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## **Conceptual Analysis of Determinants of Entrepreneurship: A South African Perspective**

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### **Abstract**

Social scientists studying the determinants of entrepreneurship have emphasised three distinct perspectives: the role of institutions, the role of social networks and the role of personal characteristics. The aim of this research study is to analyse the main determinants of entrepreneurship; role of institution, role of social network and role of personal characteristics; and subsequently their direct influence over entrepreneurs in South Africa. To this end, after presenting the theoretical bases and the applied methodology, I present the results of my empirical research, conducted on a sample of 65 SMEs, ending with the main conclusions to be drawn from the study. Before formulating and testing the hypotheses upholding this line of research, some of the concepts used will be clarified. This empirical study was conducted on 65 entrepreneurs in three economic hubs in one of the developing and transition economies to better understand entrepreneurship in view of these three perspectives. Using data from interviews conducted in the three main business hubs in South Africa, – Cape Town, Johannesburg and Durban, – I find evidence for these three sets of variables but with a particularly strong effect of social networks: those individuals whose relatives and childhood friends are entrepreneurs are more likely to be entrepreneurs.

**Key words:** organizational dynamics, corporate entrepreneurship, organizational context, innovation, Proactivity.

**JEL Classification:** M1, M10.

### **Introduction**

It has been increasingly recognised that entrepreneurship plays a crucial role in successful economies. The Schumpeterian approach to growth (Aghion and Hewitt, 1997) advances the view that entrepreneurial dynamism is the key to innovation and growth. A growing body of research also emphasises the role of entrepreneurs and the development of a vibrant small and medium enterprise sector in the process of economic development (World Bank, 2003). Understanding the factors that enable entrepreneurial activities is thus at the heart of this research study.

Schumpeter (1934) discusses the role of the entrepreneurs in the process of economic development at length. He imagines the entrepreneur as a creative, driven individual who finds “new combinations of factors of production” to develop a new product, corner a new market, or design a new technology. Schumpeter speculates about the psyche of the archetypal entrepreneur: he is motivated by a “dream to find a private kingdom, or dynasty...[driven by] the impulse to fight, to prove oneself superior to others, to succeed for the sake of...success itself” (p. XX).

In mainstream economics however, entrepreneurship has never played a central role. For decades, the main focus of economics has been on the allocation of resources and how it is achieved by markets or by governments. It is only recently with the revival of interest in the question of economic growth that Schumpeter’s views have acquired greater salience. Empirical research on entrepreneurship in economics is surprisingly limited. The current study asks why entrepreneurship thrives in certain societies and not in others. Social scientists have proposed many possible explanations to account for cross-country differences.

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## **Perspectives of Entrepreneurship**

In a broad sense, there are three distinct perspectives on entrepreneurship. The first is the institutional perspective emphasised by economists and political economists. This perspective focuses on the role of economic, political, and legal institutions in fostering or restricting entrepreneurship in different countries at various times. Particularly relevant institutional constraints are seen in two aspects. One aspect has to do with the credit market in financing entrepreneurial activities. For example, a major body of research in economic development has emphasised the role of credit constraints making it impossible for the poor to borrow to set up their own businesses (Banerjee and Newman, 1993). Another aspect has to do with security of property rights in providing the right incentives for entrepreneurs.

The second perspective focuses on the sociological variables that are shaping entrepreneurship. Sociologists have long emphasised the role of values (Cochran, 1971) and social networks (Young, 1971) in promoting or discouraging entrepreneurial activities. Social networks may work through a variety of channels, such as family, relatives, friends, or social groups in general.

The third perspective on entrepreneurship emphasises individual characteristics of entrepreneurs. For example, psychologists have hypothesised about the psychological traits associated with entrepreneurs – such as a personal need for achievement (McClellan, 1961), belief in the effect of personal effort on outcomes (McGhee and Crandall, 1968; Lao, 1970), attitudes towards risk, and individual self-confidence (Liles, 1974). Personal characteristics of entrepreneurs is also a major theme of a recent work of Lazear (2002), he concludes that individuals who become entrepreneurs have a special ability to acquire general skills, which they then apply to their own businesses.

All three perspectives seem relevant, but there is no clear consensus on the determinants of entrepreneurship in social sciences. This means it is difficult to find consensus on the appropriate policies to encourage entrepreneurship. Policies to relax credit constraints will not be very helpful if insecurity of property rights is the main obstacle to entrepreneurship, and similarly, financial and legal reforms may not achieve much if the roots of entrepreneurship lie in cultural factors or even personality. How to promote entrepreneurship is still a mystery despite its obvious policy importance.

