

## **Reassessing Necessity Entrepreneurship in Developing Countries**

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### **ABSTRACT**

The paper examines the relationship between the state of necessity and entrepreneurial activity, through qualitative case studies from Uganda and Sri Lanka, and a survey of 1006 Ugandan adults. Questions are posed on the tenability of hypothesis that necessity is a primary motive for business start-up in poor countries. The relationship between necessity and business start-up, though significant, is in the opposite direction from that predicted by the "necessity hypothesis". Those with low incomes were much less likely to start a business, because they often became "trapped" by having to work long hours for just enough income to survive. Opportunistic diversification, however, flourished once resources improved. The results question recent attempts to classify countries on the basis of distinctive forms of entrepreneurship based on necessity and opportunity. Policy makers should be cautious in formulating policies based on demarcating necessity and opportunity entrepreneurship.

**Keywords:** Poverty, necessity, entrepreneurship, economic growth, developing countries

## INTRODUCTION

The Global Entrepreneurship Monitor has set the agenda for researching the relationship between entrepreneurship and economic development in the last eight years. Particularly significant has been the emergence in the GEM 2001 Executive Report (Reynolds *et al.* 2001) of "necessity entrepreneurship", a form of entrepreneurship in which necessity (lack of choice in work, poverty, survival) is the prime motivation for starting a business.

The decision to apply the concept of necessity entrepreneurship in 2001 by the GEM was linked to the discovery of unexpectedly high rates of entrepreneurial activity in developing countries, rates which were much higher than those of the most developed countries. This apparently ran counter to the predictions of main GEM model, which implied that the higher the rate of entrepreneurship, the higher economic growth should be. "Necessity theory" was invoked to explain this. People from the poorest developing countries are driven by poverty and survival, and lack of choice in work to start business ventures, while in developed countries it is opportunity and innovation that is the primary motivator for starting businesses. The greater the poverty, the more necessity entrepreneurship there is, thus resulting, in high rates of entrepreneurial activity (Reynolds *et al.*, 2001:56).

It is now argued that there is no linear relationship between entrepreneurship and economic growth, but rather it is "U" shaped, conditioned by differential effects of necessity and opportunity entrepreneurship on developed and developing countries. Acs *et al.* note that in the poorest countries, where rates of entrepreneurial activity is high, "entrepreneurship is based on economic necessity, and the entrepreneurs have proportionately lower education." (Acs *et al.* 2005:40). In the most developed countries, however, a higher rate of entrepreneurial activity means it is inspired by opportunity, innovation, and a boom in services. Acs (2006) takes this further by reporting that "our data clearly indicated that the ratio of opportunity to necessity entrepreneurship is a key indicator of economic development. As more and more of the population become involved with opportunity entrepreneurship and more and more people leave necessity entrepreneurship the more we are seeing high rates of economic development" (Acs, 2006:102). This analysis considerably complicates the relationship between entrepreneurship and economic growth as originally envisaged in the GEM model (Wenneckers and Thurick, 1999; Reynolds *et al.*, 2001), and places considerable importance on being able to accurately separate entrepreneurship on the basis of whether motivation is necessity or opportunity driven.

Although the concept of necessity entrepreneurship is now widely accepted by researchers, practitioners and policy makers, it is largely an uncritical acceptance. We know little empirically of how "necessity" and "opportunity" are perceived, particularly by people in developing countries. The mechanisms by which necessity could translate into a business are not well understood. The assumption that necessity is a primary motivation for business start-up is largely unexplored. There are alternative motivations that could be equally important. It is also possible that necessity can have the opposite effect, and de-motivate business start-up. Even assuming that necessity is a primary motivation, how far is it combined with other motives? If complex, how can it be objectively measured?

The literature on small enterprise development in developing countries, provides some insights on these questions. Researchers have recognised the importance of survivalist motives for business start-up: As Frese and de Kruif state:

"One assumption is that most entrepreneurs in Africa are starting their own firms because they cannot find jobs otherwise and are, therefore, subsistence orientated. They are thus poverty and subsistence driven and mainly motivated to earn just enough to live" (Frese and De Kruif, 2000:20).

