

# Does Entrepreneurship Improve Well-Being?

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## Abstract

Building on Sen's capabilities approach, we explore the effect of households' participation to micro-entrepreneurship on well-being and its different economic and human components in the framework of an emerging economy. Using a representative sample of the Indonesian population, we use the Indonesian Family Life Survey to test the effect of entrepreneurship participation on income, assets, education level, and health status long-term (1997-2007) change. We contrast and compare these results with the effect of entrepreneurship participation to a composite index of overall well-being. We find that, while entrepreneurship participation reduces most well-being components taken separately apart from education levels - income, assets and health status change are negatively affected; it definitely enhances overall well-being via the combination of its different components.

## Introduction

Entrepreneurship, and specifically Schumpeterian entrepreneurship, has historically played a central role in development [1]. Its effects have primarily been linked to the process of industrialisation and economic growth ([2]; [3]; [4]). However, since the 1990s, policy-makers increasingly tend to emphasize the overarching importance of *development*, defined as sets of capabilities that are enabled thanks to sets of resources [5]. In this perspective, economic growth represents one of the important means to achieve the end of development, understood as well-being and freedoms.

This issue, in the current socio-economic context, is of general common interest to both developed and developing countries. Nonetheless, developing countries distinguish themselves with their large pool of micro and often informal enterprises, which seem to fail contributing to productivity and GDP growth. This idea is supported by [6], who, using cross-country firm data analysis, find that informal micro-businesses - that provide for half of all economic activity - are relatively unproductive, and serve as a social security net "keep[ing] millions of people alive, but disappearing over time". Determining whether those enterprises contribute to overall development is therefore of central importance. Two important questions then arise: firstly, do micro-enterprises contribute differently to economic and non-economic development, secondly, do micro-enterprises contribute to long term development or just act as transitory social safety net?

This paper's focus lies beyond the link between entrepreneurship and growth, rather, it explores the relationship between entrepreneurship and development in the case of emerging economies. We narrow down the analysis to the effect of households' participation to micro-entrepreneurship on the long-term change of a multi-dimensional measure of well-being and its different economic and human components.

We argue that restricting entrepreneurship contribution to development to its productivity or production contribution, especially in the case of micro and informal

enterprises in developing economies, is not relevant to the more general issue of development. Rather, entrepreneurship ought to contribute, positively or negatively, to overall household well-being.

### **Entrepreneurship and well-being**

We frame our contribution using [7] who “propose[s] new directions for future research that focus on entrepreneurial reward structures and decision processes, using multidimensional measures of economic well-being, contextualized within the entrepreneurial household” (p.40).

The literature often reports low earnings to entrepreneurship. This result seems to partially be explained by the use of self-employment data that tend to overestimate hours worked, which mechanically reduces earnings per hour [7]. Earnings are also often measured in some form of profits, sometimes adjusted with drawings from the business ([8]; [9]), and entrepreneurs tend to underreport earnings so as to minimize tax payments ([10]; [11]).

Entrepreneurs seem to receive average lower earnings than employees – with, however, great variation among entrepreneurs; which are arguably compensated by intangible benefits such as job satisfaction, and control over one’s working life ([12]). Other studies however show that, while entrepreneurs experience greater autonomy, flexibility, job involvement and satisfaction, they also experience more work-family conflicts and have a lower family life satisfaction ([13]). Furthermore, another strand of the literature that considers entrepreneurship as a second best alternative to employment, tends to demonstrate, and more specifically so for micro-entrepreneurship in developing countries, that it qualifies as *forced* rather than *chosen* occupation, and responds to a lack of, or difficult access to well-paid employment. In this context, one could expect entrepreneurship not to enhance one’s sense of control over her work life. Entrepreneurship could also supplement employment, and therefore harm the overall health of the entrepreneur.

On the other hand, the literature on entrepreneurship in developing countries focuses on the contribution of entrepreneurship to development, and more particularly to economic growth. In effect, the focus remains on measuring entrepreneurship performance with tools that are compatible with economic growth accounting, i.e. output, productivity, profits and their respective rates of growth.

