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Opportunity entrepreneurs – potential drivers of non-farm growth in rural Vietnam?

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Abstract:

In this paper we apply the concept of necessity and opportunity entrepreneurship to rural Vietnam. The aim is to evaluate whether opportunity entrepreneurs in rural areas in developing countries have a greater potential to stimulate endogenous non-farm growth than necessity entrepreneurs. The results show that opportunity entrepreneurs are relatively frequent. They have an agricultural background less often and are better educated and skilled. In addition, they are more successful in terms of profits, even after controlling for general business and locational characteristics. However, even rural opportunity entrepreneurs are often not oriented towards employment growth and thus have a limited capacity to generate non-farm employment for other households. It becomes clear that although the necessity/ opportunity concept has so far been primarily applied to developed countries, distinguishing opportunity and necessity entrepreneurship is very suitable in a rural developing context if some contextual specifics of the rural environment are taken into account.

Keywords: Necessity entrepreneurship, opportunity entrepreneurship, developing countries, Vietnam.

JEL Classifications: L2, O18, R23

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1.1 Introduction

The necessity/opportunity concept is well-established in the entrepreneurship literature. It acknowledges that some individuals are pulled into entrepreneurship by opportunity recognition while others are pushed into entrepreneurship because they have no other choice to earn a living. Data from the Global Entrepreneurship Monitor indicates that opportunity entrepreneurship increases when countries progress in economic development, while necessity entrepreneurship first decreases very rapidly in an early stage of development and then declines in a more moderate way (Kelley et al. 2011).[1] Developing economists recently emphasise on opportunity entrepreneurs as potential drivers of structural change in the modern as well as in the traditional sector in developing economies as these entrepreneurs have a greater potential to innovate, push greater specialization in manufacturing, and increase employment and productivity (Gries and Naudé 2010). For rural areas in developing countries this means that opportunity entrepreneurs could function as drivers of future endogenous non-farm growth. A growing non-farm economy can create employment and reduce poverty in rural areas (Otsuka and Yamano 2006; World Bank 2007) and also has the potential to slow down rural to urban migration (Haggblade et al. 2007).

The majority of empirical studies on differently motivated entrepreneurs are dealing with developed economies. In turn, evidence from developing countries and particularly from rural areas is rare. Studies on the informal sector have noticed that push/pull mechanisms can also drive entrepreneurship in developing countries. Studying rural Malawi, Tellegen (1997) outlines an opportunity scenario in which the rural population grows faster than the number of entrepreneurs, which increases demand and thus creates business opportunities. In turn, the necessity scenario occurs if income contraction leads to a strong influx of people into the entrepreneurship sector so that the sector predominantly functions as a safety net for the population. More recent studies empirically detected a dual structure within the urban informal sector in Cote D'Ivoire by distinguishing a competitive 'upper tier' that is entered voluntarily from an unproductive 'lower tier' in which individuals engage because they

[1] Since the incorporation in the Global Entrepreneurship Monitor (GEM) in 2001, national levels of opportunity and necessity entrepreneurship are observable in a number of developed and developing countries (Reynolds et al. 2002).

cannot enter the formal sector (Günther and Launov 2011). Despite these results, a direct application of the necessity/opportunity concept to developing countries is limited to very few studies. Rosa, Kodithuwakku, and Balunywa (2007) qualitatively and quantitatively analyse business motivations in Uganda and Sri Lanka and conclude that the necessity/opportunity concept should only be applied carefully. They further find that most new businesses are actually opportunity-driven. In turn, the very poor are trapped in a state of routine where they are unable to earn surplus income that could be invested in a necessity-driven business. Gurtoo and Williams (2009) analyse the informal sector in India and similarly conclude that informal entrepreneurs in India are not always motivated purely by necessity and that governments should therefore not ignore this source of entrepreneurship.

Three things can be concluded from previous studies. Firstly, the concept of necessity and opportunity entrepreneurship needs to be studied more intensely in developing countries, and particularly in rural settings due to the relevance of this concept in the debate about the role of entrepreneurship in the process of structural change and economic development. Rural opportunity entrepreneurs could be a future source of non-farm growth at the *'bottom of the pyramid'* (Prahalad 2005). Secondly, indicators should be designed carefully to correspond to the relevant empirical context. It is *'vital to develop further understanding of what "necessity" and "opportunity" entrepreneurship really mean, particularly in the context of the world's poorest countries'* (Rosa et al. 2007). Thirdly, because of this different meaning of necessity and opportunity in a rural developing context, existing assumptions towards necessity and opportunity entrepreneurs, which were mainly derived from empirical studies from developed countries, may not hold in rural settings in developing countries. Yet only if opportunity entrepreneurs differ significantly in their individual entrepreneurial skill and only if they are eventually more successful in terms of profits and employment generation, they may also have the potential to be future drivers of non-farm growth in rural areas.

In this paper we apply the concept of necessity and opportunity entrepreneurship in rural Vietnam by using two different classifications of necessity and opportunity entrepreneurship. The remaining parts of this paper are structured as follows: First, we provide a conceptual discussion on opportunity and necessity entrepreneurship in a rural developing context. Then we outline the situation in rural Vietnam and derive hypotheses

regarding the two types that can be tested in the empirical analyses. After that we present the data and the two classifications. In the next section, the hypotheses regarding differently motivated entrepreneurs are tested. Finally, conclusions for research and policy are drawn in the last section.

1.2 Opportunity and Necessity Entrepreneurship in a Rural Developing Context

The classical dual labour market model in development economics by LEWIS (1954) already assumes that households engage in types of informal and survivalist entrepreneurship, specifically in an early stage of economic development. Accordingly, a lack of other employment opportunities forces people to engage in the so-called 'subsistence sector' in which the marginal productivity of labour is close to zero. This involves activities in farming and casual labour but also self-employment activities such as petty retail trading. Once the economy develops, the labour force engaged in these unproductive activities provides an unlimited supply of labour for the so-called 'capitalist sector'. The classical notion of an unproductive informal economy has been contested in the past because empirical studies suggest that the informal sector is in fact competitive and may play an important role in economic development (Blau 1985; Mohapatra et al. 2007).