Tellegen (1997) in a study of rural enterprises in Malawi, suggests that there are both opportunity and necessity routes to rural business formation and that these fluctuate according to the economic climate, with opportunity entrepreneurship flourishing when economic circumstances are favourable, and necessity entrepreneurship increasing when they are not. In

the opportunity scenario, entrepreneurs are well placed to start a new business as capital accumulates. In the necessity scenario, however, two phenomena may arise. The first may drive people to survivalist pluriactivity, in which ephemeral pockets of demand are exploited as they arise. When demand ceases, they will move on to some other activity until that too ceases to be viable. This kind of pluriactivity is especially related to seasonality in agricultural production, where products and services arise for short periods only (Kodithuwakku 1997). The second phenomenon is one where once an enterprise is embarked upon, there is no choice but to keep on with it. The entrepreneur only makes sufficient money to live, but not enough to invest in starting another enterprise. The entrepreneur becomes trapped. This would tend to apply theoretically more to entrepreneurs outside the seasonal rural sector.

These debates on “necessity” and “opportunity” are only part of a wider debate on what motivates business start-up.. Researchers in developing countries tend to agree that basic entrepreneurial goals (autonomy, opportunity, moderate risk taking) remain primary motives for successful business start-up and growth in developing countries (Frese and De Kruif, 2000). However there are additional motives that also figure strongly, in particular non economic values which serve a more social role. Group and collectivist values in these societies are as important as individualistic ones when applied to business start-up (Tellegen (1997:10). The prevalence of other forms of motivation makes the analysis of necessity and opportunity entrepreneurship complex and difficult, and requires further research.

This study develops further understanding of what “necessity” and “opportunity” entrepreneurship actually mean, particularly in the context of the world’s poorest countries. The approach is inductive and an empirical, involving the collection of qualitative and quantitative data from two poor countries, Uganda and Sri Lanka. Uganda has one of the highest rates in the world of both opportunity and necessity entrepreneurial activity (Walter *et al.* 2003 and 2004).

In this study we will explore the following questions:

- 1) How does a state of poverty and necessity translate into motives for starting a business?
- 2) How valid is the assumption by GEM researchers that necessity and opportunity are the dominant forms of motivation for business start-up , especially in poor countries? Are there other kinds of motives which are equally relevant?
- 3) How complex is the relationship between poverty and business start-up?
- 4) How do the people in developing countries view their own lives in terms of necessity, poverty work and entrepreneurship? How much do they really understand and relate to the key motivational concepts in the GEM survey?

## **METHODOLOGY**

The difficulties of conducting the GEM Adult Population Survey in Uganda, where phones are few, literacy is variable and there are many native languages has been described elsewhere (Walter *et al.* 2003). The GEM questionnaire was constructed with developed countries in mind and has been adopted with few modifications by teams from developing countries. We decided to construct our own version of the GEM questionnaire, which would provide much more detailed information on necessity and opportunity. The questionnaire was preceded by in depth qualitative interviews of adults in business and work around Kampala, Uganda’s capital city (conducted in November 2005), which helped inform the questions asked. It also included proxy poverty measures from the Uganda Bureau of Statistics, which conducts research on socio-economic trends in Uganda. The GEM questions on business start-up were included as dependent variables, and enabled us to compare trends with those obtained from the GEM surveys in Uganda in 2003-4. To enhance comparison, we selected a selection of the same parishes surveyed in the official GEM Uganda studies, and adopted the same procedures to select households randomly (see Walter *et al.* 2003 and 2004). The new questionnaire contained 111 questions and was piloted extensively, over five iterations. It was administered by a trained team of Makerere University Business School students and staff to 1,006 adults in January and February 2006.

The qualitative study was also intended to be an important exercise in its own right. What necessity means to people in developing countries can only be discovered through grounded qualitative research if ethnocentrism is to be avoided. We chose a purposive sample of 20 adults, a cross section of adults in business from those who were relatively well off down to people who appeared very poor. Interviews were recorded on video. The 20 people interviewed included:

- Established businessmen/ women (manufacturers of metal boxes, ice cream and yogurt, school chairs, furniture, a computer software trainer, pork butchery, shops, farmer)
- Small traders (chicken seller, vegetable market stall vendors, calf skin trader. TV aerial street hawker)
- Very basic self employed (a shoe shine boy, a newspaper and phone card stall vendor newspaper street vendors (2), subcontracted self employed furniture polishers(3)).

