarded by temporary monopoly profits and is the force that creates economic growth. Substantial monopoly profits are eliminated by rivals entering the industry. Thus, the entrepreneur must continually search for innovations, and in the process propels long-term economic growth and the *creative destruction* of established companies and industries that are replaced by new companies and industries.

The self-innovation strategy can give China much control over its economic future. The quotation opening this paper is from the press conference announcing that Shanghai Automotive Industry Corporation (SAIC) is dissolving its joint venture with General Motors and Volkswagen (Bradsher 2006). SAIC is forming a wholly-owned subsidiary, SAIC Motors, to build cars for the domestic and export market using technology and know-how gained from the joint venture. SAIC's actions show how important knowledge spillover can be and hints how GM and Volkswagen might face creative destruction in China.

Moving China Toward Self-Innovation

China's economic growth has been phenomenal. From 1995 to 2005, China's Gross Domestic Product growth averaged 9.0% annually (compared to 5.4% annually for the U.S.), its merchandise exports grew from $148.8 billion to $762.0 billion (17.7% annually), and its foreign exchange reserves grew from $76.4 billion to $818.9.0 billion (26.8% annually). In 2004, China's trade surplus with the U.S., European Union, and Japan exceeded $270.0 billion (Morrison 2006).

In a broad sense, the Chinese manufacturing story is classical microeconomics. China's abundant cheap labor has allowed Chinese manufacturers to lower many industries' average and marginal cost curves, and entry by Chinese firms has lead to many established firms exiting these industries. This "make here, sell there" economic model is straightforward and non-complex: technology developed elsewhere and financed by foreign capital inflows is used to produce goods shipped to foreign markets. McClenahen (2006) notes that China's 2005 exports include "low tech" goods like footwear, textiles, and apparel ($115 billion) and "higher tech" goods like office equipment and telecommunication gear ($360 billion).

However, areas of concern exist. In a brief to the U.S. Congress, Morrison (2006) notes that:

1) the inefficiency of State-Owned Enterprises (SOEs), about one-third of industrial production, strains the economy;
2) the banking system is rife with insolvency and corruption;
3) public unrest is growing over pollution, government corruption, and increasing income inequality between urban and rural areas threatens social stability; and
4) limitations in the legal system affect competition domestically and undermine the efficient allocation of goods and services in the economy.

Lam (2005) contends that the central leadership will face difficulties propagating more energy-saving, higher value-added industries. While China accounts for 4.0 percent of global GDP, it accounts for 12.0 percent of the global consumption of energy resources, 15.0 percent of water, 28.0 percent of steel, 25.0 percent of aluminum, and 50.0 percent of cement. From a practical view, China continuing its current path will strain global raw material markets and increase the public unrest about pollution, corruption, and income inequality. New approaches are needed.

The Vision of China's Top Leadership

China's leadership offers a bold strategy in the 11th Five Year Plan. In the keynote speech at the 2006 National Science and Technology Conference, President Hu Jintao noted that "China still has to import many key technologies and the nation's self-innovation ability is still not strong enough. The competitiveness of Chinese enterprises in core technologies needs to be improved…The proportion of the high-tech sector in the overall national economy is still relatively low. And the nation is still in need of more excellent researchers for its basic scientific research" (China Central Television.Com 2006). According to President Hu: "By the end of 2020, China's science and technological innovation ability will be greatly improved…By that time, China will achieve more science and technological breakthroughs of great world influence, qualifying it to join the ranks of the world's innovative countries." China also should:

1) choose a road of self-innovation with China's own characteristics;
2) continue to put the country's self-innovation in science in a strategic position so that the country's comprehensive competitiveness will be improved;
3) further administrative system reform so a state innovation system can be established quickly;

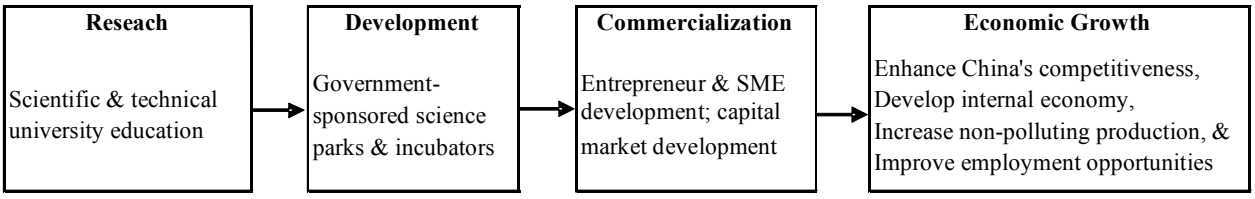
4) create a favorable environment for forming a talent pool rich in the spirit of innovation; and
5) launch a public education campaign to foster an innovative culture in Chinese society.

According to the 11th Five Year Plan (Part 3, Section 9), Small- and Medium-Sized Enterprises (SMEs) will play an important role:
"SME development should be bolstered. The construction of innovation training bases and entrepreneurial service centers should be stepped up… Emphasis should be put on supporting SMEs' projects relating to financing guarantees, entrepreneurial guidance, independent innovation, clean production, international cooperation and personnel training while fostering commercialized SME service systems…. The construction of a SME financing service platform should be facilitated to help capable SMEs tap into the capital market for funds and construct an open financing system for them."

A Framework for the Self-Innovation Strategy

Figure 1 illustrates how the self-innovation strategy can work. Commercializing science and technology research and development could transform China's economy, and economic growth could alleviate some of the problems highlighted by Morrison (2006). New firms powered by new technologies and products would reduce the role of SOEs, would be in industries that produce less pollution than do China's current manufacturing industries, and if spread over the whole country, would provide employment that would reduce the urban-rural income gap. Success of the process in Figure 1 would also accomplish President Hu's objectives: Chinese-developed technology would replace imported technology and foster a spirit of innovation.

Figure 1. China's Path to Becoming a Self-Innovation Nation



While China is competitive globally in labor-intensive industries, success of the self-innovation strategy also would make China competitive in technology arenas. By creating new industries that would offer more employment opportunities for China's workforce, the resulting rise in income would enhance China's domestic economy through the purchase of Chinese goods and services.

With a larger domestic economy, Chinese businesses would be less export-oriented, and China's trade surpluses with major developed nations would be reduced. Under Secretary of the Treasury Timothy D. Adams before the U.S.-China Business Council said that "To sustain growth, China and East Asia need to spur the growth of domestic demand and reduce their reliance on exports. A number of measures are available to China to boost domestic demand. One solution is to reform and strengthen China's pension system, healthcare system, and social safety net so that households need to save less for unexpected events and can consume more."

The self-innovation strategy offers a vision that would transform China while solving many economic and social problems. But how the self-innovation strategy will be executed and whether it will be successful is not clear. The remainder of this paper examines implementation issues. In both Morrison (2006) and President Hu's discussion, government is prominent, and corruption, regulation, and administrative issues will surely impact China's ability to make Figure 1's process a reality. While the role of government is important and complex, only government policies that can enhance the self-innovation strategy are examined here.

Some of the activities of a successful self-innovation strategy will by design adversely affect other countries and their companies. Given China's huge, arguably unsustainable trade surplus, a backlash against Chinese firms could result. That is, the long-term effect of a successful self-innovation strategy could actually exacerbate the one-way, export-driven nature of the Chinese economy. Thus, the positive description provided here might actually be masking some serious effects for the global economy. Instead of focusing only how the self-innovation strategy could solve problems presented in Morrison (2006), Chinese innovation could also be examined as another form of competition-crushing behavior. However, the rest of this paper will evaluate factors related to the successful implementation of the self-innovation strategy—and challenges the strategy faces—but the *effects* of the strategy's success will be considered in future research.[1]

R&D and the Conceptual Foundation for the Self-Innovation Strategy

By 2020, President Hu expects China to achieve technological breakthroughs and become recognized as an innovative country. Using science and technology development to power the self-innovation strategy is supported by the knowledge spillover theory of entrepreneurship. Audretsch (1995, p. 180) notes that "It is the knowledge in the possession of economic agents that is exogenous, and in an effort to appropriate the returns from that knowledge, the spillover of knowledge from its producing entity involves endogenously creating a new firm." Audretsch, et al. (2006) find that investment in new knowledge is associated with start-up activity, especially in knowledge-based and high-tech industries. Audretsch and Feldman (1996) show that spillover is bounded by geographic proximity to where knowledge is created.

In Figure 1, becoming a self-innovation nation begins with research, and China is having success at developing science and technology. The World Intellectual Property Organization estimates that China's 2,452 international patent applications in 2005 rank 10th among all nations. While only about 5.0% of the U.S.'s 45,000 applications, China's total has tripled since 2000. As Table 1 shows, the total number of university science and engineering degrees conferred in 2003 (the most recent year available) exceeded 500,000, up by more than 200,000 from 2000. According to the Ministry of Education, total postgraduate degrees in all fields totaled 189,700 in 2005, up from 54,838 in 2000.

Table 1. University Degrees in China

	Science		Engineering		Management	
	2003	**2000**	**2003**	**2000**	**2003**	**2001***
Bachelor	103,409	49,214	351,537	212,905	120,351	70,798
Master	9,515	4,864	34,764	18,724	11,641	8,262
Doctoral	3,705	1,495	6,573	4,225	1,021	540
Total	116,629	55,573	392,874	235,854	133,013	79,600

* Figures for 2000 not available

Source: Ministry of Education of People's Republic of China

While emphasizing science and technology as a basis for self-innovation does not guarantee success, China's approach is similar to Canada's Innovation Strategy (2002). Canada's broad goals include increasing public and private investment in knowledge infrastructure and ensuring that many firms benefit from the commercial application of knowledge. Canada will support indirect costs of university research and leverage commercialization of research through incentives

to specific industries, SMEs, and Canada's innovators. China seems to have selected a solid starting point for its self-innovation strategy.

In Figure 1, development of research is antecedent to commercialization. China's plan to build science parks is consistent with Audretsch's spillover theory with geographic bounds. As Saxenian (1994) shows, the networks in California's Silicon Valley and along Route 128 near Boston generated remarkable entrepreneurial activity. Lugar (2001) shows that North Carolina's Research Triangle generated significant employment in knowledge-based industries.

The 44 science parks established in China between 1999 and 2003, including those at the Beijing Institute of Technology, Shanghai University, and Jilin University, attracted $3 billion of investment. By 2006, the 50 existing parks had set up 5,000 businesses. Wu (2006b) reports that China plans to build 30 additional science and technology parks by 2010. He notes that the "parks act as 'incubators' for small- and medium-sized high-tech companies, many of which are set up by universities or students" and quotes Xu Luping of the Ministry of Science and Technology that science parks are important to creating innovation "because university-based researchers are among the most productive in China."

Wu (2006a) reports that by 2020 the State Council will increase R&D spending to $112 billion, to 2.5% of GDP from 1.3% currently, reinforcing the notion that China will use science as a tool for development. Wu (2006a) also indicates that China plans to use "scientific prowess" to remove poverty by 2050 and that the State Council intends for 60.0% of China's economic growth to come from science and technology by 2020 and for reliance on foreign technology to decrease from over 50.0% to less than 30.0%.

Tsinghua Universiy's Tsinghua Science Park is an example of a successful Chinese science park. Celebrating its 12th anniversary in September 2006, it has excellent staff and facilities, five satellite parks, and is a member of the International Association of Science Parks. It offers incubation services to entrepreneurs and students who are developing innovative projects and starting businesses. It has opened the Tsinghua Returned Students Pioneer Park that has 44 companies begun by Chinese students who have studied abroad. Seventeen multinational corporations, including Microsoft, Adobe, and Google, are tenants. Tsinghua Science Park has over 400 total tenants, has generated 874 patents, and employs over 19,000 R&D professionals.