One explanation for this could be the fact that some microenterprises in developing countries are predominantly a *'survival type activity'*, while others *'are seeking to expand'* (Mead and Liedholm 1998). Recently, development economists have consequently extended the classical dual sector model by also accounting for opportunity entrepreneurship as part of and important motors of the capitalist sector (Gries and Naudé 2010). This is supported by studies that have proposed that the informal sector may consist of a competitive 'upper tier' that is entered voluntarily and an unproductive 'lower tier' in which individuals engage because they cannot enter the formal sector (Günther and Launov 2011; Earle and Sakova 2000).

One way to conceptually apply the concept of necessity and opportunity entrepreneurship in a developing context is to highlight how necessities and business opportunities in developing countries differ from those in developed countries. A common

feature of developing countries is the large proportion of the population living in rural areas and depending on agriculture as a main source of income. Necessities in these areas therefore do not relate to unemployment, which is predominantly an urban phenomenon. Instead, people in rural areas are frequently dealing with shocks, risks, and seasonality related to agricultural production on their own farm (Reardon et al. 2007). As a consequence, rural dwellers have to deal with periodical underemployment and insufficient incomes from their primary occupation more often.

Motivations behind entrepreneurship in a rural developing context can be better understood by referring to the sustainable livelihoods literature (Chambers 1995). While not focussing on rural entrepreneurship, livelihoods researchers discuss income diversification outside the agricultural sector, for example as a means to reduce natural risks in the agricultural sector. As a consequence, similar to the entrepreneurship scholars, livelihoods researchers contrast necessity (involuntary) and choice (voluntary and proactive) reasons for income diversification into non-farm activities (Ellis 2000). Frequently, necessity and choice factors are referred to as 'push and pull' factors that drive non-farm engagement (Reardon 1997). Pull factors include higher payoffs or lower risks from non-farm engagement. Push factors generally reflect low incomes and high risks from current activities or a lack of financial assets. They can be classified into five different types, as shown by Reardon et al. (2007): Firstly, a drop of seasonal income from farming can push households into non-farm activities to smooth income and consumption in the low season. Secondly, a transitory drop of income resulting from a shock, such as drought, could force households to cope ex post with such events and take up additional occupation. Thirdly, permanent insufficiency of farming income due to physical reasons such as environmental degradation or due to market or policy changes could result in a need for income diversification. Fourthly, strong variations in farm incomes can lead to high risks. For example, due to rainfall instability, households could be forced to engage in non-farm activities that are less prone to natural risks. Fifthly, an idiosyncratic failure in the credit market or insurance failures could force households to get extra income from non-farm sources in order to fund input purchases or insure against risks. These push and pull motives for non-farm diversification seem to be pretty much in line with

the concept of necessity and opportunity entrepreneurship although differences in the necessity concept should be considered when distinguishing the two types in this context.

1.3 Hypotheses regarding Necessity and Opportunity Entrepreneurship in Rural Vietnam

In rural Vietnam, entrepreneurship opportunities and necessities that could lead to entrepreneurship have been changing constantly in the past decades. Overall, the country has achieved remarkable rates of economic growth in the last decade, including a dramatic reduction of poverty in urban and rural areas. These developments also created new opportunities for the rural population. On the one hand, non-farm wage employment emerged as an important alternative to agricultural activities. Between 2002 and 2008, the share of people engaged in non-farm wage jobs as their main form of employment has increased considerably from 15.2% to 22.2%. On the other hand, entrepreneurship, meaning engagement in non-farm self-employment, has shown tendencies of increasing professionalization and specialisation (Oostendorp et al. 2009). This may reflect higher shares of opportunity entrepreneurs, although the share of people primarily engaged in such activities remained relatively stable at around 14.0% (General Statistics Office 2009). At the same time, households in rural Vietnam are strongly affected by covariate natural shocks, including storms, the flooding of agricultural land, crop pests and livestock diseases (Völker and Waibel 2010). Vietnam has always had to deal with such extreme weather events such as floods, heat waves, and tropical storms.[2] Yet, the frequency of such events could even increase as the process of climate change continues (Chaudhry and Ruysschaert 2007). This may result in a strong omnipresence of necessities related to agricultural activities and a need for risk management strategies of rural households.

So far, no study has applied the concept of necessity and opportunity entrepreneurship to Vietnam. A limited number of studies analyse motivations for entrepreneurship in urban areas in Vietnam. Swierczek and Thai (2003) find that business owners in Hanoi, Hue city and Ho Chi Minh city are often motivated by challenge and achievement while necessity is

[2] The constant need to protect the people from dangerous floods has shaped cultural patterns that are still important in the Vietnamese economic system of today (Blien and Phan Thi Hong 2012).

less important. In turn, Benzing et al. (2005) note that businesses in Hanoi and Ho Chi Minh city are also started to increase income and to create jobs for family members. As noted above, entrepreneurial motivations in rural areas can be expected to be very different compared to the major economic hubs of the country. Because of this we derive three hypotheses regarding necessity and opportunity entrepreneurship in rural Vietnam against the background of the earlier conceptual discussion and against the background of earlier results from developed and other developing countries.

First, findings from India and Côte d'Ivoire show that entrepreneurship in the informal sector is not dominated by necessity (Gurtoo and Williams 2009; Günther and Launov 2011). Also the GEM finds that usually less than half of entrepreneurship can be attributed to necessity entrepreneurship in East and South-East-Asian Economies (Global Entrepreneurship Monitor 2011).[3] However, the earlier studies and the GEM include urban entrepreneurs. We expect the necessity share to be even higher in rural areas in Vietnam because of the multiple risk factors related to agricultural activities and against the background of lower levels of structural change and economic development in rural areas:

Hypothesis 1: Entrepreneurship in rural Vietnam consists mainly of necessity entrepreneurship.