The Sri Lankan data provided by Dr Kodithuwakku is based on several studies on rural entrepreneurship, including a study of entrepreneurship dynamics in a rural village in the Mahaveli B resettlement scheme. In this study the villagers started on an equal footing in 1985, when the government gave each family 2.5 hectares of arable irrigated land and a grant to resettle them. Ten years later there were 30 successful entrepreneurs, with the remaining villagers working for them and in a state of necessity. The full methods are described in Kodithuwakku (1997, 2002). The inclusion of this material was designed to provide comparative insights, and to help us assess the generalizability.

## ANALYSIS

The GEM adult population questionnaire distinguishes opportunity from necessity entrepreneurship by the following question:

"Are you involved in this start-up [this firm] to take advantage of a business opportunity or because you have no better choices of work?"

Take advantage of business opportunity	1
No better choices for work	2
Combination of both of the above	3
Have a job, but seek better opportunities	4
Other	5
Don't Know	8
Refused	9"

The assumption behind this question is that the entrepreneur is moving from a state of not being in business to a new state of business ownership and employment. It also assumes that (a) the entrepreneur understands what "opportunity" and "necessity" means, and that is consistent in all respondents (b) that entrepreneurs have a common and standard understanding of what "work" means and (c) that the entrepreneur will be consistent in the views given over time.

In the Ugandan interviews, we found that unless a respondent was very well educated, he or she found it difficult to understand questions on motivation. Even if they spoke English quite well, the interpreter would have to be called in. The interpreter also had a problem, because even questions that appeared relatively straightforward would be subject to lengthy discussion, negotiation and interpretation before the answers came out. Answers apparently firm in their conviction would be contradicted later in the interview. It became apparent that the concepts of opportunity and necessity were either poorly understood, or not easily distinguishable by respondents (see Table 1). They also had rather hazy ideas of what distinguishes "work", "business", a "job", "employment" and "unemployment".

As GEM's definition of necessity involves "no better choice for work because of unemployment", how unemployment is conceptualized is of considerable interest. The interviews revealed that most Ugandans view work as employment only if it is a formally

defined job in a larger company or the government. Otherwise it is just making a living. This has a major implication on how unemployment is defined. For poorer Ugandans it usually means they have no formal job, not that they have no job!

**Table 1: Case study quotations on start-up, necessity, opportunity and work**

*"Do you think this is a business?"* "No it is not. It is not even a job. Because we don't have jobs we have to live on this so that we can earn a living". *"So it is not a job or a business? What would you call it then?"* "OK it should be a business maybe." *"When you started it did you consider it an opportunity or a necessity?"* "it is an opportunity (laughter)." (Low income Newspaper street vendor). [English good].

*"When you started the business was it an opportunity or necessity for you?"* [blank stare, puzzlement, followed by interpreter intervening for 8 seconds] "That's what I wanted, to experience so much, that I started something, but its still a problem for me to get money" (low income Newspaper Stall Vendor]

*"Did you start the business because of opportunity or necessity?"* "Because of opportunity". *"In what sense"* – [Interpreter] it could provide him with enough income to return to his home village.(Low income shoe shine boy]

*"Why did he start this business?"* [Long negotiation with interpreter] "Because it is simple and can be started with common sense" (Chicken Vendor – regular income)

"I didn't know I was going to sell pork. It just happened. I tried to get employment but I failed." (Pork Butcher, started business 1990- high income).

"It was an opportunity and a necessity" (Ice cream/ yogurt manufacturer, high income).

There is no safety net in Uganda. There are no state benefits to fall back on during hard times. Most adult Ugandans, who are not in formal occupations (jobs, in higher education, registered businesses), have to do something to live. Such people regard what they are doing as their livelihood. It is the default state. They do not move from employment or unemployment into business, but from the default livelihood state into a better livelihood state if they can. In terms of rural livelihoods, considerable difficulties can beset entrepreneurship researchers depending on how far a livelihood is interpreted as a business (Tellegen, 1997).