Challenges

One major issue will be measuring the effect of China's science and technology development. For example, in 2003, U.S. Federal labs disclosed roughly 4,400 inventions, 2,200 patent applications, and 1,600 patents issued, with 6,400

licensing agreements generating $96.4 million in royalties (Office of the Secretary 2004). This report states that "Federal labs" refers to government owned or leased federally staffed facilities for performing research, development, or engineering activities relevant to an agency's missions and interests. Government-owned but contractor-operated facilities with a similar purpose also fall under the "Federal lab" title. Currently there are more than 700 Federal labs and research centers. The report suggests that success of government-supported R&D is illusive:

"The outstanding performance metrics challenges remain, as they have for some time, in the areas of measuring downstream impacts from the federal labs' technology transfer activities and in identifying and using measures that can help technology transfer managers better understand the effectiveness and productivity of the programs they operate. In general, it remains far easier to assemble statistics on technology transfer activities (e.g., CRADAs [Collaborative R&D Agreements] established, patents received, licenses executed) than it is to measure downstream benefits and the effectiveness of implemented federal lab programs for technology transfer."

The U.S. President's Council of Advisors on Science and Technology (2003) makes several recommendations that China's top officials should consider, including formalizing oversight and accountability, recognizing industry differences, documenting best practices, and centralizing technology transfer information in one location.

Brown (1998) suggests that success should be measured by how effectively science parks contribute to transferring technology to private firms in addition to accomplishing core research missions. Mechanisms will be needed to smooth China's science and technology spillover to Chinese entrepreneurs. Tassey (2006) notes the potential for inadequate standards setting processes, underinvestment in "infratechnologies", inappropriate standards (e.g., proprietary vs. open source), and ineffective standards deployment relative to market needs. Tassey (2005) places "public good" research from governments and universities at the center of new technology development, yet economic growth from R&D comes from the interplay of generic ("old") technology, supporting infrastructure, and proprietary market applications (innovation).

Storey (2003) notes that research findings have mixed results on the performance of firms in science parks, and the implication in Brown (1998) is that an emphasis on technology transfer, not just research production, is necessary. Storey also considers that business incubators are recognized world-wide as valuable in starting new firms. Science parks encompassing incubators, like Tsinghua Science

Park and Sandia National Laboratories (Brown 1998), can help achieve both research and technology transfer goals. How China manages its science parks will important in making the self-innovation strategy successful.

Entrepreneurship and the Commercialization of Innovation

Commercialization is the third part of Figure 1's process. In Audretsch (2005), entrepreneurship is the response to new knowledge not exploited by existing firms and entrepreneurs are agents for change by creating new firms. In Audretsch, et al. (2006), entrepreneurship links knowledge creation and economic growth while Audretsch and Thurik (2002) show greater entrepreneurial activity leads to greater economic growth in a sample of OECD countries.

China will need entrepreneurship development to transfer new technology and knowledge to the private sector. Governments can enact what Audretsch (2003) calls "enabling" entrepreneurship policies. Audretsch, et al. (2002) provide a framework in which government policies affect entrepreneurship development:

1) entrepreneurship supply and demand depends on social, economic, political, and cultural factors, with individuals evaluating risk and return in deciding to engage in entrepreneurship;
2) if actual entrepreneurship is less than some targeted level, government policies can alter supply-demand conditions;
3) altering entrepreneurship demand includes deregulation and privatization, government procurement programs, and business clusters; and
4) altering supply by individuals includes education and training, financing programs, tax policies, subsidies, and labor market and bankruptcy regulations.

Table 2, from Storey (2003) as modified by Audretsch (2003), illustrates Canadian, European, Japanese, and U.S government programs designed to "enable" entrepreneurship. These programs are designed to help entrepreneurs start new businesses. The EU's access to market program and science parks alter entrepreneurship demand and the remainder alter entrepreneurship supply. The programs fall into broad categories that involve financing, markets, business operations (science parks, incubators, and administrative burden), and the personal development of entrepreneurs.

Storey's assessment of success suggests that the eleven programs in Table 2 tend to have positive results, but some limitations are evident. Since SME development is also part of the 11th Five Year Plan's goals, China should consider enacting some or all of Table 2's enabling polices. In subsequent sections, financing and individual entrepreneur dimensions are examined further.

Table 2. Public Programs to Assist SMEs and Enhance Entrepreneurship (Storey 2003)

Problem	Programme	Description	Country	Success
Access to Loan Finance	Loan Guarantee Scheme	SMEs without access to own collateral obtain access to bank loans by state acting as guarantor	UK USA Canada France Netherlands	Yes, generally viewed as helpful, but small scale impact on the overall financing of SMEs in most countries
Access to Equity Capital	Enterprise Investment Scheme	Tax breaks for wealthy individuals to become business angels	UK	Unknown
Access to Markets	Europartenariat	Organisation of Trade Fairs to encourage cross-border trade between SMEs	EU	General satisfaction amongst firms that participated
Administrative Burdens	Units established within government to seek to minimise administrative burdens on smaller firms	Sunsetting Legislation deregulation Units	Netherlands Portugal, UK	The view of small firms themselves is that bureaucratic burdens have increased markedly in recent years
Science Parks	Property based developments adjacent to Universities	Seek to promote clusters of new	UK, France, Italy and Sweden	Conflicting findings on impact of SPs on

		technology based firms		performance of firms
Managed Workspace	Property provision to assist new and very small firms	Often called business incubators, these provide premises for new and small firms on "easy- terms"	World-wide	General recognition that such initiatives are of value
Stimulating Innovation and R&D in small firms	Small Business Innovation Research Program	$1 billion per year is allocated via a competition to small firms to stimulate additional R&D activity	USA	Lerner implies SBIR enhances small firm performance, but Wallsten is unable to show it leads to additional R&D
Stimulating Training in small firms	Japan Small Business Corporation (JSBC)	JSBC and local governments provide training for owners and managers of small firms. The training programme began in 1963	Japan	Unknown
Entrepreneurial Skills	Small Business Development Corporations (SBDCs)	Counselling is provided by SBDC mentors to small business clients who may be	USA	This study finds SBDC clients have higher rates of survival and growth than might be

		starting a business or be already trading		expected. Reservations over these findings are found in the text
Entrepreneurial Awareness	Entrepreneurship Education	To develop an awareness of enterprise and/or an entrepreneurial spirit in society by incorporating enterprise into the school and college curriculum	Australia, Netherlands, but leading area was Atlantic Canada	Conventional assessments are particularly difficult here because of the long "lead times"
Special Groups	Law 44	Provides finance and mentoring advice to young people in Southern Italy, where enterprise creation rates were very low	Southern Italy	This is an expensive programme, but most studies show the survival rates of assisted firms to be well above those of "spontaneous" firms

Challenges

Aligica and State (2005) examine European Union (EU) entrepreneurship policies for SMEs, innovation, and competitiveness and conclude that no central vision or strategy exists. They find EU policies to be overly broad and vague, yet the general objectives are quite similar to those described in the 11th Five Year Plan.

EU entrepreneurship policy extends back to 1983 roots but ends up relying on the U.S. model as an ad hoc standard. The U.S. model involves willingness, relative to the EU, to bear risk, focus on firm growth, simplify administrative procedures, feature venture capital and angel financing, employ stock options, and undertake R&D. China will need long-term dedication to the self-innovation strategy while learning from U.S. and EU entrepreneurship efforts.

The 11th Five Year Plan's call for developing SMEs is broad and vague. Timmons and Spinelli (2003) suggest that most firms are *not* high potential firms, and many are no more than lifestyle firms (i.e., providing good lifestyles for owners). Aligicia and State (2005) note that the EU defines micro-, small-, and medium-sized firms by number of employees, annual revenue, or balance sheet totals but also defines entrepreneurship in terms of mindset and attitudes. They note that this lack of operational and conceptual consistency leads to a lack of a coherent overall policy. Is an SME a high potential firm? A crafts business? A family businesss? This also seems to be the situation for the 11th Five Year Plan: President Hu foresees China becoming a top innovative country, but the plan for bolstering SMEs seems to apply to a wide range of SMEs.

Audretsch (2003) commends the recent emphasis of entrepreneurship policies on enabling entrepreneurs in contrast to policies in the post-World War II era aimed at constraining large corporations that offered economies of scale but also concentrated economic power. However, Audretsch also holds that it is crucial to distinguish between entrepreneurship policies (focusing on new firm development) and SME policies (focusing on promoting the viability of existing firms.) Thus, the 11th Five Year plan is incomplete and somewhat confusing: self-innovation designed to help China attain the status of an innovative nation seems to rely on high potential SMEs while the development of all categories of SMEs is included to help solve urban-rural and poverty problems. China is in danger of having the incoherence in policy that Aligica and State (2005) find for the EU. The 11th Five Year Plan is a good starting point, but for China to offer specific programs like those in Table 2 will require more concrete, consistent, and detailed policies and plans.

Financing Entrepreneurs

Table 2 includes programs to provide access to loans and equity capital. For most new ventures, debt is not appropriate in the early stages due to the lack of sufficient earnings and/or assets to serve as collateral, so equity is the typical vehicle for financing entrepreneurs and their start-up companies. Debt, whether bank loans or bonds, requires interest and principle payments under the threat of forcing a non-paying borrower into bankruptcy while equity represents a residual

position (i.e., whatever is left after debt and other claims are paid) that accepts the risk of loss without recourse to bankruptcy. Private equity common stock is not registered with security regulators for trading on a stock exchange while public equity common stock is registered. U.S. entrepreneurship is often promoted by venture capital investors (VCs) who hope to turn a start-up company's shares into publicly-traded shares through an Initial Public Offering (IPO).

Venture capital is beneficial to the U.S. economy: in 2003, VC-backed companies employed more than 10.0 million workers, generated $1.8 trillion in revenues, outperformed non-venture-backed firms, and were concentrated in heavy R&D industries (Global Insight 2004). Ernst & Young (2006) report that the U.S., Canada, Europe, and Israel account for 93.0 percent of the $31.3 billion of venture capital invested globally in 2005.

Black and Gilson (1999, 1998) link stock markets and venture capital markets: if VCs cannot "exit" investments in a timely manner, they are less likely to invest in start-ups. Black and Gilson show that stock market-centered countries have more entrepreneurial activity than commercial bank-centered countries. For example, in 2004, 70.0 percent of private equity in bank-centered Europe went to buying out existing firms and only 7.0 percent was seed/startup investment (PricewaterhouseCoopers 2005). The National Venture Capital Association shows that U.S. VCs invested $22.3 billion in 3,027 pre-exit deals in 2005. At the 8th China Venture Capital Forum (CVCF) in April 2006, Xu Guanhua, Minister of Science and Technology, stated that an exit mechanism is needed for SMEs to play a positive role in the self-innovation strategy and emphasized that developing China's capital markets is key for attracting venture capital.

Challenges

China's $1.1 billion of venture capital investment in 2005 is 3.5% of the global total (Ernst & Young 2006), and such investment must grow dramatically to fulfill the self-innovation strategy. Domestic Chinese and foreign VC firms raised $4.0 billion in 2005—a record amount suggesting a bullish future for VC investments in China (Ni 2005). However, China's stock markets are small. According to the World Federation of Exchanges, in 2005 the Shanghai and Shenzhen exchanges rank 21st and 32nd in market capitalization, only 2.15% and .87%, respectively, of the top-ranked NYSE's $13.3 trillion market cap.