If opportunity entrepreneurs are more likely to drive or support structural change and development, they should be better educated and skilled compared to necessity entrepreneurs. We expect this also because the two types of entrepreneurs are likely to differ in their employment background. Unlike in developed countries, unemployment can be expected to be a rare previous activity among both necessity and opportunity entrepreneurs in rural areas. Necessities are largely dominated by risks and seasonality related to agricultural activities. As a consequence we assume that necessity entrepreneurs were more often engaged in agricultural activities prior to starting the business. Opportunity entrepreneurs in turn may have acquired skills in previous business activities or in non-farm wage labour. This leads to the second hypothesis:

[3] Necessity entrepreneurship accounts for 42% of total entrepreneurial activity in China in 2010 and for 29% in Thailand in 2007 (Global Entrepreneurship Monitor 2011).

Hypothesis 2: Opportunity entrepreneurs have a higher level of education and better skills compared to necessity entrepreneurs.

Moreover, if opportunity entrepreneurs are more likely to stimulate non-farm growth, they should also be more successful. This would also be in line with previous results from developed countries (Amit and Muller 1995; Arias and Pena 2010; J. H. Block and Wagner 2010). Although *'there is a lack of more fine-grained theory on the issue of success factors of necessity compared to opportunity entrepreneurship'* (J. H. Block and Wagner 2010), it is only logical that spotting a business opportunity can potentially lead to more successful businesses. As Storey (1994) notes, individuals beginning with a positive motivation are more likely to set up a business that grows. Because of that we assume that, also in a rural developing context, opportunity entrepreneurs are more successful than necessity entrepreneurs:

Hypothesis 3: Opportunity entrepreneurs in rural Vietnam are more successful in terms of profits and employment than necessity entrepreneurs.

1.4 Data and Definitions

All three hypotheses will be tested for rural Vietnam in the subsequent empirical analysis. We use a dataset on non-farm businesses in rural Vietnam that was collected in the context of a rural household survey in three Vietnamese provinces (Ha Tinh, Thua Thien-Hue, and Dak Lak) between April and May 2010.[4] In order to gain detailed insights into the entrepreneurial activities of the households, we added an additional questionnaire module for owners of non-farm businesses to every second household questionnaire.[5] If there were self-employment or small business activities in the household, the owners of these businesses were questioned with this additional questionnaire module. As a result, we obtained detailed data

[4] The research project was funded by the German Research Foundation (DFG). The sampling of households was arranged in a three stage procedure in which communes and villages were selected with respect to size and households were selected randomly with equal probability from household lists. The first stage additionally had to be designed with respect to different agro ecological zones (coastal, mountain, and rice plain area) so that insufficient sample sizes in some of these zones was evaded (Hardeweg et al. 2007).

[5] We added this module only to every second household questionnaire in order to save time and costs. The households that were interviewed with the extended questionnaire were selected randomly before the survey.

on 346 non-farm household businesses and their households (excluding non-local businesses and farming businesses).

Defining necessity and opportunity entrepreneurship is not an easy task. Previous research has applied numerous different definitions depending on the topic of interest, the context and the availability of data. Some studies indirectly measure business motivation by looking at activities before starting the business. For example, Block and Sander (2009) and Block and Wagner (2010) classify people who voluntarily left their job as opportunity entrepreneurs and those who left involuntarily as necessity entrepreneurs in Germany. This has the advantage of being a somewhat more objective measure. However, the true motivations behind starting the business are not observed. In addition, such a classification may not be appropriate in rural areas in a developing country because job loss cannot be expected to be the most important necessity. Without proper social security systems, rural people usually engage in some kind of (informal) economic activity, even if returns from these activities are very low.

The majority of studies measure motivations for starting businesses by asking the entrepreneurs directly for their reasons or motivations. This could help to find the true motives behind starting the businesses under the condition that the right questions are asked, the respondents are aware of their motives, and honest in their reply. Most studies ultimately assign entrepreneurs to either the necessity-push or the opportunity-pull group. One of the first distinctions comes from Amit and Muller (1995) who let respondents in a Canadian business survey indicate how strongly they agreed with four statements on a five-point Likert scale. Two items were related to push motives (job frustration and lack of challenge) and two were related to pull motives (perceived profits in new venture and desire to realise new venture idea). If the 'push' motives were indicated to be stronger than the 'pull' motives, the entrepreneur was classified as a 'push' entrepreneur; if it was the other way around, he was classified a 'pull' entrepreneur. The disadvantage of such a procedure is that the 'push' and 'pull' motivations were not designed to capture the complex nature of necessities in rural areas.

The most influential definition comes from the GEM. Since 2001, respondents of the GEM are asked whether they started a business because they wanted to exploit an opportunity or because they had no better options for work (Reynolds et al. 2002). In this way, the 'push' and 'pull' distinction was replaced by the concepts of necessity and opportunity entrepreneurship. With only slight adjustments, the GEM definition was used by Bergmann and Sternberg (2007) and other researchers. Recently, researchers increasingly acknowledged that it may be problematic to push respondents to choose only between two options. The GEM definition may thus overestimate opportunity entrepreneurship because people who have difficulty choosing either one or the other motive may tend to choose opportunity instead of necessity (Niels Bosma et al. 2009). Because of that, a refined concept of opportunity entrepreneurship was introduced in 2007 which also incorporates the main driver behind pursuing the opportunity. If the owner only pursued the opportunity in order to maintain his income, the entrepreneur is not classified as an improvement-driven opportunity entrepreneur (N. Bosma et al. 2008; Niels Bosma et al. 2009).

The widely used necessity/opportunity dichotomy was also criticised for being too limitative as the boundary between the two types of entrepreneurs is not as clear as most empirical studies pretend. Very often, business activities are motivated by necessity as well as by opportunity (Solymossy 1997; Hughes 2003; Giacomin et al. 2011). Because of that, some recent studies allow entrepreneurs to have started the business out of opportunity and necessity at the same time (Bhola et al. 2006; Williams et al. 2009; Verheul et al. 2010; Giacomin et al. 2011). In addition, the questions asked by the GEM may not be appropriate in a rural developing context. A qualitative study by Rosa, Kodithuwakku, and Balunywa (2007) reveals that poorly educated individuals in Uganda and Sri Lanka cannot understand the concepts of opportunity and necessity used in the questions.