It is taken as read that starting a new business enterprise involves a need for making a living, but most of the interviewees were also motivated by other factors, most importantly to improve themselves, and to make enough money to achieve certain goals, such as educating their children, building a house, buying a plot of land in their rural home areas and raising their social status. In the developed West many of these goals are "necessities", but for many Ugandans they are aspirations. Ugandans are not so much "necessity" driven as "progress" driven. This is illustrated by a chicken vendor who had a small stall displaying live chickens in a local market, which were slaughtered and dressed on the spot when bought. When asked "Is the main reason he is in business because of his livelihood?" he replied (as translated by the Interpreter": "He wants to develop himself. If he finds a better business, he can go!"

There are similarities in Sri Lanka to the Ugandan trends. Like in Uganda social status attached to business in Sri Lanka is low compared to paid permanent employment (mainly government jobs)-government jobs are the role models for majority of rural people (e.g. government agents, doctors etc.) Running a business is usually an option for school dropouts or for people who could not further their formal education-In this context having a business livelihood becomes one of the major ways of survival (in addition to selling their own labour). The majority of the people start and run businesses to achieve social objectives. Examples for such are:

- to give a better education to children so that the children would achieve what their parents could not with the much needed social status
- to build a better house
- buy a vehicle (or other status items)

#### *Opportunistic Diversification and Business Start-Up:*

The Ugandan cases included adults of widely differing achievement, from relatively large businesses with annual turnovers of several million shillings to self-employed people with very low incomes. One of the trends that stood out was that the more vigorous and enterprising people (irrespective of size of income) were using savings into starting additional businesses. The most common source of capital to start businesses was from having a regular job. It is very common in Uganda for employees with good jobs to start an additional businesses in parallel to their jobs. For example most of the University lecturers at Makerere have consultancies or shops, or even significant manufacturing businesses (one has a bakery). They value the status and security that a job provides, and tend not to discontinue it, even if the business is a success. For example the Ice Cream/Yogurt manufacturer interviewed continued his job as a salesman in a large company from 1985 to 2000, when he retired, and hired a manager to run his business. A hotel garden supervisor interviewed had a motorcycle taxi business on the side which a friend drove. He admitted that if he left his job and just concentrated on his business he would probably make more money. However the status of his job was at very hard thing to give up.

In the case of Moses the skinner, his job provided the basis for a business, which soon led to others. Moses had worked as a skinner in the local abattoir at Port Bell.. He noticed that the skins of the unborn calves (in plentiful supply as pregnant cows fetch higher prices) were in demand by craftsmen make wallets. The soft skin of the foetus is particularly fine. Moses started to supply craftsmen in his own area with skins. He paid 500 shillings to the abattoir for each skin and sold it for 1000 shillings to the craftsmen. In this way he managed to accumulate enough capital to quit his job and diversify. He bought a *bodaboda* taxi motorcycle and his friend now operates the service. In the evening he also operates a hairdressing salon. He said he is very satisfied with how things had gone. He had quit his job, and all it had to do was now watch the skinning and transport the skins, rather than do the dirty work himself. He tends to sell about 20 to 40 skins a day. All these diversifications were clearly opportunity driven. Moses is a young man and is ambitious to get on. Even though his income is very low by world standards, it is sufficient for him to progress and he had no thoughts of "necessity" in his motivations for starting his businesses.

The tendency to opportunistically diversify was demonstrated strongly by an owner of a pork butchery. At first glance his butchery looked anything but successful, a pokey frontage with a couple of fly ridden pork carcasses, and a charcoal trench where pork kebabs were roasted for passing customers. Closer inspection revealed that he sold from 60-80 carcasses a day to local hotels, had a thriving 200 acre farm, his wife ran a complementary vegetable restaurant to go with the kebabs, and he owned student hostels and properties. He was considering starting a hardware store. It was difficult to ascertain the full extent of his business interests. He forgot to mention his property interests during the interview when asked if he had any other businesses. These details were filled in by the interpreter who knew the respondent well. This failure to divulge the information may have been due to the fact that the respondent did not think that school hostels and rented properties were "businesses."