The current project studies entrepreneurship from all these three perspectives using a new data set to be collected from several areas, including rural areas. The general plan is to conduct surveys in the three main business hubs in South Africa. Cape Town, Johannesburg and Durban. There are several reasons why I chose to study entrepreneurship in these areas. First, they host the largest emerging businesses in South Africa. Second, entrepreneurship is only emerging in transition economies (and it is very unequally developed in developing countries) so I am able to observe out of steady phenomena and have a glimpse at the development of entrepreneurship. Third, because these are large business and residential areas, I am able to exploit substantial regional variation in institutions and culture within those cities. Identical questions asked across the different cities also allow us to ease cross-city comparisons and to draw broad conclusions for South Africa as a whole.

The surveys cover both entrepreneurs and non-entrepreneurs in order to understand how these groups differ in terms of their individual characteristics, skills, education, intellectual and personality traits, family background, social origins, social networks, values and beliefs, and in their perception of the institutional, social and economic environment businesses face. I report in this paper some initial observations from a survey conducted in South Africa 2004-2006. South Africa is particularly interesting to study the emergence of entrepreneurship. The economic transition has only started in 1994 and private entrepreneurship was legally restricted to White Communities and legally prohibited to Black communities until then. The emergence of entrepreneurs is thus very new and my survey provides a picture of this emergence. The institutional environment in South

Africa has been highly volatile and variable across regions with a very weak institutional support for the market economy and entrepreneurs in many regions.

Corruption, racketeering, bureaucratic harassment, the weak development of financial intermediation are all factors that weigh negatively on the development of the private sector. What are the main results from this study? As one would expect, certain aspects of the institutional environment play an important role in determining the scope for entrepreneurship in South Africa. Interestingly, I find suggestive evidence that social network effects play a very large role in determining entrepreneurial behaviour: those individuals whose relatives and childhood friends are entrepreneurs are more likely to be entrepreneurs – although this result should be interpreted with caution due to the likelihood of well-known omitted variable biases in the estimation of social effects (Manski, 1993). Finally, individual characteristics including academic success and educational background, performance on a test of cognitive ability, personal confidence, greed, and willingness to take risks are also important determinants of entrepreneurship, echoing the claims of Schumpeter and others.

The rest of the paper is organised as follows. Section 2 describes the survey data collection. Section 3 presents summary statistics on the differences between entrepreneurs and non-entrepreneurs in South Africa. Section 4 reports analysis on variables associated to entrepreneurship. Section 5 concludes.

### **The survey**

The study was performed in Cape Town and two other cities in three different regions of South Africa, in an attempt to understand entrepreneurship in a wide range of settings. Three surveys were conducted. I first surveyed a random sample of 65 entrepreneurs – 20 in each of the two cities and 25 from Cape Town. An entrepreneur was defined as the owner or co-owner of a business with five or more employees. The universe of entrepreneurs was defined using official government statistics, and the survey team then selected the respondents randomly using this sampling frame. The entrepreneur survey lasted for 40 minutes on average.

The sampling frame was individuals with listings in the phonebook, and so the very poor or those who choose not to be listed in the telephone book may be systematically underrepresented. Using this sampling frame, the respondents were chosen randomly conditional on matching the race, age, gender and educational attainment of entrepreneurs from the first survey. In other words, the proportion of men, women, people at various ages and with different ethnic origins and different levels of educational attainment are near-identical in the two surveys. I opted for this approach to ensure that broad demographic differences between entrepreneurs and non-entrepreneurs were not driving the results, but rather other factors. In addition to the non-entrepreneurs “matched” to the demographic characteristics of the entrepreneurs.

Finally, a short survey was conducted among a random sample of 65 respondents (with the same breakdown across cities) asking questions about their personal characteristics, including whether or not they are an entrepreneur. These data allow us to roughly determine the proportion of entrepreneurs across the study sites. I find considerable variation across cities, with the proportion of entrepreneurs in Cape Town at 8%, Johannesburg at 15%, and Durban at 6%. The limited number of cities and regions in the study makes it difficult to generalise about the impact of regional institutional and cultural differences on entrepreneurship.