At the crossroad between the reflections on the nature of development ([5]), the contribution of entrepreneurship to development, a new avenue for research has emerged: the contribution of entrepreneurship to human development ([14]). The authors propose a theoretical contribution using Sen’s capabilities approach, and argue that entrepreneurship can be viewed as both a resource – a mean to achieve human development, and a functioning – an end to development. They argue however that where entrepreneurship is *forced*, it merely represents a resource.

We propose to bridge the literature on entrepreneurial effects on individual and households’ well-being and the contribution of entrepreneurship to human development by measuring individual and households’ well-being from a human development perspective, and assessing the effect of entrepreneurship on this well-being.

At least since [5], economic growth is less regarded as an end than a tool to development, which is in turn a concept so broad that it has been difficult to capture into a single measure. [15] summarizes Sen’s capability approach to development and states that “ultimately, the focus should be on what people manage to achieve with their resource endowment” (p.1342). Achievements or functionings encompass the collection of beings and doings of a given person, and capabilities are “the alternative combinations of functionings that are feasible for her to achieve” ([5]: 1, 75). In his critique, [15] suggests that one of the

main limitations of Sen's approach – which is also one of its main strengths, is that he does not propose an exhaustive list of desirable or valuable functionings, but leave open for each person to define what valuable functionings are. From an empirical point of view, most of the measurements of well-being focus on three main dimensions that are economic well-being in the form of income, education, and health.

The issue of causality and endogeneity is of course in order. From the literature on well-being and development, it is evident that, (1) entrepreneurship can affect certain if not all capabilities, but those capabilities also influence the likelihood of entrepreneurship from occurring (although it is not evident that once capabilities are achieved, one would choose entrepreneurship over employment or leisure), as [16] put it “from an evolutionary approach, process and context (strategy and environment) interact in a recursive continuous process, driving the fate of entrepreneurial efforts” (p.41), (2) it is difficult to disentangle the individual from the community, and some individual capabilities can only occur in groups (participation to community activities).

Building on [14], we argue that even if entrepreneurship is forced upon individuals/households because of lack of employment alternative, and therefore is not a positive functioning, it can still be a resource if it triggers higher functionings, and still contributes to increased well-being. To prove this point we compare in particular the different components of well-being as well as overall well-being itself of entrepreneurial and non-entrepreneurial households. In particular, we argue that where entrepreneurship is *forced*, it will still provide additional financial resources (relative to resources from unemployment) to enhance non-economic components such as the education and health of children, thereby improving overall household well-being. Where entrepreneurship is *chosen*, entrepreneurship might reduce the financial resources (relative to an employment opportunity), but enhance the non-economic components of well-being via job satisfaction that could show up in health status, and/or more time devoted to the education of children.

We investigate the contribution of micro-enterprises to development by investigating the following hypotheses:

1. Households' entrepreneurship participation reduces long-term income growth.
2. As a consequence, households' entrepreneurship participation reduces long-term assets growth.
3. Resources from entrepreneurship serve to enhance education and health.
4. Household's entrepreneurship participation is a way to increase households' overall well-being measured as a composite index (as a response to, for example, the trade-off that might exist between advantages and disadvantages to entrepreneurship).

### **Data and methodology**

To conduct our research, we use the panel data of the Indonesia Family Life Survey. 7,616 and 10,293 households underwent four rounds of comprehensive interviews in 1993, 1997, 2000 and 2007 in 13 of the 27 provinces, accounting for 83% of the total Indonesian population ([17]; [18]). We use the World Bank deflator of GDP in order to deflate current income and assets. [19] (p. 195) discuss the shortcomings of most empirical studies of entrepreneurship and underline the lack of recent and recurrent data collection, of information on the entrepreneurial qualities of the population. The IFLS data respond to these limitations and presents individual as well as household level data for a representative sample of the population in four survey waves tracking the same individuals for a 14-year period through to 2007. It also permits to benchmark the results by including non-entrepreneurs in the sample; contributing to lessen the common selection bias found in entrepreneurship studies in which empirical data focus on entrepreneurs only.

Building on both Sen's capability approach [5], as well as the human development index ([20]), we define three types of components to well-being – households' monetary income and assets (as measures of respectively transitory and long term economic well-being), households' average education levels, and households' average physical health.