Opportunistic diversification is also detectable in the context of the Sri Lankan village. People who want to climb up the ladder of social status in the study village first attempt to expand the paddy cultivated by them. This is done through acquiring more paddy lands owned by the majority of the poor. Such acquisition is through various hidden land tenancies. If carried out successfully, paddy cultivation acts as the much needed seasonal cash provider for investing in other businesses/expansion of business, as it provides a substantial lump sum of cash. Achievement of social status in the rural contexts is expected to be exhibited by the inhabitants going through a series of business start-ups (done together with farming). Such series

resembles a kind of metamorphosis (i.e. steps put forward from one lower status to a higher status) and the people believe that those who progress along this routine series are in the process of becoming wealthier. For example, starting a boutique is supposed to be the first big step towards achieving higher social status and setting up of a rice mill, buying and renting out a two wheel tractor are the next big steps forward. (most followers attempted to go through this routine to signal fellow villagers that they are progressing in terms of social status and failed to go past boutique stage). In such a context, the majority in the village aspire to go through this series, but only the most enterprising and managerially competent tend to succeed.

#### *Cases with no Recent Diversifications of Business Start-up.*

There were several larger Ugandan businesspeople (manufacturers of tin boxes and toys a manufacturer of school chairs, a computer training company, a furniture maker) who had not started any additional businesses since their foundation and had no serious plans to do so. These were substantial businesses on which numbers of sub-contracted workers depended for a living. One was in its second generation. The reason for this lack of entrepreneurial drive was that the core business swallowed up most of the profits, and there was insufficient capital to diversify at a scale compatible with the size of the existing business. Moreover the running of such a complex business was (respondents pointed out) too-time consuming for the owner to try something new.

The other class of interviewees who did not show any sign of starting a new business from their current livelihood state were the poorest of our interviewees. For example we interviewed some of the furniture maker's contracted self-employed workers. They were paid for the number of items actually produced. The ones we talked to were specialists in furniture polishing. They appeared to earn just about enough money to make a living, but had significant daily expenses in relation to their earnings. Transport was especially expensive. When asked if there had any other business they all said no. There were too tired at the end of the day to do anything else. They were effectively "trapped". Their income took many hours to earn and it was just enough to survive. There was nothing to spare for entrepreneurial investment.

In fact nearly all of our poorest interviewees appeared "trapped" by their incapacity to find the time and earn sufficient surplus to invest in a new business. For example a newspaper store vendor emphasised the lack of time left to diversify once he went home. A newspaper street vendor stated that he was at it all day. When asked why they had not started another more profitable business, the answer was invariably "lack of money or capital". When this was followed up by probing what kind of business would be started if the finances was found, none had any fixed idea, suggesting that it was mostly hypothetical. In fact the respondents were so used to being "trapped" they had ceased to consider alternatives and had become habituated to their condition.

An example of habituation was a shoe shine boy who had been established for three years. He had to work long hours for a small income which just about covered his expenses. Yet it appeared that he did have choices to improve his life. His uncle worked as a property agent who rented out homes and flats for clients, and could have taught him this trade, or even help finance a better small business. The interviewee had not considered this seriously. All he appeared to aspire to was to improve the shoe shine business, by building a permanent roof and upgrading his tools. He had no firm plans to accomplish this. When asked what else he could do he gave no specific answers. He seemed resigned to his circumstances.

Another interviewee owned a very small market stall (6 feet by 6 feet) selling vegetables. He had started the business eight years before, because entry was cheap. His main problem was that the vegetables were perishable and rotted quickly, eating into his profits. His immediate ambition was to sell more vegetables that had a longer shelf life, but ultimately wanted to move into wholesale. Although he appeared poor, the interviewee felt that life was improving, and that he had managed to save some money. It would take a great deal more,

however, for him to consider diversifying. Once again the option of entrepreneurial diversification was a consideration, but not a serious one for now.

It would appear, therefore, that the poorer the circumstances and the more "necessity", the less inclination there was to start a business. This is the opposite that one would expect from the "necessity" hypothesis.