Ernst & Young (2006) rank the lack of a Nasdaq-like exchange for IPO exits first among the important challenges facing China's VC industry. At the 2006 CVCF, representatives from Nasdaq and London's Alternative Investment Market (AIM) detailed the benefits of IPO exits on these markets, but China would like to develop internal capital markets to better control its own future. Still, the outlook

presented at the CVCF was positive: in 2005, interim regulations regarding VC financing and taxation preferences were jointly advanced by 10 ministries, movement was made toward full tradability of SME shares that will facilitate IPOs and mergers and acquisitions, and revised Securities Laws lowered thresholds for firms to have IPOs.

Minister Xu also noted that long R&D cycles and high risk make bank loans not suitable for technological start-ups so that venture capital is essential. He listed other challenges: weak corporate self-governance and incentives; a too-small VC market (e.g., it can't finance biotech start-ups); and compared to domestic Chinese VCs, foreign VCs are stronger, more proactive, and prefer IPOs on foreign exchanges. Ernst & Young (2006) identified more challenges:

1) weak intellectual property protection makes capitalizing on innovation difficult;
2) a shortage of company and investor management talent;
3) underdeveloped technology transfer system;
4) central government control in the venture ecosystem results in disincentives for entrepreneurs and investors; and
5) lack of stability in regulations.

Pressure from global investors will continue to push for improved securities regulations, stronger intellectual property protection, and more transparent corporate internal governance. For example, regulations introduced in early 2005 restricted VCs from establishing off-shore corporate structures to exit a Chinese company via a foreign IPO. After VCs significantly reduced investments in China, regulators reversed the restriction (Ernst & Young 2006, p. 67). The report continues with positives and negatives about China's capital markets. Negative considerations are inconvertibility of the Chinese yuan, inflexible corporate law, and prohibitions on sophisticated VC investment structures. A positive is optimism—that reforms will continue, companies are stronger and growing, and domestic pension funds and insurance companies will accept venture investing.

Currently, Chinese IPOs are dominated by SOEs who sell only 10.0 to 25.0% of their shares (Economist 2006), leaving "old" owners in control while maintaining non-transparent corporate governance. The discussion above suggests that the self-innovation strategy relies on the success of high-potential firms, and these are the types of firms that can attract venture capital and successfully execute an IPO. The challenges identified by Ernst & Young are crucial to investors, VCs or otherwise, and reflect standards that are expected in U.S. and European capital markets. To achieve Table 2's access to equity capital—which will come largely from outside

China—these challenges must be resolved. What needs to be done is clear; the steps just need to be taken.

However, non-high-potential SMEs need financing also. To the extent that such SMEs are new ventures, then access to debt financing is not possible and equity financing is not likely: VCs would not forecast sufficient returns to induce investment and "angel" financing is not well developed in China. To the extent that such SMEs are more established firms, then government-backed loan guarantee programs, as in Table 2, could help achieve economic growth. However, it appears that issues regarding adequate financing for the non-high potential SMEs will continue to loom large with no easy solution in sight.

Developing Entrepreneurs

In Figure 1, without entrepreneurs, knowledge spillover will not be commercialized, and four programs listed in Table 2 are aimed directly at the entrepreneur. MacMillan, et al. (1985) find that VCs consider the entrepreneur's personality and experience to be crucial for new venture success. Key variables are: capable of sustained intense effort, evaluate and react well to risk, articulate in discussing the venture, familiar with target market, demonstrated past leadership, and relevant track record. Elango, et al. (1995) substantiated the importance of these variables.

Liao and Sohman (2001) conclude that Chinese entrepreneurs display worldwide entrepreneurial characteristics of perseverance, diligence, integrity, resourcefulness, emotional stability, and intelligence. But they also note that the prominence of luck and fate in Chinese culture can lead to reliance on opportunism over long-term strategy, and individuals moving rapidly from one business to another can mean that an entrepreneur's suppliers might disappear. Returning Chinese entrepreneurs often maintain a safety net of dual citizenship or green cards and leave family overseas while pursuing start-ups in China. Liao and Sohman hold that political and legal uncertainty from volatile government policies and lack of access to funding, skilled labor, managerial talent, infrastructure, and technology will slow entrepreneurship development.

Kjellman and Ehrsten (2005) posit that entrepreneurial behavior is a function of the individual, environment, and culture and propose an educational model that directly exposes students to entrepreneurship throughout their education. Audretsch (2005) calls for entrepreneurship education, in addition to technology transfer from universities to the private sector, to stimulate economic growth by fostering entrepreneurship, echoing President Hu's comments above. Programs like those in Table 2 are consistent with these views, but university-level programs are also needed that will parallel the development of science and technology.

Challenges

At best, entrepreneurship education in China seems to be in the initial stages of development. While Table 1 shows that a large number of science, technology, and management degrees are conferred each year in China, finding information about entrepreneurship education is difficult. Among China's top universities, only Fudan University lists an entrepreneurship major (with four courses) while Tsinghua University offers 12 "entrepreneurship" elective courses that actually focus on technology management, new product development, and project management (only 2 of the 12 courses have "entrepreneur" in the title). Four other universities offer one entrepreneurship course. Topics covered in U.S. entrepreneurship courses such as finding a business opportunity, organizing and setting up a company, and writing a business plan appear to be absent in China's universities. Enhancing university entrepreneurship programs is essential.

An important step was taken by the April 2006 Nankai University-Babson College International Conference for Entrepreneurship Research and Education. Babson professors Jeffry Timmons and Stephen Spinelli, who attended the conference, offered an additional two-day workshop to train Chinese educators on how to teach U.S.-style entrepreneurship education.

Another challenge, permeating Chinese culture and rooted in Confucianism, is *quanxi*. Chen and Chen (2004, p. 306) define *quanxi* as "informal, particularistic personal connection between two individuals who are bounded by an implicit psychological contract to follow the social norm of *quanxi* such as maintaining a long-term personal relationship, mutual commitment, loyalty, and obligation." Trust and feeling affect *quanxi* quality, and an Internet search reveals numerous references to the inability of Westerners to conduct business in China without first building *quanxi.* Liao and Sohen (2001) note that corruption, bribery, and other "under the table" activities are implicit in *quanxi* and that the "right" kind of connections are important. Adapting *quanxi* to entrepreneurship, or vice versa, will be important, especially if "impersonal" investors like foreign venture capitalists are counted on to fuel the self-innovation strategy.

Limitations of the Self-Innovation Strategy

Science park development and VC expansion are positive developments for the self-innovation strategy outlined in Figure 1. But these forces have been in motion for many years before the 11th Five Year Plan was ratified, so progress in knowledge creation is not surprising. Zero2IPO.com has published quarterly surveys since 2003 of the 50 most active local and foreign China VCs. Zero2IPO's VC report for the third quarter of 2006 indicates that 56% of the 77 deals were early stage with 52% in the Information Technology sector, continuing the trend

toward more early-stage deals. This also is consistent with the self-innovation strategy.

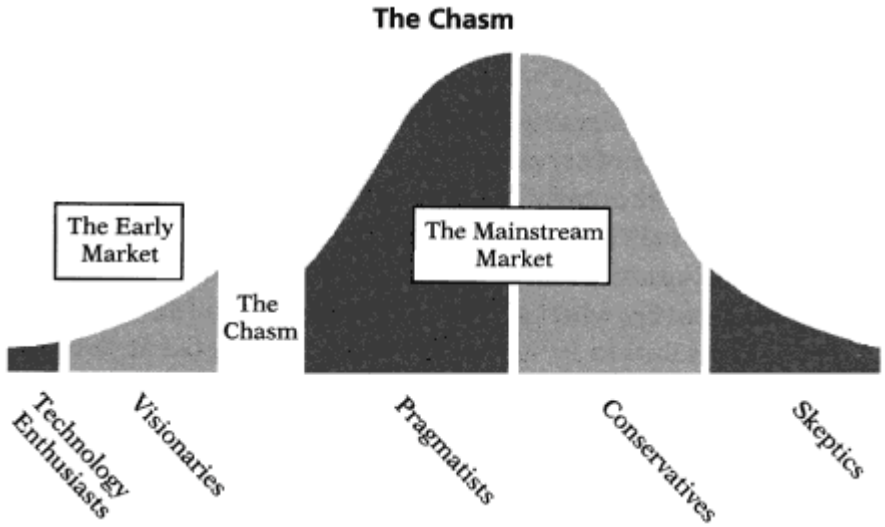
Audretsch's spillover theory requires entrepreneurship to commercialize new knowledge, but with the current dearth of entrepreneurship education in China, from where will entrepreneurs come? From the U.S., according to Saxenian (2006). Returning Chinese apply U.S. technical education and start-up experience to new ventures in China. Chinese professionals with technical and/or managerial experience in U.S. start-ups can command a premium; a Silicon Valley Bank Senior Vice President – Asia for Global Financial Services, related in conversation that such individuals can command astronomical salaries of U.S. $135,000 to $150,000 in China.

These outcomes represent only the tip of the iceberg: given the size of China's economy and population, 100 science parks, 50-plus VC firms, and hundreds of returning Chinese entrepreneurs will not achieve the self-innovation strategy. To transform China, even the submerged part of the iceberg must be affected. This section examines major gaps in the self-innovation strategy that must be filled to realize the goals of the 11th Five Year Plan.

The Successful Commercialization Gap

As knowledge creation spills over to new ventures, the focus will shift to commercialization. However, not all knowledge creation leads to commercial opportunities. To Timmons and Spinelli (2003), the entrepreneurial process is opportunity driven. An opportunity is an innovation that creates enduring economic value. Market demand, market size and structure, and profit margin potential help distinguish opportunities from non-opportunities. Chinese new ventures will face the problem of crossing the chasm between early market and mainstream market customers (Moore 2002; see Figure 2). Moore's insight is that the different segments are distinct markets and he contends that marketing holds the key to successful crossings. China's "make here, sell there" approach of recent years involved products and technology that had already crossed the chasm so that the focus could be on exploiting the labor cost advantage in mainstream markets. The self-innovation strategy brings crossing the chasm into play, and firms that cannot penetrate the majority market segments will not survive, no matter how innovative the underlying new knowledge is. These are "business" issues, not "innovation" issues.

Figure 2. Moore's Model of Crossing the Chasm



Currently, the 11th Five Year Plan's goal of transforming China into a manufacturer of homegrown global brands through internal science and technology development is at the stage of Figure 2's early market segment. Figure 1's economic growth will come from successful commercialization of science and technology development that moves to mainstream markets. Management skills, not just scientific and technical skills, will be needed if the self-innovation is to be truly successful in the long run. Returning Chinese Argonauts (Saxenian 2006), with both technical and managerial skills honed through experience in the U.S., can begin the journey across the chasm, but the mainstream market will require more widespread availability of suitable business managers in the Chinese population. Education is important in this journey.

The Education Gap

Domestic Chinese entrepreneurs currently lack the marketing skills and experience necessary to cross the chasm in fast-moving, global markets. In addition to developing entrepreneurship education (from virtually a zero base, as discussed above), overall management education must be bolstered. While Table 1 shows that the number of Management university degrees conferred is increasing, a gap seems to be growing between Management degrees and Science and Engineering degrees. If the focus remains only on scientific development (e.g., patents applied for or issued), or firms cannot negotiate the customer chasm, resources could be squandered without producing the expected economic growth. For the self-innovation strategy to have long-run success, both business and entrepreneurship education must be extended and enhanced. President Hu's call for public education could be part the solution needed here.

The Financing Gap

A shortage of private equity capital is likely to occur. The whole emphasis currently seems to be on venture capital and subsequent stock market IPOs. If the concept of bolstering SMEs extends beyond only high-potential ones, then alternatives to venture capital will be needed.