### **How do entrepreneurs compare to non-entrepreneurs?**

The South Africa data paint a broad picture of South African entrepreneurs, which can be interpreted as supporting evidence for all the three perspectives. I first focus on the differences in means between the entrepreneurs and non-entrepreneurs, controlling for individual race, age, gender, education, and town.

Over 90% of the respondents are South African, and there is no statistically significant difference in ethnic composition between entrepreneurs and non-entrepreneurs. Despite the claims of Weber (1905) and others, there is similarly no difference in religious beliefs between the two groups.

There are significantly more married people among entrepreneurs, and they have more children although the average number is quite low (1.3 instead of 1.2). 44.3% of entrepreneurs declare to have been in the top 10% of students in secondary school while the corresponding figure is 23.7% for non-entrepreneurs. This response suggests either that the sampled population is not representative or indicates overconfidence in the survey population – and possibly an even higher level of overconfidence among entrepreneurs.

Consistent with the survey answers on academic performance, entrepreneurs scored significantly higher than non-entrepreneurs did on a test of cognitive ability, focusing on short-term recall. They also declare themselves to be in better health and practice more sports than non-entrepreneurs do, although this is possibly due to their higher average income and wealth.

The study found that entrepreneurs have a higher number of distinct previous professional activities than non-entrepreneurs. Entrepreneurs also declare more often that they plan to move in the future. They also appear to have different personality characteristics with respect to risk: when asked whether they were willing to accept a risk-neutral gamble – win R1000 with 50% probability and lose R1000 with 50% probability – 77.3% of entrepreneurs responded positively versus 59.7% among non-entrepreneurs, suggesting that entrepreneurs are more risk-taking. The higher income and wealth levels among entrepreneurs could however explain some of this difference.

Entrepreneurs are indeed better off than non-entrepreneurs along a range of income and wealth proxies: they spend a smaller proportion of their income on food, are more likely to own a home, as well as more likely to own a car and a computer (48% of non-entrepreneurs and 5% of entrepreneurs own neither a car nor a computer).

Regarding work-leisure substitution possibilities, responses to the question of whether the respondents would retire if they won 100 times or 500 times South African GDP per capita were also strikingly different for the two groups: 8% (18%) of entrepreneurs would choose to retire if they won 100 times (500 times) average income, while the corresponding figure for non-entrepreneurs is much higher, at 32% (47%), a difference of over 20% (nearly 30%).

When asked why they would not retire despite the hypothesised huge windfall, the key reasons were not pecuniary: about 50% of entrepreneurs and 24% of non-entrepreneurs only said it was because they wanted more money, while more than 80% of entrepreneurs and 70% of non-entrepreneurs claimed it was because they like their work and nearly 70% of non-entrepreneurs said it was because they considered their work to serve a useful purpose – much higher rates than for non-entrepreneurs, which is 50%.

Interestingly, entrepreneurs claim to be both happier and more successful than non-entrepreneurs are, while only slightly over 40% of non-entrepreneurs consider themselves successful, the comparable figure for entrepreneurs is 73%. South African entrepreneurs and non-entrepreneurs also differ substantially in family background. The families of entrepreneurs had more education, better jobs and were richer. In particular, a much higher proportion of the fathers and mothers of entrepreneurs had higher education, respectively 41.8% and 36.5%, than the parents of non-entrepreneurs (24 and 19.6%, respectively). Similarly, the parents of entrepreneurs were also significantly less likely to have been workers.

Note that only 5% of the entrepreneurs in the sample inherited a family business, so family effects likely played a role through other channels. Another striking pattern relates to friends during childhood and adolescence. Respondents were first asked to remember five friends from their childhood and adolescence, and then to report how many of these five have become entrepreneurs. The response is twice as high for entrepreneurs as for non-entrepreneurs (1.2 of 5 friends for entrepreneurs versus 0.6 friends for non-entrepreneurs).

Clearly, entrepreneurship is strongly associated with having a family background of entrepreneurs and being in a social circle with many entrepreneurs. Making a causal claim about the effect of social interactions using observational cross-sectional survey data like the data I use is problematic because of the plausible presence of omitted variables that influence choices of individuals in a similar way as discussed by Manski (1993) and others. However, note that more than one quarter of entrepreneurs in the sample claim that friends who were entrepreneurs influenced their own choice to become an entrepreneur, further suggestive on the important role of the social environment and social effects in the entrepreneurship decision.