The Sri Lankan data also sheds some light on the phenomenon of becoming trapped into a state of necessity. All the villagers in the study site had been resettled in 1985 with 2.5 hectares and a government grant. Ten years later there were some 30 successful entrepreneurs and some 250 other villagers who were far from entrepreneurial and in a state of necessity. They had had to mortgage or lease most of their land to the successful entrepreneurs, and in addition to their rent tended to live on subsistence and by selling labour to their successful neighbours. How did they fail to succeed, given they started with the same assets? One difference was that the unsuccessful villagers did not carefully husband their resources. They spent their harvest income on goods to enhance social status and did not save. They soon ran into debt and became trapped in a cycle of poverty. Even if they earned more they could not save much, as most surplus went into paying debts. Having lost their resources they had no capital left to invest in a new business. The successful villagers, however, were able through superior enterprise and management to build on their resources, and avoid debt, and expand their businesses. This often meant sacrificing status in the short term to provide money for investment. One entrepreneur for example, bought a tractor instead of luxuries, built a brick garage to stop it rusting, but lived in a miserable grass hut until eventually he had made enough money to upgrade it. (Interestingly it is not uncommon for the poorest housing in villages to actually belong to up and coming entrepreneurs, eager to save and invest, and hence poor housing cannot be used uncritically as a poverty indicator). The unsuccessful villagers were in a much greater state of necessity, but did not have the means to start additional businesses. This example again shows that those in a state of extreme necessity were not likely to start new businesses. Necessity did not drive them to improve their lot through business start-up. It was in fact the main barrier.

### *Complications of the Rural/Urban Interface*

When one sees a poor self-employed person on the streets of a third world city, one assumes that their income is confined to their business activities in an urban environment. The newspaper street vendor, for example, gave us a long interview all about selling newspapers and how he managed to live on this in Kampala. We returned two hours later to re-interview him, as we had forgotten to ask him about rural sources of income. Closer inspection showed that he had a much more complex life. He owned a small farm in Mbale, some 150 miles East of Kampala, where his wife and children lived. He travelled to see them every few weeks. He was able to subsidise his life in Kampala when harvests were good, but had to send money home at non peak seasons of farming activity. Having established this complex routine, there was even less incentive to start additional businesses.

We soon realised that it was important to ask about rural assets and the urban rural interface in interviews. Many Ugandans retain rural rights to land when they migrate to the city. They have an alternative source of income, where their family often resides. Even though the city job or enterprise may be marginal, the migrants still tend to view it as a step upwards. The furniture manufacturer interviewed was disabled, and found it hard to work consistently. When asked what he would have done if he could no longer work when he was ill, he said that if it had got that bad he would have had to return to his home village and live with his mother, and "till the soil". This was his ultimate fallback position and safety net.

Another illustration of dual rural/urban livelihoods was a street hawker of TV aerials in Kampala. He had been in the same business for some years. His aim was to get more working capital so that he could set up a shop and give up hawking. As the interview progressed he revealed that he had close links to his home area:

"Does he do anything else?" [Interpreter] "Here nothing, but when he goes home to Fort Portal [200 miles west] he can cultivate and dig" [his 7 acre farm]. "He gets money from both ends [farm and hawking business] In the town money comes in daily. In the village there is a period of restriction – up to 3 or 4 months for crops to mature."

The income gained in hawking was used as a means of evening out seasonal variations in rural income. This appeared to be a common practice, and it was difficult to work out which was the main source of household income.

The quantitative study showed that the interface between the town and countryside is very significant. The survey revealed that:

24% of the urban respondents owned a small farm in the countryside

Of these:

70% have close family living on the farm.

55% send money to the countryside

24% receive money from the countryside

56% of poor urban Ugandans earning below 750,000 Ugandan shillings (c 400\$) a year own a farm.

The percentage rises as incomes decline, with 55 per cent of the poorest urban respondents also owning a small farm, a much higher percentage than for all urban dwellers. . This dimension of rural/urban interdependence has yet to be addressed in the previous studies on necessity entrepreneurship.

*Results from the Customised Ugandan Adult Population Survey.*

**Table 2: Total Entrepreneurial activity (TEA) by annual income**

	Low income		Medium income		High income		Total
	n.	%	n.	%	n.	%	
0	473	68.9	73	50.0	35	50.7	581
1	214	31.1	73	50.0	34	49.3	321
<b>Total</b>	<b>687</b>	<b>100.0</b>	<b>146</b>	<b>100.0</b>	<b>69</b>	<b>100.0</b>	<b>902</b>

*Chi Square = 24.7 2df p=0.000*

*Low income = ≤ 750,000 Ugandan shillings per year*  
*Medium income = >750,000 ≤ 2 million Ugandan shillings per year*  
*High income = > 2 million Ugandan shillings per year.*