In order to create a composite index of objective well-being, following [20], we perform a principal components analysis (PCA) of the set of the four components that reflect the different facets of well-being. The methodology allows combining components that are highly correlated and sets weights appropriately for each component.

Our empirical strategy first consists in testing the impact of entrepreneurship participation on the rate of change of each of the components of well-being, then on the rate of change of the constructed composite index of well-being. This allows in particular differentiating the effect of entrepreneurship participation on economic and non-economic well-being.

We use the panel nature of the data to estimate the impact of entrepreneurship participation on long-term (1997-2007) well-being change, while using a two-stage estimation technique so as to treat the endogeneity of entrepreneurship participation by instrumenting it with its determinants for the year 1993.

In the first stage of the estimation, following [21], we model entrepreneurship participation in year  $t = 1997, 2000, 2007, 1997 - 2007$  as a function of the three core households' capitals, i.e. financial, human, and social capital in 1993. Financial capital  $FK_{193}$  is measured as the total household's private and business assets in 1993. The human capital variables  $HK_{193}$  are a set of five dummies indicating the highest educational level attended by the head of household in 1993, choosing from elementary, junior, and senior high school, adult education, or university. The social capital variable  $SK_{197}$  is captured by a dummy indicating whether the household participated to *arisan*, a popular community activity that also serves as a rotating credit association. This variable is only available from 1997 onwards and we take its 1997 value. Households' characteristics  $C_i$  are automatically used as instruments as well. Initial institutional and infrastructure quality also matter, as they will condition entrepreneurship participation and the conditions in which the activity will take place. We use  $I_j$ , a set of three  $j$  village-level dummies that indicates whether the business permits emission services and the transportation quality are adequate, and whether the local government is perceived as corrupt.<sup>1</sup> The first stage of the model writes:

$$E_{it_{97,00,07;97-07}} = \alpha' + \beta' \cdot FK_{193} + \gamma' \cdot HK_{193} + \delta' \cdot SK_{197} + \rho' C_i + \sigma' I_j \quad (1)$$

We use  $\hat{E}_{it_{97,00,07;97-07}}$ , the estimated entrepreneurship participation of the first stage as the main explanatory variable in the second stage.

$$\log WB_{i07} - \log WB_{i97} = \alpha + \beta \hat{E}_{it_{97,00,07;97-07}} + \gamma C_i \quad (2)$$

The left hand-side term  $\log WB_{i07} - \log WB_{i97}$  represents the change in well-being that is measured alternatively by the total annual income of the household, the total household and household business assets, the average education level of the household (no education = 1, elementary education = 2, junior high education = 3, and senior high education = 4, adult education = 5, or university education = 6), the average overall health of household members (very good health = 1, good health = 2, a bit unhealthy = 3, very unhealthy = 4), and a composite well-being (constructed by carrying out a PCA using the four previous components) between 1997 and 2007.

$C_i$  is a set of households' characteristics used as control variables.  $E_{t_{97,00,07}}$  represents a dummy that indicates whether the household has participated to entrepreneurship in at least one of the years 1997, 2000 or 2007. Alternatively we also use a dummy  $E_{t_{97-07}}$  that indicates

<sup>1</sup> These variables are treated as constant but are collected for the year 2007.

whether the household has participated to entrepreneurship in all of the three years. This allows distinguishing between households that participate to entrepreneurship in all of the 3 waves 1997, 2000, 2007, the ones that participate occasionally (at least once and at most three times), and the ones that never participate.

The control variables  $C_i$  are either constant or averaged over the period. We control for the head of household's age and its square value in log ( $HHage_i$  and  $HHage_i^2$ ), gender (dummy  $male_i$  taking the value of 1 if the head is male), marital status (dummy  $married_i$  taking the value of 1 if the head is married, 0 otherwise), the size of the household in numbers of people and its square value in log ( $HHsize_i$  and  $HHsize_i^2$ ), an urban dummy that equals 1 if the household is situated in an urban area ( $urban_i$ ). The number of household members includes also dependents (young children as well as elderly members). Finally, we control for the number of householders in employment,  $njob1_i$ , as well as the number of householders holding a second job in employment. We note that entrepreneurship participation and employment are not mutually exclusive.