Cultural differences also appear to play some role – but less than some would have expected. Entrepreneurs appear to have a stronger work ethic than non-entrepreneurs do on average: nearly three quarters of entrepreneurs consider work to be an important value compared to slightly over half of non-entrepreneurs. Entrepreneurs believe that the work ethic is less widely held by the population of their town as a whole than it actually is, perhaps evidence of contemptuous attitude towards non-entrepreneurs. Intellectual achievement is also more important to entrepreneurs than to non-entrepreneurs, as are power and politics. However, in many other dimensions entrepreneurs and non-entrepreneurs share similar values, for instance in terms of the proportion of respondents believing that family, friends, leisure time, religion, service to others, financial security, health, and freedom are important.

In terms of social norms regarding corruption and cheating entrepreneurs more than non-entrepreneurs consider both paying and receiving bribes are acceptable. It is unclear how to interpret this pattern in the data: while it could be interpreted to mean that South African entrepreneurs on average have fewer scruples regarding corruption than non-entrepreneurs, it is also probably the case that many entrepreneurs are immersed in business environments where there frequently is corruption and have come to accept it as a part of doing business. There are no statistically significant differences between entrepreneurs and non-entrepreneurs, however, in two other hypothetical cheating measures, avoiding a fare on public transport and buying a stolen item. Both entrepreneurs and non-entrepreneurs appear to “project” their own views toward corruption on other people in their town.

Entrepreneurs have more trust in business partners, employees and other business people than do non-entrepreneurs, again perhaps due to their experience in business, which could promote this sort of trust. However, in terms of overall trust of friends, families, and others, entrepreneurs and non-entrepreneurs are largely similar, whether the trust question is asked in terms of general trust, or with reference to trusting individuals in particular situations. This tends to suggest that there is no real exogenous difference in trust among entrepreneurs and non-entrepreneurs.

There were also survey questions regarding respondents’ subjective perceptions of the attitude that the population as a whole, and different government officials, have towards entrepreneurs. Subjective perceptions are important, since they often shape economic choices. In general, perhaps surprisingly, entrepreneurs and non-entrepreneurs appear to have very similar perceptions in this dimension, with a few exceptions, mostly notably less willingness among entrepreneurs to use the courts to punish a government official who abuses her/his power, and a stronger belief among entrepreneurs that it is easy to find money to start an enterprise.

In summary, there are significant differences between South African entrepreneurs and non-entrepreneurs along many personalities (self-confidence and risk accepting behaviour) and other characteristics (cognitive ability), in terms of certain cultural values (work ethic), as well as in their family and social background, in particular the high density of entrepreneurs among their family and friends. Fewer differences are seen in views on the business environment and the ability to trust others.

## **Determinants of entrepreneurship in South Africa**

To understand the determinants of entrepreneurship, I focus on variables that can plausibly be considered exogenous to the decision to become an entrepreneur.

The first three variables represent probit regressions on entrepreneurship. The first regression looks at the effect of social networks, the second one adds individual characteristics and the third adds institutional variables. Note that all regressions include town fixed effects.

Higher levels of parents' education are significantly positively associated with entrepreneurship and this effect is quite robust. The children of fathers who were members of the "National Party" (old Apartheid ruling party) are significantly more likely to become entrepreneurs but the effect loses significance when one includes individual and institutional variables. Interpretation of this effect is also complicated – more motivated and ambitious men might have been more likely to have joined the Party, and also are likely to have more motivated children. On the other hand, children of Party members may have inherited a more extensive social network of business and government contacts that might have smoothed the operation of an enterprise. Interestingly, having had a mother being a boss or a director has a negative and robust effect on entrepreneurship, although the reasons why remain obscure. Having entrepreneurs in the family has a very robust and positive effect and so does having entrepreneurs among adolescent friends (the childhood friends effect is less robust), although, as stated above, interpreting this as a causal effect is complicated by well-known identification problems.

Among the individual characteristics, the score on the cognitive exam (testing recall) has a positive and robust predictive power. Height appears to have a negative and robust effect. Greed (not wanting to retire if earning 500 times the GDP per capita in order to earn more money) has a positive and robust effect while risk-taking does not have a robust effect on becoming an entrepreneur. Note that family characteristics remain statistically significant when other individual characteristics are included.