While venture capital can propel the early push for self-innovation, finding funding sources that cross over to the larger area of non-high potential firms will be challenging. In the U.S., this gap is often filled by angel investors, defined as high-net worth individuals who invest in high-risk, high-return entrepreneurial ventures. The MIT Entrepreneurship Center (2000) offers a comprehensive report of U.S. angel investing that examines the context for angel investing, profiles of angel investors, the angel investing process (from deal source to deal exit), the rise of angel groups, and how to become an angel investor. This provides a valuable blueprint for China.

While many Chinese businesspersons have generated significant wealth from China's recent economic growth, achievement of the self-innovation strategy will require channeling some of this wealth into new entrepreneurial ventures. Even in the U.S. and Europe, angel investing is viewed as an "informal" market when compared to bank, bond, stock, and venture capital markets. That is, angel investors mainly find investment opportunities through personal, unstructured search. In the context of *quanxi*, in which trust and feeling play a significant role, the development of Western-style angel investing may be slow. While the need for angel investment to extend and complement venture capital is clear, little information exists about this type of financing in China today. Angel investing in China is a fertile area for future research.

The Journey Ahead

Together, Figures 1 and 2 outline a transformation process for China; frame China's current stage of innovation, education, and financing; and indicate a path for successful transformation. Since the self-innovation strategy has been created at the highest level of government and announced as part of the broadest type of plans, China is clearly in the early-market part of this strategy. And since the 11th Five Year Plan has just begun, gauging success is not yet possible.

This paper has provided an overview of the self-innovation strategy and examined its general dimensions in a manner consistent with the Timmons Model (Timmons and Spinelli 2003) that looks for fits and gaps among opportunities, entrepreneurs/teams and financing/resources. As the self-innovation strategy unfolds, more in-depth analysis can proceed along each major dimension.

What role SMEs play in the self-innovation strategy needs further analysis. Analogous to Moore (2002), venture capital-worthy firms are the early market for

the self-innovation strategy, while other SMEs lie in the mainstream. As Timmons and Spinelli (2003) note, most new ventures are not high potential firms. Aligica and State (2005) point out the lack of consistent policy orientation to and definition of SMEs in the EU. Audretsch (2003) distinguishes between entrepreneurship policies that foster new firm development and SME policies that promote the advancement of existing firms. The 11th Five Year Plan's concept of SME development quoted above seems to be a "one size fits all" approach. Audretsch's (2003) point is that new firms and existing firms require different policies, and the experience of the EU detailed by Aligica and State (2005) suggests that vagueness, ambiguity, and lack of central vision will ensue by not recognizing the need for different policies for new firms and existing firms, as well as for high-potential firms and non-high potential firms.

In this regard, China should continue to enhance the environment for science parks and venture capital and to further develop Nasdaq-like stock exchanges so that high-potential firms can flourish. But at the same time, China's national, regional, and city governments should begin developing programs such as those listed in Table 2 to help existing and non-high potential firms to also flourish. If enhancing only high-potential firms is the objective, then one day China might rank among the world's innovative nations without solving the problems listed in Morrison (2006). Programs like those in Table 2 would assist a broad range of SMEs and could ease urban-rural income inequality, reduce the reliance on SOEs, and improve the allocation of goods and services in the economy.

Concluding Comments

If the 11th Five Year Plan's self-innovation strategy successfully generates economic growth through entrepreneurship, then China can choose a path that expresses China's own characteristics while creating a talent pool rich with innovative spirit. Linked with a public education campaign to advance an innovative culture in Chinese society, then President Hu's goals of improved comprehensive competitiveness and SME development can be achieved.

As noted above, the view of Chinese innovation from outside of China could be that the self-innovation strategy will just extend China's dominance in manufactured goods to other economic arenas. Other countries might fear that the self-innovation strategy could have adverse effects on their economies and firms, so a successful self-innovation strategy could solve Chinese economic and social problems while creating such problems in other parts of the world.

The implementation of the self-innovation strategy is best considered a continuous process with improvements and adjustments that will be made along the way. For

self-innovation to transform its economy, China should prepare for a long march rather than a great leap forward.

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EVALUATION OF THE IMPACT OF ENTREPRENEURIAL CHARACTERISTICS ON THE PERFORMANCE OF SMALL SCALE MANUFACTURING INDUSTRIES IN NIGERIA

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ABSTRACT

Introduction: The research study evaluated the impact of entrepreneurial characteristics on the performance of small-scale manufacturing industries in Nigeria. This is with a view to identifying these entrepreneurial characteristics and the factors that influence their translation to optimum business performance.

Method: Primary data, through structured questionnaire, were collected from the samples of 100 firms randomly selected from among the small-scale manufacturing industries engaged in food and beverage; textile and wearing apparel; wood and wood products; chemical and pharmaceuticals; and fabricated metal products.

Analysis: Data were analysed using descriptive and inferential statistics with the aid of Statistical Packages for Social Scientists (SPSS). Also, the correlation analysis and regression analysis were carried out to examine the relationship between contextual variables and business performance.

Results: The results showed that human resource factors and the sales revenue were found to be inadequate and severely inhibited the potential of the entrepreneurs for performance and growth. However, length of years in business and working experience were found to have positive contribution on their performance. While majority (7) of the 10 Personal Entrepreneurial Characteristics (PEC) of the respondents made negative contribution on the sales revenue, only demand for efficiency and product quality, information seeking; and systematic planning and monitoring had positive impact.

Conclusion: The study concluded that the negative attributes exhibited by the respondents in most of the PEC were critical factors in the dismal performance of the small-scale manufacturing industries, which need to be developed in the entrepreneurs through training.

INTRODUCTION

Perception of African entrepreneurship among scholars and researchers seem to differ considerably. At one extreme is the view that, for one reason or the other, technical entrepreneurial talent that involves the establishment and management of manufacturing industries for productive activities in the real sector of the economy, is lacking in Africa. According to a World Bank study carried out by Nils-Henrik Morch in 1995, the poor growth performance of most sub-Saharan countries and, in particular, the slow rate of industrialization could be taken to support such a dismal perception. However, the study further proposed an alternative view that entrepreneurial talent is indeed available but that the economic environment have been such as not to allow this talent to develop.

Supporters of this view may point to the fact that the kind of economic policies that have been followed in many African countries in the two to three decades after political independence have not always been conducive to private enterprise. This position is consistent with a third view by Adjebeng-Asem (1989) that the African entrepreneur is alive and well, but that he or she, rather than undertaking manufacturing businesses, has been diverted to non-productive, rent-seeking activities which researchers have referred to as commercial entrepreneurship.

In spite of this critical gap in Africa's development process, researchers and scholars around the world have long identified the role of entrepreneurs and entrepreneurship in the economic development of nations. For instance, Dozie (2005) argues that this vital factor of production formed the bedrock of the classical thesis of Joseph Schumpeter (1934) who established that no nation would break the barriers of development without a critical mass of entrepreneurs. This assertion, which formed the basis of Schumpeterian model of economic growth, has helped many developed and even developing nations to accelerate their pace of development by focusing on appropriate incentives to support entrepreneurial activity (Dozie, 2005). It is the entrepreneurs who generate the critical momentum an economy requires for economic growth by breaking new grounds in human endeavour as a result of the vital characteristics or attributes they posses.

Unfortunately, after more than four decades of import substitution strategy, structural adjustment programme (SAP), commercialization and privatization of ailing state-owned enterprises and general economic decline, the manufacturing sector's contribution to the Gross Domestic Product (GDP) in Nigeria is still very small. It is plagued by low productivity and low-quality output. This is compounded by the consequent increase in competition from imports, which has resulted in downsizing or outright closure of many manufacturing industries. Therefore, the extent to which the restructuring of the private sector as the engine of growth of the economy will succeed is dependent on the fostering and development of technical entrepreneurship among the indigenous population.

In addition, theoretical and empirical investigations have emphasized the crucial role that technological innovation and technical entrepreneurship play in fostering economic development. These investigations are now seen as crucial and are also recognized as important components of technology policy and economic planning. For instance, the present emphasis by government and stakeholders on indigenous technical innovation and entrepreneurship stems from the failure of past attempts through the import substitution strategy to stimulate development by borrowing or transferring advanced and sometimes inappropriate and unsustainable technologies from developed countries.

This position was further reinforced by Adjebeng-Asem (1989) where it was argued that governments in most developing economies such as Nigeria were criticized for paying inadequate attention to the need for accelerated economic growth and for not harnessing the abilities of their own citizens for technological innovations and entrepreneurship. Critics also conclude that these developing countries depend on exogenous technologies that are inappropriate for their environment (ibid, 1989).

This has been responsible for Nigeria's exports which have largely been based on raw materials and semi-manufactured goods with the petroleum sector as the most important. Less than 5% of these exports are on the average attached to knowledge intensive goods and services (Adjebeng-Asem, 1989 and Akeredolu-Ale, 1975). The problems became acute in the 1980's and early 1990's, when Nigeria experienced stagnating industrial output and decreasing crude oil prices while industrialization through the production of indigenous technological development became central topics in the industrial policy debates. As a result of this, United Nations Development Programme (UNDP, 1992) and United Nations Industrial Development Organisation (UNIDO, 1994) argued that if Nigeria is to join the league of industrialized economies, industrial activities have to converge and focus more on knowledge-based production particularly in the small scale manufacturing and processing industries.

This view was partially enunciated in the various development plans, national budgets, rolling plans and in the current reform programmes elaborated in the National Economic Empowerment and Development Strategy (NEEDS) (Federal Government of Nigeria, 2004). The central theme of the policy has been that small-scale industries should spearhead the nation's drive towards economic recovery. Studies have shown that small industries in many countries provide the mechanism for promoting indigenous entrepreneurship, enhancing greater opportunities per unit of capital invested and aiding the development of local technology (Sule, 1986, Nils-Henrik and Morch, 1995).

In Nigeria, small-scale businesses represent about 90% of the industrial sector in terms of the number of enterprises. They also account for 70% of national industrial employment if the threshold is set at 10 – 50 employees, contribute 10% of manufacturing output and a meager 1% of gross domestic product (GDP) in 2001 (Ajayi, 2002). Similarly, they have also contributed significantly to economic development through employment, job creation and sustainable livelihood (Nigerian Investment Promotion Commission, 2003).

In spite of their significance and contribution of small industries to the national economy, many problems and constraints still exist in promoting their development and growth. For instance, an International Labour Organisation (1994) study shows that inadequate technical entrepreneurial talent particularly affects the development of small-scale manufacturing and processing industries. While large scale industries can be established with expatriate capital, small industries need to have a domestic entrepreneurial and industrial base.

Another obstacle to the modernization of small industries are the persistence of a low level of technology, the shortage and inadequate entrepreneurial skills of operators and the absence of an effective management techniques (UNIDO, 1994). Their low product quality makes it difficult for them to compete in a technologically driven, knowledge-based and export oriented globalized economy. There is therefore the need to tap the considerable R&D efforts that take place at universities, polytechnics, monotechnics and other public and private sector research institutions through increased commercialization or technology transfer of research results. However, this can only be achieved through a deliberate intervention strategy of developing a core of characteristics among the small industry operators to enhance production efficiency, quality and output.

The failure of past efforts by small industry operators and the little intervention by government necessitate the need to assess why indigenous technical innovations, management practices and other key success factors in business are often not translated into feasible business ventures despite the fact that the country has the technological need. These issues according to researchers such as Akeredolu-Ale (1975), Afonja (1986) and Adjebeng-Asem (1989) imply a link between technical innovation, nascent entrepreneurship and a much broader level of technological development. The present study focused mainly on a narrow aspect of the link of nascent entrepreneurial characteristics and its effect on the development and growth of small-scale manufacturing industries.