As [7] notes, empirical studies of entrepreneurial earnings are rare, and confined to the domain of labor economics, that uses data on self-employment rather than entrepreneurship. Our data is particularly suited to the study of entrepreneurship, as it relates to family businesses owned by the household and in which family members work. It therefore substantially contributes to the empirical testing of entrepreneurial earnings, but also entrepreneurial well-being, both economic and non-economic.

## Results and implications

Table 1 presents summary statistics of the main variables. Over the 1997-2007 period 47% of households participated at least once to micro-entrepreneurship, while only half of these (23%) declared operating a micro-business in 1997, 2000 and 2007. These facts are in line with the literature that finds that about half of employment stems from micro-enterprises. Households have on average 4.7 members and combine 10 years in a primary job employment, and 1.7 years in a secondary job employment. Therefore, on average, the Indonesian household is of moderate size and in regular employment, while second jobs are taken up occasionally, but micro-entrepreneurship is widespread.

The same average household has seen its annual income growth by 180% over the 10-year period (18% p.a.), which has contributed to an average increase of households' assets by 40% (4% p.a.). The distribution of income and assets growth shows however that if at least 90% of households have increased their income between 1997 and 2007, only at least 50% of households have increased their assets. This suggests that short and long term economic development have to be distinguished. The education level of households has increased over the period and for the large majority of households (at least 90% of them), but strikingly, at least 50% and 25% of households have experienced respectively a stagnation or decline, or a net decline in the overall health status. As a result, the combined effects result in an average status quo of average well-being, with at least 50% of households experiencing a decline of it.

Table 2 presents the correlation matrix of the main variables. As a result of its construction, well-being is significantly and positively correlated to income, assets, education, and health growth. Evidently, income and assets growth correlate positively and significantly, as do education level growth and respectively income and assets growth. Health level growth however does not correlate with the other well-being growth components.

The examination of both summary statistics and correlation matrix shows that there are wide variations in the distribution and scope of the different components of well-being that already points towards a differentiated effect of entrepreneurship participation on income, assets, education, health, and well-being change.

Table 3 presents results for the first stage regressions for model (1) and (2), the models explaining income growth. The first-stage results of the other models lead to very similar results. We refer to [21] for a full discussion of the first-stage model. They show that overall, households in regular primary job employment are more likely to engage in entrepreneurship at least once, and even more likely to remain in entrepreneurship over the entire period, while having secondary jobs has no impact. Consistent with the literature, households with greater social capital and initial assets, headed by a relatively more experienced member who has received elementary or junior high education, situated in an urban area with quality transportation, are more likely to engage in entrepreneurship. Interestingly, while the gender of the household head does not seem to matter in terms of occasional entrepreneurship participation, female-headed households are more likely to maintain entrepreneurship participation over the 10-year period.

Table 4 presents the results of the second stage of the instrumental variable estimations of the impact of entrepreneurship participation on the long-term growth of the different components of well-being and well-being itself. All results are robust to the exclusion of employment as explanatory variable.

Firstly, consistent with the literature, and confirming hypothesis 1, we find in models (1) and (2) that entrepreneurship participation reduces average income growth; while years spent in primary employment enhances it. However, we know, both from the literature and table 1, that, while income growth is positive for 99% of households, the standard deviation for entrepreneurs' income growth is larger than for non-entrepreneurs. Therefore, the effect of entrepreneurship on income growth is on average negative, but could be positive for the upper part of the distribution.<sup>2</sup>

In models (3) and (4), we confirm hypothesis 2, and demonstrate that entrepreneurship participation also reduces assets growth, while employment augments it. Interestingly though, we also see in table 1 that, contrary to the distribution of income growth, only 75% of households experience assets growth, and its distribution is narrower for entrepreneurs: among those that witness a positive change in assets, entrepreneurs are slightly less well off, however, among those who witness a decline in assets, entrepreneurs are those who are better off. This hints at a possible damping effect of entrepreneurship on assets erosion. One of the reasons could be the preservation and increase in value of business assets, so as to be able to carry on the activity.

Models (5) and (6) show that entrepreneurship participation has a negative effect on the improvement of the average health status of the household, refuting hypothesis 3. This result is however consistent with the idea of individuals with poorer health will participate to palliate for a lack of employment opportunity [8]. Also, participation could generally increase the number of hours worked and the stress put on entrepreneurs, so that their health is negatively affected. This is corroborated by the positive effect of employment on health improvements. As for assets, this result is however mitigated by the narrower distribution of health change for entrepreneurs.