As a result of the shortcomings of previous definitions of necessity and opportunity entrepreneurship, we use our own way to understand motivations for starting businesses. In this way the realities in a rural developing context and intellectual capabilities of respondents are more easily addressed. We directly asked the entrepreneurs for the most important reason and the second most important reason for starting the business. Besides nine previously designed answer categories, it was also possible to specify any other reason in case the

proposed answers would not apply. Most reasons can be assigned to necessity or opportunity without problems. For example, if the owner said he started the business because he figured that this kind of business could be successful, this is a motivation related to opportunity. Contrarily, if the business was started because of insufficient income in another activity, this is a motivation related to necessity. Some respondents used the possibility to specify their own reasons. In these cases the stated reasons have to be observed one by one and then assigned to either of the two broader categories.[6] In addition, some people inherited the business or major equipment and thus simply continued a family tradition. In such cases, we cannot clearly state whether this is a reason related to opportunity or necessity.

Because the question of definition is so critical, opportunity and necessity entrepreneurs are distinguished in two ways. This makes it possible to check how robust the results are against different classifications. The first classification only uses the primary reasons for starting the businesses, similar to the GEM definition. If the primary reason is a necessity motivation, these entrepreneurs are classified as necessity entrepreneurs. In turn, if the primary reason is an opportunity motivation, the entrepreneur is an opportunity entrepreneur.[7] The second classification uses both reasons for classifying businesses, thereby responding to the criticised dualism of necessity and opportunity entrepreneurship (Giacomin et al. 2011). As a result there are three categories instead of two: those who are driven only by necessity, those who are driven only by opportunity, and those who are driven by a combination of both.

1.5 Empirical Results

1.5.1 Occurrence

The stated primary and secondary reasons for starting the businesses are displayed in Table 1. It is shown that the most common reasons are the speculation that the planned business can be successful in the specific location, insufficient income from agricultural jobs,

[6] Often mentioned other reasons were that the household member was too old to pursue any other occupation (necessity reasons) or intrinsic motives like simply enjoying doing this kind of business (opportunity reason).

[7] If the manual observation of the primary reason is inconclusive (like in the case of inherited businesses), the secondary reason for starting the business is used in this classification.

and insufficient income from farming. The least common reason for starting a business is unemployment, underlining the insignificance of this phenomenon in rural areas.

Table 1: Reasons for starting the business

	Type of reason	Primary reason	Secondary reason
Previous experience in this kind of business	opportunity	6.4%	2.6%
Saw other successful business of that kind	opportunity	10.1%	7.2%
Figure that this kind of business can be successful	opportunity	27.5%	17.1%
Unemployment	necessity	4.9%	2.0%
Insufficient income from farming	necessity	13.0%	11.3%
Insufficient income from agricultural job	necessity	17.9%	12.7%
Insufficient income from non-agricultural job	necessity	5.5%	4.3%
Inherited the business	unclear	6.4%	0.9%
Other reasons	mixeda	7.5%	3.2%
No answer / not applicable	not used	0.9%	38.7%
N (100%)		346	346

Notes: [a] Specified reasons were observed manually and assigned to one of the two categories.
Source: Own calculations based on DFG-FOR 756 Household Survey 2010.

The results of the classification exercise are shown in Table 2. When using the first classification of necessity and opportunity entrepreneurship, 169 of 346 entrepreneurs are classified as opportunity entrepreneurs and 168 are classified as necessity entrepreneurs. Only nine entrepreneurs cannot be assigned to either of the two categories because of insufficient information.[8] Using the second classification, we find that 93 businesses were driven only by opportunity, 112 were driven only by necessity and 132 were driven by both (again nine businesses cannot be assigned to either category).

Regarding the first hypothesis concerning necessity entrepreneurship being in the majority in rural areas, we have to conclude that entrepreneurship in rural Vietnam does not mainly consist of necessity entrepreneurs. About half are primarily driven by opportunity and half are primarily driven by necessity. A chi squared test shows that this distribution is not significantly different from a uniform distribution ($p = 0.96$). Necessity and opportunity are thus equally important as primary reasons. However, including information on the secondary reasons reveals that 65% of entrepreneurs are driven by an opportunity as a primary or

[8] These businesses were thus excluded from the analyses in this paper.

secondary motivation while about 70% mention necessity as a primary or secondary reason. This difference is statistically significant. Necessities are thus slightly more important when considering secondary motivations in rural Vietnam. Yet overall the results show that neither necessity or opportunity motivations clearly dominate. This supports findings from other developing countries that found that entrepreneurship in the informal sector is not dominated by necessity (Gurtoo and Williams 2009; Günther and Launov 2011).

Table 2: Classifications of opportunity and necessity entrepreneurs

	Classification 1		**Classification 2**	
	using primary reason		using primary and secondary reason	
	N	%	N	%
Opportunity only	169	48.8%	-	-
Necessity only	168	48.6%	-	-
Primarily opportunity	-	-	93	26.9%
Primarily necessity	-	-	112	32.4%
Mixed	-	-	132	38.2%
Inconclusive	9	2.6%	9	2.6%
	346	100.0%	346	100.0%
Chi² -Test	0.00		6.78**	

Notes: The Chi² -Test for classification 1 and 2 tests whether the distribution is different from a theoretical uniform distribution.
Source: Own calculations based on DFG-FOR 756 Household Survey 2010.

1.5.2 General characteristics

Table 3 shows some selected general characteristics of necessity and opportunity entrepreneurs. It is shown that opportunity and necessity entrepreneurs only differ slightly in terms of their sectoral composition. The majority of rural entrepreneurs engage in traditional non-farm activities that seem to have little innovative capacity. Generally speaking, the majority of entrepreneurs are in the service and retail sectors. In addition, repair shops, handicrafts, and rice mills are also typical enterprises in the rural environment. Necessity entrepreneurs are more often engaged in wholesale and in taxi and transport. Opportunity entrepreneurs more often engage in the construction sector and are more often in the very heterogeneous 'others' section, indicating that they also engage in particular activities.[9]

[9] Such activities are, for example traditional healers, mobile tents, or veterinary services.