The economic significance of the results is as follows: all else constant, the father's and mother's higher education increases the probability to become an entrepreneur by 4.7 and 20.4 percentage points, respectively; the presence of a businessperson in the family and among adolescent friends leads to an increase of this probability of 5.6 and 2.9 percentage points, respectively. Town fixed effects control for the actual differences in institutional environment; they are highly significant. Yet, the individual perceptions of business climate matter for career choice: lower perceived corruption and better perceived attitude of population and government towards entrepreneurship increase the probability to become entrepreneur. (In all regressions, inclusion of the measures of individual perceptions of the business climate does not have a significant effect on estimates of other coefficients).

Results are similar when the dependent variable is years since the individual became an entrepreneur. This variable is best, interpreted as an early start as an entrepreneur, right at the beginning of transition, or even before then in the shadow economy. Taken together, the picture that emerges is that a whole set of factors determine the development of entrepreneurship in South Africa: education, social network effects, as well as individual characteristics such as cognitive ability. One potential problem with this analysis is that there are different types of business owners who became entrepreneurs due to varying circumstances. I asked respondents questions about those circumstances. The two major categories that come out are what I call entrepreneur by opportunity and entrepreneur by necessity. The former became business owners because they seized a business opportunity.

In the Schumpeterian sense, they are the only true entrepreneurs. The latter became business owners primarily because they lost their job or because of economic decline in their previous sector. Note that other motives such as having obtained money play a relatively minor role in the response to that question. I report the regressions with either only family or social characteristics or with

only individual characteristics and both together. Institutional variables were included in all specifications.

Variables as the father's party membership, the mother's education and career, cognitive ability, and greed have the same effect on probability to become a business owner of both types. The father's education has a negative effect for entrepreneurs by necessity but party membership of the father has twice as strong effect on chances to become entrepreneurs by necessity compared to entrepreneurs by opportunity. The family network has a positive effect only on the probability to become "an opportunity entrepreneur". This variable even has a negative effect on entrepreneurs by necessity. Perceived favourable attitude of government officials towards entrepreneurs increases the chances of taking a business opportunity and reduces the chances to open one's own business due to necessity.

I also ran a multinomial logit regression on the choice of becoming entrepreneurs by opportunity, by necessity, or not starting one's own business. The results are only slightly different. The mother's background, greed, perceived attitude of population towards entrepreneurs, and perceived corruption are the most robust effects to the choice of specification and across types of entrepreneurs. Family network and perceived attitude of the government have positive effects on becoming a business owner of both types, but the effects are significantly larger on entrepreneurs by opportunity. Risk-taking has a negative effect for entrepreneurs by necessity and a positive effect on entrepreneurs by opportunity. Overall, family and perceived business climate seem to play less of a role in entrepreneurship by necessity.

Finally, I asked non-entrepreneurs the reasons why they did not want to become entrepreneurs. The three main reasons that stand out are lack of money, lack of entrepreneurial skills ("I do not have what it takes") and risk aversion towards entrepreneurial activity. The last two point towards individual characteristics whereas lack of money can be interpreted as credit constraints but also as lack of drive to find the money, which is also an individual characteristic. It seems that individual characteristics play an important role in the choice to become or not an entrepreneur. Confidence in starting one's own business is boosted by having entrepreneurs in one's family and among one's friends.

## **Conclusions**

Preliminary results suggest that the determinants of entrepreneurship in South Africa are multiple. South African entrepreneurs are driven by their work; they like to take risks and are greedy. Social network effects – having entrepreneurs in the family and among one's friends – appear important for the choice to become an entrepreneur. Individual characteristics are also quite important, in particular cognitive ability and greed. Cultural differences do not seem to play a key role in South Africa, even though there are some notable differences between entrepreneurs and non-entrepreneurs, including their self-expressed work ethic. Credit constraints appear to play some role in discouraging people from starting or expanding an enterprise but they are only one factor among others.

The current survey does not allow differentiating the precise channels through which social network effects influence the choice to become an entrepreneur. Are there hidden characteristics in entrepreneurial families that create a sorting effect to create clusters of social networks of entrepreneurs? Are there peer effects – or simply reflects social sorting? To the extent that there are network effects, what are these about? Do they merely alleviate credit constraints? Do they serve as encouragement and create herding effects? Are they the locus of exchange of business information and skills that have significant value for entrepreneurs? I am refining the survey to give a better answer to those questions. In the meanwhile, I hope to discover whether responses in other developing economies are similar or different to what I found in South Africa.

In addition, the data from the South African pilot alone are insufficient to evaluate the effect of institutional variables on entrepreneurship because of too few town-level observations. One of the tasks of the larger survey is to compare the importance of individual and institutional effects.

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