Models (7) and (8) confirm hypothesis 4, and demonstrate that entrepreneurship participation has a positive impact on the average change in households' education level, and even more so than primary employment, while secondary employment has a negative impact. It could well be the case that households engage in entrepreneurship so as to insure the education of their offspring.

Overall, taking well-being components separately, entrepreneurship participation seems to have a negative impact on all but education level improvement. Those results are however mitigated by a wider distribution of incomes, and narrower distributions of assets and health long-term changes.

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<sup>2</sup> Further investigations not included here perform quantile regressions to account for this.

Turning now to the effect of entrepreneurship participation to overall well-being, combining the effects of income, assets, health and education changes will shed some light on the more complete profiles of entrepreneurs and the trade-offs that can result from the interactions between the different components of well-being. Models (9) and (10) confirm hypothesis 5, and show that both occasional and consistent participation to entrepreneurship have a strong, significant and positive effect on long-term well-being improvements.

These are strong results that suggest that indeed, entrepreneurship can serve as social safety net, to palliate to job losses, low employment pay, or lack of opportunities for low skilled or unhealthy individuals. In turn, the effect shows a reduction in the growth of households' income and assets, but numbers also show that some entrepreneurs' income growth overshoot the maximum income growth from employment, and provides a floor to the potential assets losses incurred. Entrepreneurship could also damage health status, but this effect could be due to the initial poor health of entrepreneurs. When the four effects are combined, we however show clearly that entrepreneurship definitely enhances households' well-being.

### **Conclusion**

Building on Sen's capabilities approach, we explore the effect of households' participation to micro-entrepreneurship on well-being and its different economic and human components in the framework of an emerging economy. Using a representative sample of the Indonesian population, we use the Indonesian Family Life Survey to test the effect of entrepreneurship participation on income, assets, education level, and health status long-term (1997-2007) change. We contrast and compare these results with the effect of entrepreneurship participation to a composite index of overall well-being. We find that, while entrepreneurship participation reduces most well-being components taken separately apart from education levels - income, assets and health status change are negatively affected; it definitely enhances overall well-being via the combination of its different components.

These results indicate that entrepreneurship might be an alternative to unemployment and low employment remuneration, especially for the low-skilled and unhealthy labourers. As income increases for most households, the negative impact of entrepreneurship on income growth represents primarily the difference in income growth between entrepreneurs and employees. However, as entrepreneurs are often also employees, strengthening the argument in favour of entrepreneurship as a supplement to employment, and explaining in turn the slower growth of earnings, and assets accumulation. Entrepreneurship could also damage health status, but we cannot exclude the endogeneity issue and the hypothesis that entrepreneurs could have initial poor health. Our results show definitely that entrepreneurship increases education levels in the household. When the four effects are combined, we finally show clearly that entrepreneurship enhances households' well-being change, meaning that the different trade-offs generated between the four components of well-being by entrepreneurship participation contribute positively to human development.

This paper contributes to both the entrepreneurship and development studies literature, in that it brings new light on the outcomes and impact of entrepreneurship participation on households' well-being. It extends the view of the enterprise being solely a (poor) economic contributor, by showing that it also fulfils a societal role via the improvement of non-economic components of objective well-being and of well-being itself.

Those results can be generalised to other emerging economies, but also to developed economies that rely on large numbers of micro and small enterprises. It informs policy-makers and practitioners about the potential effects of the currently rapid development of micro and small entrepreneurship.