Table 3: General characteristics

	Classification 1			Classification 2			
	Primarily opportunity	Primarily necessity		Only opportunity	Only necessity	Mixed	
	Mean/ Share	Mean/ Share	t-test / chi²-test	Mean/ Share	Mean/ Share	Mean/ Share	F-test / chi²-test
Sectoral distribution:							
Rice Mills	4.7%	2.4%	1.4	3.2%	2.7%	4.6%	0.7
Handicrafts	11.8%	10.7%	0.1	15.1%	9.8%	9.9%	1.8
Repair shops	5.3%	3.0%	1.2	4.3%	4.5%	3.8%	0.1
Construction	5.3%	1.8%	3.1*	3.2%	0.0%	6.8%	8.2**
Food processing and selling	10.7%	16.1%	2.1	11.8%	16.1%	12.1%	1.1
Restaurant/cafe/hotel	6.5%	3.0%	2.3	6.5%	4.5%	3.8%	0.9
Retail-Shop (sales store)	27.8%	25.0%	0.3	28.0%	26.8%	25.0%	0.3
Petty trader (sales on street)	7.1%	8.3%	0.2	8.6%	7.1%	7.6%	0.2
Wholesale	10.1%	20.2%	6.8***	7.5%	17.9%	18.2%	5.8*
Taxi and transport	2.4%	6.6%	3.5*	2.2%	8.0%	3.0%	5.2*
Others	8.3%	3.0%	4.5**	9.7%	2.7%	5.3%	4.7*
Total	100%	100%		100%	100%	100%	
Characteristics							
Age of owner	43.3	44.3	-0.7	43.1	44.1	44.0	0.2
Female	59.8%	67.9%	2.4	61.3%	67.9%	62.1%	1.2
Ethnic minority	3.0%	6.6%	2.4	2.2%	6.3%	5.3%	2.0
Bad health status	9.5%	17.9%	5.0**	8.6%	17.0%	14.4%	3.1
Age of business	9.6	8.2	1.7*	9.7	7.9	9.2	1.8
Registration	50.3%	38.7%	4.6**	51.6%	39.3%	43.9%	3.2
Is primary occupation of the owner	67.5%	56.6%	4.3**	72.0%	56.3%	59.9%	5.8*
Days worked in business per month	24.6	23.4	1.7*	23.8	23.2	24.8	1.57
N	169	168		93	112	132	

Notes: T-Test or F-Test was calculated for comparing group means, Pearson Chi² test was calculated for comparing shares. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.
Source: Own calculations based on DFG-FOR 756 Household Survey 2010.

Regarding other characteristics, no significant differences can be found in terms of age of the owner, gender, and ethnicity of the entrepreneurs. Most business owners are in their early 40's, and the vast majority of entrepreneurs belong to the Kinh (ethnic Vietnamese). In addition, as opposed to many developed countries, entrepreneurship in Vietnam is not an activity dominated by males. About two thirds of both types of entrepreneurs are female. However, we find that entrepreneurs that are primarily motivated by necessity state that they have health problems significantly more often. This reflects old and sick people who are unable to continue their regular work and thus start a small business at home in order to maintain a certain level of income. Businesses primarily motivated by opportunity are also

significantly older which reflects the better survival prospects of opportunity entrepreneurs. Not surprisingly, they are also more often registered as household businesses or according to the enterprise law. Furthermore, opportunity entrepreneurs show higher commitment. The businesses are clearly more often the primary employment of the owner, which is evident in both classifications and the owners work more days per month – a sign of professional entrepreneurship among the opportunity entrepreneurs.

1.5.3 Employment Background and Skills

The second hypothesis assumes that opportunity entrepreneurs have a higher level of education and better skills compared to necessity entrepreneurs. If this is the case, opportunity entrepreneurs might have a higher potential to be drivers of structural change and development because a higher level of skills is needed to innovate and to run a successful business. We measure skills in two ways. Firstly, we look at the employment background because previous activities indicate what kind of skills a person might have acquired. In a second step we look at the educational attainment and use a self-assessment of the entrepreneur.

The primary employment statuses before starting the businesses in Table 4 reveal one of the major differences between necessity and opportunity entrepreneurs in rural Vietnam. Necessity entrepreneurs were more often previously engaged in agriculture. About three quarters of necessity entrepreneurs but only about half of the opportunity entrepreneurs were self-employed farmers before becoming engaged in the business. These results reflect that the necessities that lead to business formation in rural areas may primarily be related to agricultural production. In contrast to urban areas and developed countries, unemployment does not play an important role in rural business formation. Less than 1% of the entrepreneurs started a business out of unemployment and less than 6% started a non-farm business out of casual wage employment. In turn, opportunity entrepreneurs were more often engaged in another non-farm business or were students at a school or university. This already indicates that opportunity entrepreneurs may have acquired more skills in the non-farm sector or in schools or universities.

Table 4: Primary employment status and location before starting the business

	Classification 1			Classification 2			
	Primarily opportunity	Primarily necessity	Chi²-test	Only opportunity	Only necessity	Mixed	Chi²-test
Type of activity							
Own Agriculture	53.0%	73.7%	15.4***	44.6%	73.0%	68.2%	19.7***
Non-farm Business	18.5%	11.4%	3.3*	21.7%	11.7%	12.9%	4.7*
Wage Labour	14.3%	10.8%	0.9	12.0%	11.7%	13.6%	0.2
Student/Pupil	8.3%	1.8%	7.4***	14.1%	0.9%	2.3%	21.8***
Housewife	4.8%	1.2%	3.7*	5.4%	1.8%	2.3%	2.7
Unemployed	0.0%	0.6%	1.0	0.0%	0.9%	0.0%	2.0
Other	1.2%	0.6%	0.3	2.2%	0.0%	0.8%	2.7
Total	100%	100%		100%	100%	100%	
Location of activity							
Same commune	81.0%	86.2%	1.7	73.9%	86.5%	87.9%	8.7**
Same province rural	4.8%	4.8%	0.0	6.5%	4.5%	3.8%	0.9
Same province urban	3.6%	1.8%	1.0	4.4%	1.8%	2.3%	1.4
Other province	10.7%	7.2%	1.3	15.2%	7.2%	6.1%	6.2**
Total	100%	100%		100%	100%	100%	
N	169	168		93	112	132	

Notes: T-Test or F-Test was calculated for comparing group means, Pearson Chi² test was calculated for comparing shares. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.
Source: Own calculations based on DFG-FOR 756 Household Survey 2010.