Against this background, the research study assessed the impact of technical entrepreneurial characteristics on the performance of small-scale manufacturing industries in Nigeria.

Entrepreneurship and Small Industry Development

In the literature on entrepreneurship, there is a broad consensus among policy makers, researchers and practitioners that a fundamental cause of difficulties experienced by many developing countries such as Nigeria is lack of technical entrepreneurship. This is manifested in the low rate at which small-scale manufacturing industries are created and at the high rate of mortality in the sub-sector (Ajakaye, 1999). It is particularly evident in Nigeria where there are many barriers militating against the development and growth of the real sector that is the bedrock of any economy.

Such barriers inhibit entrepreneurial progress in the country despite a number of strengths and opportunities that encourage the prevalence of "creative imitators" rather than "innovators" with low level of entrepreneurial talent (Umo, 2001). Adegbite and Van-Hattum (2002) suggest that the main prerequisite for such progress in Nigeria is the development of an institutional framework and enterprise culture capable of creating the optimum condition for technical entrepreneurship. Unfortunately, a number of models perceived to be relevant in international context have not been effective in Nigeria due to lack of a holistic, equitable approach to industrial development and socio-economic transformation.

This has necessitated the need for this study to critically examine how technical entrepreneurial characteristics affect the start-up of small-scale industries and their subsequent performance.

The Concept of Entrepreneurship

Throughout the theoretical history of entrepreneurship, scholars and researchers from multiple disciplines such as anthropology (Steward, 1991), psychology (Shaver and Scott, 1991), sociology (Reynolds, 1991), economics (Kirchoff, 1991), management (Stevenson, 1985) and technology (Roberts, 1991) and (Litvak and Maule, 1999) cited in Tonge (2002) have grappled with a diverse set of interpretations and definitions to conceptualize this abstract idea. A further

search of the literature also reveals that researchers have been inconsistent in their definition of entrepreneurship. There are a minimum of a hundred definitions to explain the concept of entrepreneur and entrepreneurship. Their meanings depend on when they were devised and on the society in which the various researchers developed them (Di-Masi, 1999).

In the last century, many writers have identified entrepreneurship with the function of uncertainty and risk bearing and others with the coordination of productive resources, the introduction of innovation and the provision of technical know-how (Hoselitz, 1952) cited in Burnet, (2000). During the sixteenth century, people who organized and managed military and exploration expeditions in France were called "entreprendre". The word entrepreneur originates from the French verb, *"entreprendre*" and the German word *"unternehmen*" both of which means to undertake (Afonja, 1999). In the Oxford Dictionary, an entrepreneur is defined as one who organizes, manages and assumes the risks of a business enterprise.

The early 18th century French economist Richard Cantillon (circa 1755) introduced the term entrepreneurship. In his writings, he formally defines the entrepreneur as the agent who buys means of production at certain prices in order to combine them into a new product. He further defines entrepreneurship as self-employment of any sort where the entrepreneur is the bearer of uncertainty and risk. Shortly thereafter, the French economist Jean Baptiste Say (1824) defines the entrepreneur as someone who shifts economic resources out of an area of lower to an area of higher productivity and greater yield. He added to Cantillon's definition by including the idea that an entrepreneur is one who brings other people together in order to build a single productive organization. But Say's definition, according to Peter Drucker (1985), does not tell us who the entrepreneur is. And since Say coined the term almost two hundred years ago, there has been lack of consensus over the definition of entrepreneur and entrepreneurship.

In the 19th century, British economists such as Adam Smith, David Ricardo and John Stuart Mill defined the concept of entrepreneurship under the broad English term of business management (Burnett, 2000). However, Schumpeter (1947) argues that whereas the writing of Smith and Ricardo suggests that they likely undervalued the importance of entrepreneurship, Mill actually stresses its significance for economic development and growth. He further claims that entrepreneurship requires "no ordinary skills" and laments the fact that there is no good English language equivalent word to encompass the specific meaning of the French term entrepreneur

The necessity of entrepreneurship for production was also recognized by Alfred Marshall in 1890 when he asserted in his treatise of Principles of Economics that there are four factors of production i.e. land, labour, capital and organization. Entrepreneurship, both technical and commercial, is the driving element behind organization. He further argued that the skills associated particularly with technical entrepreneurship are rare and limited in supply and that the ability of entrepreneurs are so great and so numerous that very few people can exhibit them all in a very high degree. Another research carried out by Penrose (1959) posit that entrepreneurship, particularly technical entrepreneurial activity, involves identifying opportunities within the economic system, filling market deficiencies through input-completing activities including the process of identifying, developing and bringing a vision to life. This vision may be an innovative idea, an opportunity or a better way of doing something. The end result of this process is the

creation of a new venture, the expansion of an existing one carried out under conditions of risks and considerable uncertainty (Meyer et. al., 1976).

Therefore, in recognition of the considerable risks and uncertainty associated with entrepreneurship, Afonja (1999) made a clear distinction between technical entrepreneurship and commercial entrepreneurship. The former involves product manufacture or the provision of technical services while the latter involves trading, buying and selling or provision of non-technical services. The prerequisites for success and risk factors involved differ significantly for the two types of entrepreneurship. Therefore, the focus of this study is on the effect of technical entrepreneurial characteristics on the performance of small industry manufacturing operators in the food, textiles, and wood processing and fabricated metal products all of which are generally important in the industrialization of a developing economy such as Nigeria.

The Entrepreneur

A number of attributes have been suggested as predicators of central behaviour with some degree of consensus. These studies have tended to examine in some detail the synonyms and adjectives used to described entrepreneurs since they tend to identify what makes an entrepreneurial personality characterized by certain traits. For instance, Rasheed (2002) suggested that the following are the most relevant: need for achievement, creativity and initiative, risk taking and setting objectives, self-confidence and internal locus of control, need for independence and autonomy, motivation, energy, commitment and persistence. The entrepreneur is the individual that identifies the opportunity, gather the necessary resources, creates, and is ultimately responsible for the performance of the organization. However, the above definitions should not be taken to discount the importance of the traits and characteristics of the entrepreneur from the perspective of their propensity to act and the influence of the social, cultural, psychological, political and economic contextual factors.

These models, particularly the one focusing on the entrepreneur, recognize that before organizations, there are pre-organizations (Van de Ven, and Romifin, 1987). Initially, they exist only as thoughts, ideas or dreams of an individual. Through the business creation or start up process, the founder's thoughts are sometimes, but not always, translated into a pre-organization, that is an attempt to found, and then, sometimes, but not always, a business organization (Mazzarol, 1999) cited in Tonge (2001). Central to this process is the founding individual, and early and other contemporary research in entrepreneurship focused therefore on the entrepreneur. It sought to determine what personality characteristics distinguished entrepreneurs from non-entrepreneurs, and examine the influence of these characteristics on business organization formation rates (Tonge, 2001).

For instance, such factors as the need for achievement (McClelland, 1965); risk taking propensity (Brockhaus, 1980); locus of control (Brockhaus, 1982); desire for personal control of business (Sexton and Bowman, 1983); opportunity seeking, risk taking and innovation, demand for efficiency and product quality, persistence in searching for suitable technology, commitment, information seeking to enhance production efficiency, goal setting, systematic planning and monitoring, persuasion and networking with trade groups and associations, support institutions

and large-scale industries (McClelland, 1969 and United Nations Centre for Transnational Corporation (UNCTC), 1988) have been identified and examined as possible traits or characteristics associated with entrepreneurial behaviour.

In addition, other background factors or human capital related to individual personality have been discussed. Some of these include previous employment (Storey, 1982); family background (Scott and Twomey, 1988); age and gender (Buttner and Rosen, 1989); education (Storey, 1982) and religion (Weber, 1930) cited in Tonge (2002). Altogether, the combination of personal characteristics with background factors or human capital makes some individual more likely entrepreneurial candidates than others (Tonge, 2002).
Therefore, to summarize the model for this research study, we argue that one of the main factors influencing a new small-scale manufacturing industry creation and subsequent performance is an interactive process in which entrepreneurial personal characteristics interact with human capital, particularly education (technical and management), and other salient events in the environment to influence decisions concerning new venture creation, performance and growth.

Therefore, a deeper understanding of the biographical traits (age, gender, experience, education etc.), personality and characteristics of the entrepreneur.are needed to assess their technical and managerial competence for small business start-up, growth and sustainability.

METHODOLOGY

Study Area and Sample Population

The study was carried out in Oyo State of Nigeria. Oyo State is situated in the Southwestern part of the country and is notable for various types of small, medium and large-scale manufacturing industries However, the vast majority of indigenous enterprises in Nigeria are owner-managed private small-scale businesses. These manufacturing industries are defined by the Central Bank of Nigeria and Bankers Committee (2001), as those with a capital outlay of between N1 million and N50 million, excluding the cost of land and working capital, and employing between 10 and 50 full-time workers.

The main participants and the dominant activities in the small-scale sub-sector are in the area of food processing, textile and wearing apparel, metal fabrication and foundry, agricultural raw materials processing, saw milling, woodwork and furniture, leather processing, chemical and pharmaceutical and so on. Therefore, the focus of this study was a purposely selected sample of 100 owner-managed small-scale industries engaged in food and beverage processing; textile and wearing apparel; wood and wood products; chemical and pharmaceuticals; and fabricated metals.

The questionnaire was the main instrument of the study. However, some structured in-depth interviews were also conducted. Secondary data were also collected from annual reports of the trade associations, specialized journals and published articles.
A number of measures were taken to ensure the validity and reliability of the questionnaire used in this study. The use of equivalent questionnaire items was employed. A first draft of the questionnaire was made. This was pre-tested on ten small-scale manufacturing industries with

two questionnaires each administered for each of the five sub-sectors. Furthermore, a team of three experts moderated the questionnaire to ensure its relevance and reliability.

Data were analysed by using descriptive and inferential statistics. Descriptive statistics involved the use of frequencies, mean, and percentages. Inferential statistics were used to measure the relationship between variables with the aid of Statistical Packages for Social Scientists (SPSS). Correlation analysis was used to examine the relationship between the characteristics of the entrepreneurs and business performance while regression analysis was employed to examine the cause and effect relationship between contextual variables and business performance. Policy implications were drawn from the results obtained from the study.

Model Specification and Measurement of Variables

To assess the impact of technical entrepreneurial characteristics on the performance of small-scale manufacturing industries, a conceptual model was identified as relevant (Gibb and Tolentino, 1988). The model assumed that human capital, management of business resource factors and personal entrepreneurial characteristics have influence on the performance of the entrepreneurs.

Human Resource Factors

Legal status of the business was measured by the number of small-scale industry that has registered their business with the Corporate Affairs Commission either as a sole proprietor, partnership or private limited liability company. Gender was measured in terms of male and female. Age of the entrepreneurs was measured in years. Marital status was measured by indicating married, single, divorced, widowed and separated and is measured as a dummy with married being 1 and others being 0. The level of education was measured in years of formal education and working experience was measured in the study by the number of years of working experience.

Personal Entrepreneurial Characteristics Factors

Regression statistics was used to analyze personal characteristics of the entrepreneurs.

$$\mathbf{BPE} = f(xi)$$

where i=1, 2, 3 ……10

A linear equation was chosen because it had the highest R2 value.

RESULTS AND DISCUSSIONS

Proportional Distribution of Respondents by Sector

Table 1 shows that all the small scale manufacturing industries were classified into five (5) main industrial sectors of which the majority 46.1% engaged in Food, Beverage and Tobacco industry.