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## Tables

Table 1: Summary statistics 1997-2007

stats	entrepreneurship participation at least once anytime	entrepreneurship participation 1997, 2000 & 2007	household size			total number of years worked by all members 1997-2007, first job			total number of years worked by all members 1997-2007, second job			income growth 1997-2007			
	all	all	all	ent_all	non_ent	all	ent_all	non_ent	all	ent_all	non_ent	all	ent_all	non_ent	
N	14998	14998	14918	3378	11540	13708	3202	10506	13708	3202	10506	5638	1183	4455	
p1	0	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.52	-1.52	-1.52	
p10	0	0.00	1.75	2.00	1.00	3.00	4.00	3.00	0.00	0.00	0.00	0.24	0.19	0.26	
p25	0	0.00	3.00	3.00	3.00	6.00	7.00	5.75	0.00	0.00	0.00	1.04	0.98	1.07	
p50	0	0.00	4.14	4.67	4.00	9.00	10.33	9.00	0.00	0.25	0.00	1.77	1.69	1.79	
mean	0.47	0.23	4.66	5.03	4.55	10.00	11.13	9.66	1.69	2.03	1.59	1.80	1.72	1.83	
p75	1	0.00	6.00	6.33	6.00	13.50	14.60	13.25	2.00	3.00	2.00	2.51	2.37	2.54	
p90	1	1.00	8.00	8.14	8.00	17.67	18.00	17.00	6.00	6.67	6.00	3.38	3.14	3.42	
p99	1	1.00	12.08	12.56	11.92	27.50	27.86	27.17	13.33	13.75	13.29	5.44	5.45	5.44	
sd	0.50	0.42	2.53	2.45	2.54	5.79	5.80	5.74	3.01	3.20	2.94	1.41	1.43	1.40	
assets growth 1997-2007			education level growth			health growth 1997-			well-being growth						
	all	ent_all	non_ent	all	ent_all	non_ent	all	ent_all	non_ent	all	ent_all	non_ent			
N	6466	1258	5208	6653	1349	5304	6644	1347	5297	6474	1250	5224			
p1	-4.52	-4.07	-4.60	-0.29	-0.29	-0.36	-1.17	-1.00	-1.20	-2.36	-2.95	-2.09			
p10	-1.48	-1.37	-1.53	0.15	0.29	0.06	-0.67	-0.53	-0.67	-0.85	-0.89	-0.85			
p25	-0.44	-0.33	-0.47	0.51	0.69	0.51	-0.33	-0.33	-0.33	-0.52	-0.47	-0.53			
p50	0.43	0.43	0.43	0.81	0.92	0.80	0.00	0.00	0.00	-0.13	-0.03	-0.15			
mean	0.40	0.38	0.41	0.81	0.87	0.80	-0.04	-0.04	-0.05	0.00	0.10	-0.03			
p75	1.28	1.16	1.31	1.10	1.20	1.10	0.20	0.20	0.20	0.37	0.48	0.33			
p90	2.33	2.10	2.39	1.39	1.39	1.39	0.50	0.50	0.50	1.05	1.23	1.01			
p99	4.77	4.10	4.88	1.79	1.79	1.79	1.00	1.00	1.17	3.28	4.49	2.97			
sd	1.70	1.52	1.74	0.47	0.44	0.47	0.49	0.46	0.49	1.17	1.66	1.02			

Table 2: Correlation matrix

	entrepreneurship participation 1997, 2000 & 2007	household size	total number of years worked by all members 1997-2007, first job	total number of years worked by all members 1997-2007, second job	income growth 1997-2007	assets growth 1997-2007	education level growth 1997-2007	health growth 1997-2007	well-being growth 1997-2007
entrepreneurship participation at least once anytime	0.5683*	0.2827*	0.1826*	0.0043	-0.0205	-0.0198	0.0920*	0.0023	0.0360*
entrepreneurship participation 1997, 2000 & 2007		0.0789*	0.1064*	-0.0017	-0.0296*	-0.0078	0.0675*	-0.0058	0.0413*
household size			0.2873*	0.0329*	0.0264*	-0.0594*	0.1224*	0.0277*	0.0068
total number of years worked by all members 1997-2007, first job				0.2960*	0.0820*	0.1161*	0.0839*	0.0027	0.0731*
total number of years worked by all members 1997-2007, second job					0.0254	0.0397*	-0.0972*	-0.0239	-0.0109
income growth 1997-2007						0.1900*	0.0749*	-0.0032	0.3487*
assets growth 1997-2007							0.0550*	0.0036	0.2959*
education level growth 1997-2007								0.0037	0.4707*
health growth 1997-2007									0.1216*

Table 3: Results of the first-stage regressions for models (1) and (2)