Regarding the location of the previous activity, we cannot find any clear differences. The majority of businesses are started by people from the same commune or province. This supports the idea that entrepreneurship is a local or regional event (Feldman 2001) and thus constitutes an endogenous development potential also in rural developing regions. However, the share of return migrants who were previously employed or studying in another province appears to be higher among the opportunity entrepreneurs. Among entrepreneurs that are only motivated by opportunity the share of return migrants is 15.5%. In contrast, only 7.2% of the necessity only entrepreneurs are return migrants according to classification 2. This is in line with a recent study from rural China that found urban to rural return migrants to be more likely to become entrepreneurs than non-migrants (Démurger and Xu 2010). These return migrants have acquired skills in the urban centres of the country that might help them to set up more successful and innovative companies.

Also in terms of formal education opportunity entrepreneurs are better equipped with human capital. As is shown in Table 5, entrepreneurs primarily motivated by opportunity have

acquired more than eight years of schooling on average – about 1.5 years more than entrepreneurs primarily motivated by necessity. We also asked the entrepreneurs directly where they have acquired the skills they use for running the current business (Table 5). It soon becomes clear that most entrepreneurs have learned the majority of their skills from other family members while formal education is not perceived to be all that important. Yet again it is shown that opportunity entrepreneurs are better skilled. They more often acquired skills in a previous business or in vocational training. The results reflect that opportunity recognition requires a certain level of education or experience from other businesses. In addition, better educated people might only start a business if they have recognised an opportunity which can be explained with higher opportunity costs. Educated people also have the option to engage in better-paid wage employment. Nonetheless, opportunity entrepreneurs appear to be better skilled. These skills could help them to develop innovative business strategies.

Table 5: Education and skills

	Classification 1			Classification 2			
	Primarily opportunity	Primarily necessity		Only opportunity	Only necessity	Mixed	
	Mean/ Share	Mean/ Share	t-test / chi²-test	Mean/ Share	Mean/ Share	Mean/ Share	F-test / chi²-test
Education of entrepreneur (years)	8.1	6.6	4.2***	8.3	6.6	7.3	6.5***
Acquired skills in school	3.0%	1.2%	1.3	3.2%	0.9%	2.3%	1.4
Acquired skills in vocational training	13.6%	6.6%	4.6**	12.9%	8.9%	9.1%	1.1
Acquired skills in farming	9.5%	11.9%	0.5	8.6%	8.9%	13.6%	2.0
Acquired skills in previous business	14.2%	4.8%	8.7***	9.7%	3.6%	14.4%	8.3**
Acquired skills in wage labour	4.1%	3.6%	0.1	5.4%	2.7%	3.8%	1.0
Acquired skills in family	60.4%	62.5%	0.2	54.8%	62.5%	65.2%	2.5
N	169	168		93	112	132	

Notes: T-Test or F-Test was calculated for comparing group means, Pearson Chi² test was calculated for comparing shares. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.
Source: Own calculations based on DFG-FOR 756 Household Survey 2010.

1.5.4 Performance

Our third hypothesis assumes that opportunity entrepreneurs are more successful in terms of profits and employment compared to necessity entrepreneurs, which was also the result of studies from developed economies (Amit and Muller 1995; J. H. Block and Wagner 2010). We test whether this hypothesis also holds in a rural developing context by using two

variables: profits, converted to USD purchasing power parities, and the number of employees. Simply comparing means shows that opportunity entrepreneurs achieve higher profits than necessity entrepreneurs. According to classification 1, entrepreneurs driven primarily by opportunity reach 345.8 USD of profits per month and have 0.6 employees while entrepreneurs driven primarily by necessity only reach 235.5 USD of profits and have 0.2 employees. According to classification 2, entrepreneurs driven only by opportunity reach 338.6 USD of profits per month and have 0.6 employees, entrepreneurs driven only by necessity reach 207.0 USD and have 0.1 employees, while entrepreneurs driven by both necessity and opportunity reach 328.7 USD and have 0.5 employees. Although the differences are consistently statistically significant ($p<0.01$), this may be resulting from differences in general and locational characteristics.

Because of this we test whether the relationship remains significant in multivariate regression models that control for a set of other factors that may determine business success. We estimate standard ordinary least squared (OLS) regressions to separately explain profits and employment. Independent variables indicate business motivations. In the first model, classification 1 is represented by including a dummy indicating that the business was primarily started out of opportunity (primarily opportunity). The reference group is having started primarily out of necessity. In the second model, classification 2 is represented by one dummy for having started the business only out of opportunity (opportunity only) and one dummy for having started the business out of opportunity and necessity (mixed). Here, the reference group has started the business out of necessity only.