**Table 3: TEA and some summarized proxy measures of poverty**

Proxy Poverty Measure	TEA for Most basic category	TEA for sophisticated category	Significance (Chi square)
Read or write? (No*, Yes#)	23.6*	38.2#	0.000
Bath (none*, shared pit latrine, Outside, inside#).	43.8*	23.1#	0.000
Light (candles/firewood*, paraffin, electricity#)	36.6*	26.6#	0.003
Water (open source, borehole/well*, pipe/tap#)	45.2*	26.7#	0.000

The survey of 1006 Ugandan adults contains many variables designed to examine the relationship between business start-up, poverty and other factors, both in an urban and rural context. The interview questionnaire was 13 pages long. All relevant variables were crosstabulated against the total entrepreneurial index (TEA), as measured using the same questions as those used in the GEM Adult Population Survey questionnaire. Many were

significant, but the strongest and most significant relationship was between the TEA and annual income. As Table 2 shows, there is a very strong and highly significant relationship between annual income and the TEA. The trend, however, is totally the opposite to that which would be expected by the "necessity entrepreneurship" hypothesis. The TEA is much larger amongst the medium and high income categories than in the low income one.

There are problems, however, in accurately measuring annual income as a poverty indicator, especially amongst poorer people who do not record what they earn, and whose income may vary a great deal throughout the year. For this reason the questionnaire contained many proxy measures of poverty and income, including measures used by the Uganda Bureau of Statistics in their surveys of poverty in Uganda. Crosstabulations with the TEA reveal complex results. For example in Table 3, respondents that can read and write have much higher TEAs than those who cannot (compatible with the result on annual income just discussed). However other measures on the state of their house and amenity show the opposite. The more basic the amenity, the higher the TEA for that category. For example people with no bath have a much higher TEA than those with a bath inside their house. It would appear that there must be many Ugandans on higher incomes who have very basic amenities. This may support the qualitative findings from Sri Lanka reported earlier that entrepreneurs often prefer to invest spare money on the business rather than on the house.

**Table 4: Logistic regression of the TEA by measures of necessity and poverty.**

	B	Sig.
Sex (0=male,1=female)	-0.38	0.053
Age of respondent	0.01	0.934
Urban or rural (1=Urban,0=Rural)	0.43	0.193
Number of people in the household	0.20	<b>0.040</b>
Can read or write (1) else 0	0.76	<b>0.002</b>
Highest level of education (1-7) none to postgraduate	-0.08	0.379
Number of rooms in the dwelling (1-7+)	-0.12	0.052
Roof materials (mud/thatch, Iron, Tiles, concrete)	0.08	0.742
kitchen 1-3 (none, outside, inside)	-0.78	<b>0.000</b>
bath (1-5) none to inside	0.00	0.986
light 1-3 firewood-candles, paraffin, electricity	-0.23	0.213
fuel (1-4) firewood, charcoal, paraffin, electricity-gas	-0.78	<b>0.001</b>
water (1-3) open source, well-borehole, tap	0.24	0.137
annual income Ugandan Shillings	0.77	<b>0.000</b>
Whether unemployed or expect to be in next 6 months	-0.06	0.803
Is your income enough to permit you to save (1=Yes,0=No).	1.15	<b>0.000</b>
Having problems with making enough money to survive(1-3)-none, some, severe.	-0.03	0.806
CONSTANT	-0.86	0.386
<b>Valid sample</b>		<b>732</b>
<b>Cox &amp; Snell R Square</b>		<b>.191</b>
<b>Nagelkerke R Square</b>		<b>.262</b>

To clarify the position a series of binary logistic regressions were performed with the TEA as dependent and a host of relevant independent variables as independents. Table 4 demonstrates that annual income, literacy and "Is your income enough to permit you to save?" are highly significant predictors of the TEA, but with the opposite trend to that expected by the necessity hypothesis. Two proxy measures, kitchen and fuel, are also significant, but compatible with the hypothesis, thus contradicting the income variables. The analyses were also performed on the non composite measures of entrepreneurial activity (questions 1a to 1e of the GEM adult population survey, but these results had to be omitted to remain within the word limit). It was interesting that the only variable significant across all measures of entrepreneurial activity used to form the TEA, was "Is your income enough to permit you to save?" The ability to save is thus the greatest predictor of entrepreneurial activity at all levels. It is also a variable not

directly related to necessity pushing one to start a business, but more to making something out of necessity. Gender and annual income are also powerful predictors, but not for all the dependents. Annual income, for example, is not significantly related to "currently starting a business". Many of the other proxy measures appear to have either no relationship, or more complex relationships with the dependents. Finally Table 4 shows that some key measures that one would have thought would have been significant, are not. These are the level of education attained, whether unemployed or expect to be unemployed, and having problems making enough money to survive. The failure of these variables to relate significantly to the TEA again runs counter to the necessity hypothesis.