Only 18.4% were engaged in metal fabrication while 13.2% each was engaged in wood and wood products, Chemical and Pharmaceuticals and only 9.2% of respondents in Table 1 were engaged in Textile and Wearing Apparels. It was earlier reported that the food processing industries contribute significantly to satisfying the basic needs in most African countries (Nils-Henrik and Morch, 1995). It is therefore not surprising that most of the respondents in this study were engaged in food processing industries (Table 1).

Table 1: Sectorial Distribution of the Respondents

	Variables	Frequency	Percentages
	Major line of business		
(a)	Food, Beverage and Tobacco	35	46.1
(b)	Textile, Weaving Apparels	7	9.2
(c)	Wood and Wood products	10	13.2
(d)	Chemical and pharmaceutical	10	13.2
(e)	Fabricated metals	14	18.4
	Total	76	100.0

Source: Field survey, 2006

About 38% and 4% of the firms in Table 2 operated as limited liability companies and partnerships respectively while majority (57.9%) were sole proprietorship form of business. This was because the cost of incorporating a limited liability company in Nigeria is very high while the process is also cumbersome. The findings support the studies in other developing countries where the process and high cost of registering and formalizing a business had forced many small-scale industries to operate as sole proprietor rather than limited liability company or partnerships with dire consequences for access to capital and other material resources necessary for expansion and growth of the business.

Table 2: Legal Status of Small-Scale Industries

	Variables	Frequency	Percentages
	Legal status of business		
(a)	Sole proprietorship	44	57.9
(b)	Partnership	3	3.9
(c)	Limited liability	29	38.2
	Total	76	100.0

Source: Field survey, 2006

Table 3 indicates that 89.5% of respondents were male while only 10.5% are female. Further analysis indicates that male respondents, (42.1%) were engaged in Food, Beverage and Tobacco whereas there was no female engaged in the wood and wood products industry. Tonge (2002)

made a similar report that female entrepreneurs were generally less likely to be founder of manufacturing industries than male. Kourilsky (1980) also established that males had significantly higher entrepreneurial intentions than females.

Table 3: Gender Distribution of the Respondents

S/N	Major Line of Business	Gender of Respondent		Total
		Male	Female	
1.	Food, Beverage and Tobacco	32 (42.1%)	3 (3.9%)	35 (46.1%)
2.	Textile and wearing Apparel	4 (5.3%)	3 (3.9%)	7 (9.2%)
3.	Wood and wood products	10 (13.2%)	- (-)	10 (13.2%)
4.	Chemical and Pharmaceutical	9 (11.8%)	1 (1.3%)	10 (13.2%)
5.	Fabricated metals	13 (17.1%)	1 (1.3%)	14 (18.4%)
	Total	68 (89.5%)	8 (10.5%)	76 (100%)

Source**:** Field survey, 2006

Table 4 shows that most, (60.53%) of the respondents, were between the age of 46 to 60 years whereas 17.11% were below the age of 45 years. The finding is contrary to the outcome of the research conducted in Britain by Reynold (1999), in Indonesia and India by Krirtiansen et. al., (2003) where it was disclosed that individuals between 25-44 years of age were the most active and successful entrepreneurs. However, the higher concentration of entrepreneurs between the ages of 46 years and above could be due to the fact that the younger generations are less disposed to establishing manufacturing businesses due to the risk and the long gestation period of investment. Instead, most of them are more inclined to engage in service oriented businesses that offers quick return on investment. These service businesses include non-productive, rent-seeking commercial entrepreneurship such as trading, buying and selling activities because of the kind of economic policies followed by the government in the past four decades after political independence (Adjebeng-Asem, 1989). According to Nils-Henrik Morch (1995), these economic policies coupled with the socio-political environment has not been conducive for the younger generation to develop the entrepreneurial talent needed to develop and grow the economy.

Table 4: Age Distribution, Marital Status and Training Skill Acquisition of Respondents

	Age of respondent	Count	Percentage
(a)	30 – 35	2	2.6316%
(b)	36 – 40	8	10.5263%
(c)	41 – 45	3	3.9474%
(d)	46 – 50	21	27.632%
(e)	51 – 55	13	17.105%
(f)	56 – 60	12	15.789%
(g)	61 – 65	11	14.474%
	Marital Status of Respondents		

1	Married	70		92.1%
2	Single	3		3.9%
3	Widowed	3		3.9%
	Total	76		100%
Training and Skill Acquisition				
1.	Formal training	53		71.6%
2.	Experience from previous job	10		13.5%
3.	On the job experience	8		10.8%
4.	Exposure to others experience		3	4.1%
	Total	74		100%

Source: Field survey, 2006

Majority of the respondents, (92.1%) in Table 5 were married whereas 3.9% were either single or widowed. Reynolds (1999) and Fielden et. al., (2000) further established that there is a positive relationship between marital status and business performance. Married men and women worked harder and performed better in managing a business because of the social, financial and psychological support than single, divorced or widowed individuals because of family responsibility and commitments.

Majority, (71.6%) of the entrepreneurs acquired formal training, to enhance their operations. Fielden et. al., (2000) reported that skills and experience are very crucial to enterprise survival while experience from previous job, and on the job experience were also major key factors in enterprise duration, growth and survival. Majority (60%) of the firms had turnover of between 0.1 2.0 million Naira, and 18% 0f them were from food and beverage industry. The table further showed that about 16%, 8%, and 5% of the firms belonging to food, beverage and tobacco, textile and wearing apparels and metal fabrication and metal products respectively had turnover above 2.0 million naira.

The high turnover of the firms in the Food, Beverage and Tobacco and Textile and Wearing Apparels is in line with the proportional distribution of respondents by sector. This shows that most of the entrepreneurs surveyed were in the food processing industries. This finding supports the view by Nils-Henrik and Morch (1995) report which indicated that most Small Scale Industry operators engage in food processing which contributed significantly to the basic need in most African countries.

Table 5: Sales Turnover of the Firms in the different Industrial Sector

	Sales Turnover (Million)					
Major Line of Business	0.1–1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00–5.00	5.00-6.00
Food Beverage & Tobacco	17.5%	18.4%	9.5%	4.6%	2.2%	-
Textile & Wearing Apparels						

Wood & Wood Product	5.2%	6.4%	3.2%	3.3%	1.6%	-
Chemical & Pharmaceutical	3.4%	2.5%	1.2%	2.6%	0.6%	-
Fabricated Metal Product	-	-	1.0%	0.9%	-	1.5%
Total (% Sales Turnover in the last Accounting Year)	4.77% 30.87	1.91% 29.21	2.8% 18.50	0.9% 12.3	1.8% 6.2	- 1.5

Source: Field survey, 2006

Regression Analysis

The regression equation obtained is shown in the equation 3 below.

$Y = -0.307X1 - 0.074X2 - 0.23X3 + 0.049X4 - 0.017X5 - 0.087X6 + 0.11X7 + 0.21X8 - 0.53X9 - 0.006X10 + 15.351$… …… (3).

The independent variables are the 10 personal characteristics. The regression analysis showed that all the ten personal entrepreneurial characteristics could only explain 19.7% of the variation in the sales turnover of the industries. This could be so because other variables such as age, training and skill acquired, working experience and capital outlay is not taken into consideration. However, out of the ten personal entrepreneurial characteristics, networking and persuasion was the only characteristics that affected the turnover significantly.

Table 6: Contribution of PEC to Sales Turnover (%)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.440a	.193	.057	4.11549

Table 7: Linear Model of PEC to Total Annual Sales Turnover (N)

Model	Unstand. Coeff.		Stand. Coeff.	T	Sig.
	B	Std. Error	Beta		
(Constant)	15.351	6.600		2.326	0.023
Persistence (X2)	-7.418E-02	0.406	-0.033	-0.183	0.855
Commitment to Work Contact (X3)	-.225	0.465	-0.077	-0.483	0.631
Opportunity seeking and initiative (X1)	-.307	0.433	-0.134	-0.710	0.480
Demand for efficiency and product quality (X4)	4.935E-02	.270	.026	0.183	0.855

Risk taking (X5)	-1.731E-02	0.340	-0.007	-0.051	0.960
Goal setting (X6)	-8.700E-02	0.344	-0.041	-0.253	0.801
Information seeking(X7)	0.105	0.280	0.054	0.376	0.708
Systematic planning and monitoring (X9)	0.208	0.237	0.123	0.881	0.382
Networking and persuasion (X8)	-0.529	0.257	-0.325	-2.059	0.044
Independence and self-confidence (X10)	-6.136E-03	0.023	-0.034	-0.269	0.789

Source: Field survey, 2006

From Table 7, sales turnover (y) would be 15.351 when all the independent variables are zero. Also, a unit increase in x1 would bring about a decrease of 0.307 in y. Similarly, when x2 increase by one unit, y would decrease by 0.074.

A high propensity for risk taking (x5) is desirable and necessary for wealth creation. The higher the risk, the greater the return on revenue or sales expected (Khilstrom and Laffront, 1979). However, in this study, a unit increase in the propensity for risk taking decreased the performance of the company by a proportion of 0.017. The negative propensity for risk taking on the sales turnover could also be a direct consequence of the average age of the respondents which is between 46-60 years. In the literature on entrepreneurship, there is an inverse relationship between the age of an entrepreneur and propensity for risk-taking. Entrepreneurs between the ages of 25 – 44 years have a higher risk-taking propensity and are more active than those from 45 years and above.

The respondents also exhibit a low desire for goal setting (x6). This is shown by a unit increase x6 which led to a decrease in the turnover of the firms by a proportion of 0.087. This has impacted negatively on the ability to be pro-active, to anticipate problems and take actions to prevent them. However, according to Ibrahim and Ellis (1993), a strong desire to set goals and objectives and to carry them out has been documented as a driving force for many entrepreneurs. This has not been the case with the respondents and particularly explains the decrease of (-0.087) units for every Naira of sales turnover. In addition, respondents did not show enough disposition and commitment to work. Therefore, the negative attributes exhibited by the respondents in their ability to set goals and objectives, anticipate problems and evolve strategies to cope with them is also responsible for the poor performance of the small scale industries.

The negative coefficient (-0.023) of x3 indicates that a unit increase in x3 produced a reduction of 0.023 unit in the turnover of the firms. This result showed that the respondents did not show enough dispositions to work. Stewart et. al., (1999) reported that negative attitudes to work affect the output, productivity, sales turnover and profitability of businesses. The lack of personal sacrifice by the entrepreneur and the workers leads to breach of contract, lack of customer satisfaction and loss of goodwill. These impacted negatively on performance and growth of the businesses.

Another characteristic of an entrepreneur (x3) opportunity seeking and initiative has a coefficient of -0.037. This indicates that a unit increase x1 would decrease performance of the firm by 0.37. It also showed that respondents were not exploring better ways to accomplishing their tasks through access to new technology, inventions, creative imitations and improved process

technology to enhance product quality. This result is contrary to findings in the literature. For instance, Kirzner (1973) argues that the process of discovery through opportunity seeking is a proximate issue of entrepreneurship. Stevenson et al (1986) also posit that technical entrepreneurship is driven mainly by the perception of opportunity while Timmons et al (1987) maintain that opportunity recognition is the most important step in the entrepreneurial process.

Economic and social networks are very useful in assembling the resources needed for starting and managing manufacturing industries (Burnett, 2000). However, in this study, networking and persuasion (x8) has a negative coefficient (-0.021) This implies that for a unit increase in networking and persuasion (x1) brings about a decrease of 0.021 in the performance output. This is a clear indication that efforts are not being made to use networks to gather information on resources available and how to acquire and harness the resources. This could be due to the fact that most of the respondents were not networking for mutual benefit with other members of their trade associations. The negative result of this trait may also indicate that respondents were not persuasive enough in the business interaction through effective communication with customers, suppliers and competitors.