Table 6: Motivation as a determinant of business success (OLS)

	Profits	**Profits**	**Employees**	**Employees**
	classification 1	classification 2	classification 1	classification 2
Motivation:				
Primarily opportunity (vs. primarily necessity)	0.14*** (2.7)		0.05 (0.9)	
Opportunity only (vs. necessity only)		0.12** (2.0)		0.07 (1.2)
Mixed (vs. necessity only)		0.22*** (4.0)		-0.00 (-0.1)
General characteristics:				
10 sectoral dummies included	yes	yes	yes	yes
Business age	0.17*** (3.5)	0.17*** (3.4)	0.09* (1.8)	0.09* (1.8)
Initial investment (ln)	0.45*** (7.6)	0.44*** (7.5)	0.32*** (5.6)	0.32*** (5.7)
Education	-0.01 (-0.2)	0.00 (0.1)	-0.04 (-0.9)	-0.05 (-0.9)
Vocational skills	0.01 (0.2)	0.02 (0.3)	-0.08 (-1.5)	-0.07 (-1.4)
Female	-0.09 (-1.4)	-0.09 (-1.3)	-0.10 (-1.6)	-0.10 (-1.6)
Minority	-0.05 (-0.9)	-0.06 (-1.1)	0.02 (0.5)	0.03 (0.5)
Natural shocks	-0.12** (-2.4)	-0.13** (-2.5)	-0.01 (-0.3)	-0.01 (-0.2)
Locational characteristics:				
Non-farm wage rate	0.16*** (2.7)	0.18*** (3.0)	0.02 (0.4)	0.02 (0.4)
Distance to Market	-0.09 (-1.6)	-0.06 (-1.3)	-0.00 (-0.0)	-0.00 (-0.0)
Distance to intermediate city (ln)	0.02 (0.4)	0.03 (0.5)	-0.08 (-1.5)	-0.08 (-1.4)
Two lane road	0.03 (0.3)	0.01 (0.1)	-0.09 (-1.1)	-0.10 (-1.2)
Thua Thien Hue	-0.13* (-1.9)	-0.12* (-1.8)	-0.05 (-0.8)	-0.05 (-0.8)
Dak Lak	0.08 (0.8)	0.07 (0.8)	-0.06 (-0.7)	-0.07 (-0.8)
N	318	318	326	326
F statistic	7.71	7.94	9.19	8.88
R^2	0.39	0.40	0.42	0.43
adjusted R^2	0.34	0.35	0.38	0.38
LR test Motivation	7.20***	8.01***	0.89	1.10
LR test Individual characteristics	3.83***	3.64***	9.66***	9.71***
LR test Locational characteristics	2.40**	2.50**	0.87	0.87

Notes: For profits, the natural logarithm was used and cases with negative or zero profits/sales had to be excluded. Displayed are standardised coefficients. t statistics in parentheses * p < 0.10, ** p < 0.05, *** p < 0.01
Source: Own calculations based on DFG-FOR 756 Household Survey 2010.

Further independent variables are added to control for other factors which can influence profits and employment. Primarily these are general characteristics of the entrepreneur and his/her business which influence business growth according to previous theoretical and empirical work (Storey 1994). The years spent in formal education (education) and a dummy for having acquired skills in vocational training (vocational skills) represent the human capital of the entrepreneur that can lead to higher returns in the business. A dummy for being female (female) and a dummy for not being part of the Kinh majority (minority) reflect important socio-demographic characteristics and possible social marginality. Women entrepreneurs in Vietnam are still constrained by gender stereotypes, values, and norms (Vietnam Women Entrepreneurs Council 2007). As a result, female entrepreneurs, who are in the majority in Vietnam, could be less successful than their male counterparts. Similarly, ethnic minorities are socially disadvantaged as they often face lower returns to productive characteristics (van de Walle and Gunewardena 2001). The largest minority groups in the research provinces are the Ede people in Dak Lak and the Taoi and Cotu people in Thua Thien-Hue. Also, the age of the business (business age) is an important control as older businesses managed to survive, had more time to grow, and are thus much more likely to be prosperous. Initial investment (initial investment) may also be an important determinant of future returns in informal activities (Grimm et al. 2011), which is why this is also included as an independent variable (in USD purchasing power parities). Finally, sectoral affiliation is crucial. Thus, ten dummies that represent the sectors shown in Table 3 are added. The reference sector is retail.

Besides the general characteristics of the entrepreneurs, we control for a set of locational characteristics. First of all, sales and profits could be stimulated by local demand which can be expected to be higher in communes with better access to non-farm wage employment. We measure this by calculating the share of nucleus household members of working age in other households in the same commune that are engaged in non-farm wage employment (Non-farm wage rate). The distance to the next market in minutes (distance to market) could influence business profits because longer distances to markets can mean extra transportation costs and far away from markets, business opportunities might be limited. Theoretically, not only the distance to a local market but rather access to larger input and output markets are crucial. In the three research provinces, these markets can be more easily

accessed in proximity to the provincial capital. Because of that the natural logarithm of the distance to these intermediate cities (distance to intermediate city) is also controlled for. Finally, it should be noted that many rural businesses in Vietnam are situated next to larger streets and highways such as the national highway number one. Close to such major infrastructure, businesses may be more successful due to larger sales markets. Consequently, we also include a dummy for being located in a village that is connected with a two lane made road. Finally, regional dummies are included to indicate whether the business is located in Thua Thien Hue, Dak Lak, or Ha Tinh (reference category). Thua Thien Hue is the province with the largest number of entrepreneurs and the most viable non-farm economy – particularly in Hue city. This may open up new business opportunities. However, strong urban competition could also hamper businesses in rural areas due to leakage effects that occur in a later stage of non-farm development (Start 2001).

The results of the OLS regressions are displayed in Table 6. It becomes clear that profits are significantly influenced by entrepreneurial motivation, even after including the control variables. The results are robust for both types of classifications. Classification 1 shows that entrepreneurs primarily driven by opportunity generate more profits than entrepreneurs primarily motivated by necessities. Classification 2 reveals that entrepreneurs driven only be opportunity generate significantly more profits than entrepreneurs driven only by necessities. However, those businesses driven by both necessity and opportunity are also more successful than entrepreneurs driven only by necessity. This is surprising because GEM researchers have assumed that opportunity entrepreneurship is generally overestimated when asking for primary motivations. The results show that at least in terms of outcome, asking only for primary motivations may rather overestimate necessity entrepreneurship. After all, it seems that opportunities predominantly determine profits while necessities only have negative implications in the absence of such opportunities.