These regressions reveal that poverty may indeed be related to entrepreneurial activity, as the R squares are all significant. However the relationship is complex, as the direction of the relationship is contradictory when different variables are considered. Moreover the R Squares may be significant, but they are LOW. Most, if not nearly all, of the variance in business start-up remains unaccounted for by the measures included in the analyses.

## CONCLUSIONS

The results show little support for the "necessity" hypothesis, i.e. that necessity motivates people strongly to start new businesses:

Firstly many respondents did not clearly understand the concepts of opportunity, necessity or "no other choice". They commonly only provided answers after lengthy discussions with the interviewer, and even then answers were often irrelevant. Asking the questions again later in the interview often produced contradictory answers. Respondents had different interpretations of work and unemployment than we are used to in developed countries. In Uganda and Sri Lanka work is associated with high status employment (in government and large companies). Any lesser job is not viewed as employment. Unemployment is thus not being in high status employment, not in being without work. These findings have serious implications on the way necessity and opportunity has been measured in the GEM, particularly in relation to developing countries.

Secondly other motives for business start-up were found to be more prevalent than "necessity." Poor Ugandans and Sri Lankans are progress and status driven to improve their social and economic standing so that they can contribute and enjoy the benefits of development. In doing so they will lessen any state of necessity, but this will be a consequence rather than a driver of their entrepreneurship. Moreover many poor Ugandans lived complex economic lives, owning a micro enterprises in the town and a small farm in their tribal homelands. An urban business was commonly started as a mechanism to regulate farm income which is seasonal and unpredictable. This is a much more sophisticated motive than being driven by poverty to start a business.

Thirdly all poor Ugandans and Sri Lankans displayed similar motives to "progress" their lives. Only a small minority, however, succeeded in doing so. Both qualitative and quantitative results showed that the poorer the people, the less likely they were to be able to start a better business. The survey results are particularly revealing, with entrepreneurial activity rates much lower as annual income declines. The very poor tend to get "trapped" in a state of routine in which long hours are needed to earn a survivalist living. There is insufficient margin to save, and any savings are swallowed by debts. In time the ambition to really try and escape through starting a new enterprise evaporates too. Indeed, as the Sri Lankan data showed, many of the poor contributed to the cycle by over consumption at those times when income temporarily improves. Overall this trend of poverty reducing entrepreneurial activity is both an urban and rural phenomenon.

Fourthly most new business start-ups in the case studies were associated with entrepreneurs who are opportunity driven with resources. The ability to save comes out as an essential prerequisite for new venture formation and is the most important predictor of entrepreneurial activity in the survey analyses. Both the Ugandan and Sri Lankan case studies reveal that

entrepreneurial diversification and pluriactivity increases with success. The ability to conserve and save capital, and resist excessive consumption, is an important quality of successful entrepreneurship. The fact that Uganda has a high TEA is driven by the growing number of entrepreneurs (most very small scale, but still successful compared to their poorer counterparts) who are taking advantage of a rapidly growing economy, rather than by people driven by poverty to start a business. The fact that many Ugandan respondents of the official GEM survey stated they were driven by necessity is of dubious significance given the problems of interpretation and measurement discussed earlier.

The fact that most of the trends just discussed are similar in two different countries does suggest that there is some generalizability in the findings. "Necessity theory" as conceptualised by GEM researchers is not supported by the empirical evidence of this study. The view that there are two forms of entrepreneurship promoted by Acs *et al* (2005) one, necessity driven, prevalent in developing countries and the other, opportunity driven, prevalent in developed countries is questionable given the complex trends outlined, and needs re-examining. This has important policy implications. Acs implies that necessity entrepreneurship is perhaps a less productive form of entrepreneurship to that motivated by opportunity and innovation. It is not the form that leads to economic development and needs a different kind of support (Acs, 2006). Our findings suggest that any such policy discrimination may be premature and possibly harmful.

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