An entrepreneur mastery over the tasks and problems encountered in a business requires specific independence of thought and self-confidence (x10). Unfortunately, for a unit increase in the unit of this characteristic (x10), there is a corresponding decrease of 0.006 in the turnover of the firm. However, this is contrary to Peacock (2000) cited in Tonge (2002) study which showed that most successful entrepreneurs had mastery over tasks and problems which they encounter.

In the literature on entrepreneurship, innovation, creativity and the persistence (x2) as identified by Drucker (1985) are essential qualities of technical entrepreneurs. However this variable has a negative coefficient of 0.0074 which indicates that for a unit increase in X2 in this study, there is decrease of 0.0074 in the naira sales turnover. This could be as a result of the requisite knowledge for the management of innovation among small enterprises in the study area.

CONCLUSION AND RECOMMENDATIONS

The study draws attention to the need for evolving strategies for enhancing the performance of entrepreneurs in Nigeria. For instance, the study concludes that the negative propensity for risk-taking is a direct consequence of the ageing population of entrepreneurs. There is need to develop a crop of potential entrepreneurs among the youths by incorporating entrepreneurship education into the school curriculum at all levels of the educational system. Specialized training programmes in entrepreneurship should be organised to expose potential and existing entrepreneurs to risk-taking strategies inherent in self-employment and wealth creation.

Also, the education system should incorporate business management courses in schools curriculum through the use of case studies and business simulation clinics. This will assist to develop and enhance the ability of future entrepreneurs to be proactive, to anticipate business related problems, to set goals and objectives and be better prepared for the world of work.

In addition, entrepreneurs must be exposed to various sources of information and business opportunities available both in Nigeria and external environment. To achieve this, government agencies and research and development (R&D) organisations, as well as non-governmental organisations, and development partners should develop and organize business awareness workshops and disseminate information on investment opportunities available locally and internationally. These strategies will expose entrepreneurs to sources of raw materials, new and improved process technologies, domestic and foreign markets and other information necessary for business survival and growth.

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Medical tourism, an innovative opportunity for entrepreneurs

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Abstract
People have always travelled for health reasons. Pilgrims travel for religious reasons and sometimes in search of miracle healing from certain locations such as in Lourdes. In recent times, with modern developments in the treatment and provision of healthcare, the range and scope of specialised medical treatments and cures have increased over time. With the ease of international travel accompanied with the cheaper costs of providing medical services and treatments in certain parts of the world, medical tourism is becoming a growing industry for international business.

This paper explores and critically analyses the issues surrounding medical tourism in today's environment. Similar to tourism ventures, there are many entrepreneurial opportunities associated with this emerging healthcare industry. Asian countries have a competitive advantage in this industry because of the support and promotion of this industry by their governments. There are medical enterprises in countries such as India, Thailand, Singapore and Malaysia that have invested in attracting tourists for this specialist market. As the costs of medical treatment and hospital queues gradually increase in western countries, the demands for medical services in developing countries are gradually increasing. This paper concludes that this form of tourism will certainly become more significant in the near future. Therefore, Asian countries specialising in attracting medical tourists create new entrepreneurial activity that can lead to a profitable and sustainable tourism industry in the region.

Key words: healthcare, medical tourism, entrepreneur

Introduction
Travel for health purposes is not a new phenomenon. Ancient stories, legends and fables contain many stories of journeys taken by heroes seeking potions and cures for another, often their kings or queens. There were quests in search for the 'fountain of youth' or for other equivalent rewards to seek immortality or perpetual beauty. These ambitious activities are not confined to one culture and stories for the search for the mysterious and supernatural span all cultures. Similarly these quests also include a search of wealth and riches that can guarantee or purchase a comfortable lifestyle and wellbeing.

Over time, things have not changed much except that this idea or concept has evolved to become more acceptable to the new generation. People still travel for health reasons and to seek cures for their ailments and take measures to preserve their wellbeing. For example, people travel to health spas especially to bathe in the special mineral waters to alleviate the symptoms of arthiritis (eg. Rotorua, New Zealand), travel to warmer climates to escape the winter months (eg. Monte Carlo) and to avoid the winter illnesses such as colds and flus. Pilgrims continue to travel for religious purposes, some in search of miracle healing from certain blessed locations such as in Lourdes where there is a history of miracles that have occurred in the past. Hence, those organisations and

businesses that capitalise and cater for such markets can prosper and grow as the demands for their products and services continue to increase.

This paper briefly explores the concept of medical tourism, mainly referring to procedures that require some medical or surgical interventions. It analyses aspects of the demand and supply of these products in the modern global environment. As the number of elderly people increases, there is an increased demand for affordable healthcare services. Therefore, there is a wide scope of entrepreneurial opportunities that can be created to supply and support this growing and sustainable industry.

What is medical tourism?

There is no one definition for medical tourism. However, it is generally accepted that this term is used to refer to travel activity that involves a medical procedure or activities that promote the wellbeing of the tourist. For example, the term 'healthcare' tourism has been used to cover travel and tourism that are related to medical procedures, health and wellbeing purposes. The scope of healthcare tourism is illustrated in Figure 1 below.

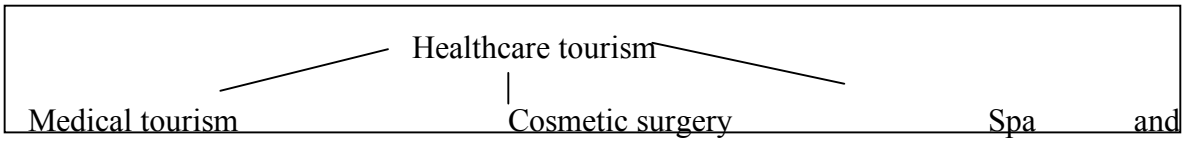

Figure 1 Scope of healthcare tourism (Henderson, 2004).

This definition has since been slightly modified. Figure 2 below illustrates a revised framework for medical tourism. This framework reflects the interchangeable use of the terms 'medical tourism' and 'healthcare tourism'. In addition, a new category is introduced to accommodate new 'reproduction' procedures. The previous terms used in the categories in Figure 1 have been included in Figure 2 to illustrate where these correspond in the first diagram.

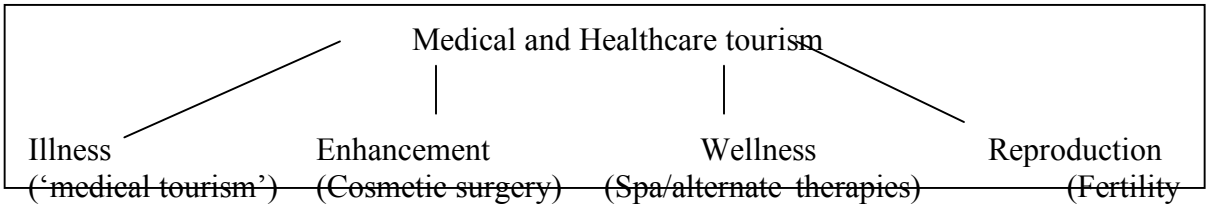

Figure 2 Medical tourism segments (TRAM 2006).

Using the framework in Figure 2, the medical procedures that are classified under 'illness' include medical check-ups, health screening, dental treatment, joint replacements, heart surgery, cancer treatment, neurosurgery, transplants and other

procedures that require qualified medical intervention. 'Enhancement' procedures also require qualified medical personnel but much of this work is non-disease related (unless disfigurement is caused by disease) and done mainly for aesthetic purposes. Examples of such procedures include all cosmetic surgery, breast surgery, facelifts, liposuction and cosmetic dental work. The 'wellness' segment of medical and healthcare tourism promotes healthier lifestyles (Bennett, King and Milner, 2004). Therefore, these products can include spas, thermal and water treatments, acupuncture, aromatherapy, beauty care, facials, exercise and diet, herbal healing, homeotherapy, massage, spa treatment, yoga and other similar products.

Under 'reproduction' tourism, these patients seek fertility related treatments such as *in vitro* and in *vivo* fertilization and other similar procedures. Birth tourism is also classified under this segment (TRAM 2006). This involves a pregnant mother who travels to another country to give birth to her baby in order to utilise the services, which are often free or obtain an advantage from having an offspring gaining citizenship of another country.

Referring to the medical tourism framework in Figure 2, there is opportunity for different entrepreneurs to capitalise on these varied medical tourism segments. The provision of surgical procedures would require specialized staff but the provision of leisure spas do not require medically trained staff. Therefore, there is a range of personnel expertise that is required to support this industry that can be provided by the host country.

Why tourists and medical tourism?

When referring to tourists, there are numerous definitions for this group of people depending on the purpose for the definition (Theobald, 1998). Generally, it is accepted that tourist are travellers who have travelled and stayed away from their home environment for 24 hours or more, and hence, often utilising some form of accommodation facility. Therefore, for those travelers who do not meet this 24 hour criteria are generally referred to as 'visitors'. For travellers that travel overseas for medical purposes, conceptually, they would meet the definition for that of a tourist. Since medical tourists are travelers whose main motivation for travel is for a specific purpose, medical tourism is a form of special interest tourism (Douglas, Douglas, and Derrett, 2001).

International travel is not without restrictions. Governments have a range of different visas that they grant for different purposes to visitors to their countries (Immigration, 2006). For example, international students who intend to study in a foreign country and migrant workers who work in a foreign country for income purposes are not usually given free entry into a country without assessing their applications. Travel for healthcare purposes also has its restrictions. For example, the United Kingdom that provides free treatment under the National Health Scheme restricts entry of foreign nationals who travel to seek medical treatment or are in need of foreseeable medical inventions such as pregnancy (TRAM, 2006). However, in the case of medical tourism, the service

providers are often private organisations relying on non-government sources of income and often are catered for the international patient or tourist. Therefore, in these situations, the restriction of the movement of such travelers is often minimised. Since tourist visas are often the easiest and least restrictive to obtain for entry into most countries, by offering medical tourism services that target tourists, these 'tourists' can enter a country more easily for medical treatment without much government (at visa level) intervention. The governments are often aware of the occurrence of medical tourism and many countries in the world support and encourage medical tourists to visit because, like other recreational and leisure tourists, these medical tourists pay for the healthcare treatment that they receive. As the market for medical tourism continues to grow and the medical procedures become more complicated, this increases the recovery time beyond those of a normal tourist visa, and therefore, the duration of these visas will need to be revised.

The medical tourist

The medical tourist would be a traveler travelling for the primary purpose of receiving a healthcare service. For those travelling for the purpose of undergoing a medical procedure such as heart surgery, cancer treatment or other surgical procedures, the traveller may travel alone of with one or more support person who may be the spouse, parent or friend. Therefore, the destination will benefit from the visitation of several people who would stay and spend their 'tourist' dollars during their trip. As the focus on medical tourism grows, more is done for this category of tourists. It is not unusual for luxury hotels to be in close proximity to private medical centres or facilities that provide medical tourism services. In catering for certain medical tourists, packages are put together to make it easier for the tourist who need not spend much time in researching their travel and accommodation requirements (Medical tourism, 2005a; 2005b). It is especially helpful for the tourist who is seeking medical treatment, because, quite often, the person is ill and impaired due to the condition and so the stress of organising the travel and accommodation alongside the medical procedure, can be reduced. At the opposite end of the spectrum, travelling overseas to a different country to undergo a medical procedure can be risky and dangerous (Menck, 2004). In a possible worse case scenario, the post operation recovery does not go well and the patient needs to prolong their stay at the destination and therefore incur additional costs, or, if the patient has returned home, they would have to seek further medical care and treatment in their home country. This would increase the cost of the overall treatment for their condition (Connell, 2006). This type of complication is not uncommon in cosmetic surgery where not all procedures go according to plan.