Also, the general characteristics show some interesting results. Sectoral affiliation determines business success, with construction being the most profitable non-farm sector. Construction businesses are easy to implement in a rural environment and appear to be the major beneficiaries of the economic growth that has occurred in the three research provinces in the last decade. In addition, the age of the business is crucial. As expected, older businesses

have been able to generate more sales and to become more successful over time than younger businesses. The strongest effect of all independent variables is the initial investment, which is also hardly surprising. The more businesses invest from the start, the larger the returns are later on. Education and vocational training, in turn, seem not to be very important determinants of profits. This may be surprising at first sight. However, given the low technological level of the majority of non-farm businesses in rural areas, it is reasonable that education does not play a strong role in determining business success. Also, gender and ethnicity do not play strong roles as determinants of business success in the specification as the effects are statistically insignificant. Females and ethnic minorities do generate lower profits than males and ethnic Vietnamese. However, this can mainly be attributed to differences in initial investments which are controlled for in the regressions. Females and ethnic minorities initially invest less money in their businesses. Small businesses thus do not help to ease the generally problematic situation of Vietnamese ethnic minorities in terms of living standards (Dang 2010). The role of the locational characteristics is limited to the local non-farm wage rate. Profits are significantly higher when there are more people working in non-agricultural wage employment in other households in the same commune. This could be explained with higher incomes and greater demand for products and services in regions with better access to non-farm wage employment. The other locational factors do not show any significant effects on profits when controlling for general business characteristics and motivation.

The results for employment are not as clear as for profits. When controlling for general and locational characteristics, the effect of business motivation does not remain a significant determinant of employment figures regardless of the classification. This may be due to the fact that a large number of businesses is self-employed and does not have any employees. Non-farm businesses in rural Vietnam often hesitate to grow in terms of employment. We found that 91% of all entrepreneurs do not plan to hire additional non-family employees in the next year. Again 91% of these entrepreneurs state that the reason for this would be a lack of work. Opportunity entrepreneurs are slightly more willing to hire non-family employees (11.3% vs 4.9%; $p < 0.01$). Yet, as is shown in the multivariate analyses, their overall capability to create employment for other rural households also seems to be limited.

Although the results from the OLS seem to be very robust regarding different types of classifications, some doubts remain concerning the direction of causality. Given the time that has passed between the start of the company and the survey, answers may be prone to measurement error. In retrospect, some respondents of successful business may tend to perceive opportunity as having been the major reason for starting the business. In turn, they may forget the necessities that once forced them to become an entrepreneur. As a result, independent variables may be correlated with the error term and coefficients may be biased (Wooldridge 2002). We tested whether endogeneity is a problem by instrumenting the business motivation with dummies that represent the possible activities engaged in before starting the business.[10] However, in all regressions the tests of endogeneity cannot reject the null hypothesis that variables are exogenous. We can therefore assume that endogeneity does not play an important role in the OLS specifications and we can stick to the earlier interpretations.

1.6 Conclusions

In this paper the concept of necessity and opportunity entrepreneurship is applied to rural Vietnam. The aim is to evaluate whether opportunity entrepreneurs in rural areas in developing countries have a greater potential to stimulate endogenous non-farm growth than necessity entrepreneurs. The results contradict the popular argument in the entrepreneurship literature that regards rural entrepreneurs in the developing world as primarily necessity-driven. Despite numerous risks and problems that appear in a rural developing context, necessity is not the only motivation for starting a non-farm business. About 65% of the entrepreneurs state that opportunity is among the two most important reasons for starting the business. We show that, although the concept has so far been primarily applied to developed countries, distinguishing necessity and opportunity entrepreneurs is very suitable in a rural developing context if some contextual specifics of the rural environment are taken into

[10] As was shown in Table 4, necessity entrepreneurs were clearly more often engaged in farming while opportunity entrepreneurs were more often engaged in another business or were still in school or university. The activities before starting the business are unlikely to directly determine business success but they are very likely to determine business motivation. A test of over-identifying restriction (Hansen's chi squared) is insignificant for all equations, showing that the instruments are valid in all regressions.

account. Firstly, it should be acknowledged that many entrepreneurs in the rural environment are motivated by a combination of both necessity and opportunity (Solymossy 1997; Hughes 2003; Giacomin et al. 2011). Secondly, unemployment should not be regarded as the primary necessity that rural people in developing countries face. Instead, underemployment, risks, and shocks, often related to agricultural production, can lead to low incomes and poverty. Rural necessity entrepreneurs then start informal businesses in order to supplement and increase their incomes and to avoid poverty. Thirdly, opportunity entrepreneurs in rural areas of developing countries are also not comparable to those of developed countries. Perceived opportunities predominantly relate to local market potentials or to business models that are new to an area instead of having to do with technological upgrading and innovation.

Nonetheless, opportunity entrepreneurs have greater entrepreneurial skills than necessity entrepreneurs. They have a farming background less often but instead have been involved in non-farm businesses before or started their business directly after school or university more often. As a consequence they are better educated and more experienced in doing business. In terms of output, entrepreneurs motivated by opportunity generate higher profits even after controlling for general business characteristics and locational characteristics. This is even the case for businesses that are motivated by both necessity and opportunity. Starting a business out of necessity is thus not automatically a hopeless endeavour. Necessity entrepreneurs are only less successful if they do not perceive an opportunity at the same time. However, like necessity entrepreneurs, opportunity entrepreneurs have only a relatively limited capacity to generate non-farm employment for other households. This may be because perceived opportunities in the rural environment rarely relate to innovative business ideas and businesses are often not oriented towards employment growth.

Despite this shortcoming, entrepreneurs motivated by opportunity appear to have a greater potential to become drivers of future endogenous development in the rural non-farm economy due to their generally greater entrepreneurial ability. This should be acknowledged for example when designing entrepreneurship support schemes. Opportunity entrepreneurs in rural areas in developing countries may not be as innovative and successful as their counterparts in developing countries or in urban areas. Yet they constitute one of the very few valuable and scarce resources for future endogenous non-farm growth in rural areas.

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