	(1) ent_any_year	(2) ent_all_years
assets93	0.0257***	0.0265***
soc.cap.97	0.0460**	0.0497***
elem.93	0.0555**	0.0462*
junior93	0.0641*	0.0635*
senior93	-0.00185	0.00127
permits.07	0.00081	-0.00572
transp.07	0.0602***	0.0380*
corrupt.07	-0.0239	-0.0285
nb years emp 1st job	0.0585**	0.126***
nb years emp 2nd job	0.0156	0.00867
HHHmale	0.00786	-0.152*
married	-0.0645	0.0173
log_ageHHH	1.275	1.381
log_ageHHHsq	-0.177	-0.192
log_hhsize	0.021	-0.0637
log_hhsizesq	0.00167	0.0123
urban	0.143***	0.0830***
_cons	-2.257	-2.835
N	3315	3315

\* p<0.05, \*\*p<0.01, \*\*\* p<0.001

Table 4: Model results

	(1) income growth 1997- 2007	(2) income growth 1997- 2007	(3) assets growth 1997- 2007	(4) assets growth 1997- 2007	(5) health growth 1997- 2007	(6) health growth 1997- 2007	(7) education level growth 1997-2007	(8) education level growth 1997-2007	(9) well- being growth 1997-2007	(10) well- being growth 1997-2007
ent_any_year	-0.928*		-3.235***		-0.329**		0.854***		0.845**	
ent_all_years		-0.934*		-3.971***		-0.374**		1.067***		1.148***
nb years emp 1st job	0.238**	0.300***	0.701***	1.040***	0.0306	0.0566*	0.0608**	-0.0168	0.176***	0.0741
nb years emp 2nd job	0.0303	0.0245	0.0657	0.0575	-0.0115	-0.0122	-0.0552***	-0.0542***	-0.0201	-0.0185
HHHmale	0.162	0.0129	-0.00338	-0.43	0.0159	-0.0167	0.135	0.227**	0.205	0.307*
married	-0.494*	-0.418*	-0.274	-0.211	-0.0775	-0.0776	-0.117	-0.117	-0.358*	-0.362*
log_ageHHH	-1.008	-0.917	4.736	6.113	-0.163	0.0564	4.104***	3.288**	1.025	0.269
log_ageHHHsq	0.0722	0.05940	-0.723	-0.919	0.00824	-0.0226	-0.628***	-0.514***	-0.216	-0.111
log_hhsize	0.457	0.376	-0.413	-0.503	-0.175	-0.192	0.299**	0.351**	0.518*	0.544*
log_hhsizesq	-0.0969	-0.0865	0.0672	0.0439	0.0469	0.0484	-0.0617	-0.0673	-0.158*	-0.152*
urban	0.0378	-0.0215	0.574***	0.428***	0.0478	0.0318	0.0851**	0.115***	0.144*	0.169**
_cons	4.492	3.967	-6.062	-9.968	0.824	0.299	-6.671***	-4.862*	-2.012	-0.257
N	3315	3315	3658	3658	3761	3761	3763	3763	3683	3683
Anderson-Rubin F-statistic (test of joint significance of endogenous regressors)	3.92	3.92	18.17	18.17	2.62	2.62	65.69	65.69	23.49	23.49
Cragg-Donald Wald statistic (underidentification test)	69.45	75.58	76.855	72.87	84.72	87.57	86.28	86.28	81.13	76.2
Cragg-Donald Wald F-statistic (weak identification test) <sup>3</sup>	8.63	9.4	9.76	9.06	10.54	10.89	10.73	10.73	10.09	9.48
Sargan statistic (overidentification test)	23.206	24.42	35.993	28.03	11.702	10.754	152.138	152.138	148.458	135.462
1st-stage partial R <sup>2</sup> /Shea's	0.0205/0.0205	0.0223/0.0223	0.0210/0.0210	0.0195/0.0195	0.0220/0.0220	0.0228/0.0228	0.0224/0.0224	0.0224/0.0224	0.0216/0.0216	0.0203/0.0203

<sup>3</sup> Stock Yogo (2005) weak identification test critical values are respectively 11.39 and 6.69 for 10% and 20% maximal IV relative bias

\* p<0.05, \*\*p<0.01, \*\*\* p<0.001