The tourist travelling for wellness purposes to health resorts or spas are usually less at risk of medical misadventure. This type of leisure and recreational tourism has always been popular to enable the tourist to revitalise and rejuvenate themselves before retuning to their normal routine in their home country (Bennett, King, and Milner, 2004). Unlike surgeons performing operations who have to be qualified and registered doctors, the level of accreditation and certification of the staff administering natural therapies at health

resort can vary from country to country. Although it is believed that natural therapists can do little harm, some of the herbal remedies that are used can be just as potent and harmful as orthodox pharmaceutical products.

Entrepreneurial opportunity in a new emerging international business

Entreprenership in the tourism and leisure industries is not new (Morrison, Rimmington and Williams, 1999). Medical tourism adds a further dimension and provides an opportunity for some unique and specialised business ventures to be created. International travel for medical care in the past was mainly for seeking treatments that were not available in their home country. For example, years ago, New Zealanders travelled to Australia for kidney transplants before this procedure was offered locally. Similarly, patients from the Pacific Islands also used to travel to New Zealand and Australia for certain medical procedures that were not performed in the local hospitals. In those cases, most of the costs of the medical treatment is borne by the governments depending on the healthcare arrangements between the countries. This 'new' medical tourism mainly involves private hospitals, clinics or private health care providers that rely on the number of fee-paying patients to support and fund their operations. Therefore, it is not uncommon for these entrepreneurial ventures to offer medical procedures that can bring in a reasonable amount of income in order to remain self-sufficient.

The characteristics of the 'new' medical tourism are very much like those for international business. Firstly, international business involves financial transactions across the borders of two or more countries (Fisher, Hughes, Griffin and Pustay, 2006). With transactions across borders, there would be country issues and differences that emerge. These can include differences in cultures, religions, attitudes, behaviour, legal systems and resources. Medical tourists, who travel overseas for privately financed medical treatments, do encounter and experience these country differences, which can be positive or negative towards their 'travel' experience. Governments in international business can create or design various trade barriers for certain businesses mainly to protect their interests. With medical tourism, such barriers are usually at the border with visa and entry control. Special visas are usually required for certain types of specialist treatment especially those which are provided by government-funded hospitals, but many other medical procedures offered by private health care providers may not require anything more than a tourist visa when entering as a tourist into a country. Cosmetic surgery or treatments such as liposuction and botox treatments, are good examples of the latter. Many patient travel overseas to secretly undergo such procedures and to recuperate before returning to their home country.

Many governments, who recognise the value of medical tourism as an innovative new business that can attract new foreign capital as a high value product, support this industry by providing assistance for the growth, development and infrastructure for this business. A number of countries in Asia such as India, Thailand, Singapore and Malaysia have invested in attracting tourists for this specialist market (Henderson, 2004). These countries have an advantage because in addition to the ease of accessibility through the

advances of air travel, the medical tourists that they cater for can also benefit from the favourable exchange rates and other products and facilities that these countries can offer. In the industry where the tourist also need to evaluate the quality of the product, for example, in this case medical treatment, government backing or endorsement does go a long way in helping increase customer/patient confidence to utilise these medical services. Like other international trade, it is usually the competitive pricing of the procedures that attract the medical tourist to certain destinations to undergo surgery, cosmetic procedures and enhancements. As with most low-priced products, the quality can sometimes be perceived as poor. For example, India is perceived as a low cost and low hygiene environment as broadcasted by a German radio station for medical procedures (Connell, 2006). However, government backing and also the assurance of the medical provider can addressed this issue for the potential medical tourists by increasing the consumers confidence in the quality of the medical product (News 2005).

Other characteristics of international business include the types of strategic alliances formed by the medial clinics from the destination country with the country of origin organisations. Therefore, depending on the types of business arrangements, joint ventures, franchising and partnerships are created to facilitate the organisation and development of the medical tourism industry (Menck, 2005).

Demand and supply for medical tourism

Travel itself does expose the traveller to various mental and physical challenges in their new environment as part of their experience (Freedman and Woodhall 1999; Cetron, *et al.* 1998; Isaacson and Frean 1997; Lederberg 1997; Morse 1995; Wilson 1995). This is especially so when the medical tourist is ill and debilitated and therefore, more susceptible to contracting illnesses from the destinations. Nevertheless, the availability of receiving medical treatment often compensates for this travel risk at the destination, taking into account the local medical expertise who are expected to take precautions from exposing these medical tourists to harmful medical situations.

As the price of healthcare increase in western nations, many of their citizens look overseas for medical treatment. The ageing population of baby boomers helps contribute to longer waiting lists for medical treatment which encourages some of the population to go overseas to receive medical treatment much sooner than queuing for their turn in their own country (CBS, 2004). As the quality and reputation of overseas providers of medical tourism facility grow, private patients or consumers of these services are not the only clients. Insurance companies and governments are also following such developments with interest. For example, India has targeted the National Health Service to explore the use of medical services overseas. Such arrangements are not unlike subcontracting or off-shoring of services that are used in other industries.

In countries where a significant number of citizens do not have private health insurance such as in the United States, many of these people travel overseas to India to receive medical services. In addition to just providing medical services, many such health or

medical-related packages provide additional leisure and recreational activities that are included in the price of the package. This is where entrepreneurs can create novel group travel packages to accommodate the requirements of the medical tourist and their accompanying family and/or friends. For accommodation providers, there is opportunity to provide medium term accommodation packages and facilities for patients who need to recuperate sufficiently before flying back to their home country. The average tourist may only stay of a few days whereas a medical tourist is likely to stay for a week or more, especially if they are provided with the incentive to stay and it is affordable. Therefore, the medical package can be very attractive to the medical tourist. From the marketing perspective, the consumer is receiving a better deal than just the one product. They are receiving a medical intervention as well as a visit to a novel location by themselves or with their family and friends. This will become more important in the future as different destinations compete for the medical tourism dollar (free trade competition).

Table 1 lists some examples of countries that provide medical tourism services. These countries are geographically dispersed. A simple internet search can easily list the types of medical tourism services that they can provide although there is no guarantee of the quality and the safety of the products that they offer. In the early days of medical tourism development, for this industry to be sustainable, like other tourism providers, there would be a need to develop some certification or accreditation that can reflect well upon the product that they are providing. This is increasingly more important as the competition for medical tourists consumers increase amongst countries offering the same types of medical tourism procedures (Healthcare Management, 2005; Medical tourism, 2005b).

Argentina	Dubai	Netherlands
Australia	France	Oman
Bahrain	Germany	Peru
Bangladesh	Greece	Philippines
Barbados	Hungary	Poland
Belgium	India	Romania
Brazil	Iran	Russia
Bulgaria	Israel	Saudi Arabia
Canada	Japan	South Africa
Cayman Islands	Jordan	Switzerland
Chile	Korea	Taiwan
Costa Rica	Lebanon	Thailand
Cuba	Lithuania	Turkey
Cyprus	Malaysia	
Czech Republic	Mexico	

Table 1 International medical tourism provision of service (TRAM, 2006).

Medical tourism in Asia

Many countries in Asia have at some stage been colonized by a western power. Therefore, despite gaining independence, the characteristics of development in these countries and peoples would have been influenced by the colonizers. This provides an advantage for the Asian country to provide the appropriate level of hospitality to cater for western clients or patients. Furthermore, with an increasing educated Asian population together with a relatively cheap specialised and skilled labour workforce, the cost of providing healthcare services is much cheaper in relation to the cost of providing healthcare in western and developed countries.

With the internationalisation and global movements of people through travel and training or migration, many personnel of medical tourism providers are trained in different countries. For example, many recruits into the medical tourism providers in India, are from the United States. There are usually Indian citizens who have been trained in the United States or Indian migrants to the United States who have returned to their country of origin to practice due to lifestyle factors. Similarly, other countries offering medical tourism, also recruit local doctors that were trained in the United Kingdom, United States and other western countries. This is to treat their western medical tourists who are a good selling point for this industry. These recruits would have at some stage trained and practiced in the hospitals in the West and treated the patients in their home country in their careers (CBS, 2005).

Like free trade, international medical tourism can be seen as a positive and is competitively priced. It also provides services to many who would not be able to afford the treatment in their home countries. However, critics do mention that the poorer citizens of the host countries would experience longer waiting lists whilst waiting 'behind' the medical tourists. They would also not be able to afford the increasing costs of medical care that medial tourists have artificially increased due to their greater spending capacity. Nevertheless, some medical tourist operations have allocated a certain proportion of their medical capacity to treat and accommodate the local poorer population in order to address this international concern. The medial tourist indirectly funds the medical treatment of the local population who otherwise would not have access to the more expensive medical procedures if not for this subsidy. Therefore, investing in medical tourism ventures provides a valued and necessary healthcare service for both tourists, locals and the underpriviledged.

In Malaysia, the growth of the medical tourism industry is well supported by the government. In addition to this support, Malaysia possesses a number of intrinsic advantages (Garcia-Altes, 2005). Malaysia is a multicultural society and therefore has the cultural intelligence to cater for a diverse range of patients. Also, with a number of different religions, the providers are aware of the different religious requirements, such as the provision of 'halal' food and other practices of their patients. Therefore, this country is ideal for attracting Muslim medical tourist from wealthy Middle Eastern countries. Furthermore, there are many local doctors and specialists who have been trained overseas and there is no language barrier as English is widely used and spoken in this country.

With a multiculturally diverse population, it is always possible to find people in the local population who can converse and translate any language into English or Malay so that the foreign patient and family members can be understood by the local medical staff. As with international trade, the low foreign exchange rates are favourable with most medical tourists from western nations.

For the entrepreneur, there are many opportunities associated with medical tourism. A medical entrepreneur, intrapreneur or team entrepreneur can contribute in a medical setting. Those entrepreneurs without medical training may participate as managers or operators in the management of these ventures instead. Since the tourism travel and accommodation infrastructure are utilised in the provision of medical tourism services, much of the business opportunities in tourism are also present to cater for medical tourism. Alongside the development of high technological medical hospitals in Asia, there is further demand for tourist facilities. This is because medical tourists do not normally travel alone for medical treatment. Hence, there is a further opportunity to cater for the accompanying travelers. The importance of business networks and cooperation between tourism operators can be extended to cater for medical tourism. Therefore, in countries that already have a developed tourism industry plan and infrastructure, medical tourism provides an opportunity to capitalise on a higher cost product that exceeds the normal tourist expenditure at a destination. Furthermore, with the demand for affordable healthcare services from western medical tourists and also wealthy medical tourist from the Middle Eastern countries, the medical tourism industry is more sustainable than the tourism industry catering for ordinary tourists.

Conclusion

With globalisation, medical tourism is becoming a new and emerging international business that is gradually increasing in importance. Along with this development comes many entrepreneurial opportunities to capitalise on the growth of this industry. Much of the travel and services in the tourism infrastructure supports this industry and so promotes the growth. As hospital queues increase and the cost of medical procedures increase in western society, the demand for medical tourism increases alongside this development. Not too different from the subcontracting or the off-shoring of services mainly due to higher costs and expertise, in the future, medical tourism is likely to be the new global trend for provision of medical services with Asian countries having an advantage in this area. Since medical services are an essential part of life and living, the demand will increasingly grow. Like all rapid developments, there will some need for regulation and monitoring of institutions to ensure the health and safety of the medical tourists. It remains to be seen in the future which countries will adopt this role and be *proactive before* rather than *reactive after* a major medical tourism mishap.

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