Education and Career Patterns among Small Scale Entrepreneurs in Thailand

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Introduction

Since the beginning of the 1970s, the growing urban labour force not employed in modern factories, services or the administration has become a major concern of the governments of developing countries. The so-called informal sector, once considered a social pariah, has been surveyed and analyzed, and is now seen as a socially useful "sponge" of unemployment. This shift is one of the benefits brought about by the greater emphasis international agencies have placed on the informal sector: the ordinary labour of million of people has been acknowledged by their governments as being socially useful.

Soon after the discovery of this social phenomenon, the need for government action was brought to the front stage. Beyond the ordinary social welfare policies, one of the major fields of intervention of governments in the informal sector is training and education. Under the auspices of the International Labour Organization (I.L.O), many projects of training or upgrading the skills of the self-employed, workers or small entrepreneurs in the informal sector have been established throughout the world.

Early research on this topic noted the low educational level of people engaged in the informal sector as well as their lack of skills, low productivity and low incomes. In comparison, the formal sector was supposed to attract well-educated and trained people with higher salaries. Hence the theoretical background of the dualistic economy, where the barrier of the technical level in the modern sector would reject the surplus of labour in an informal low income-generating sector.

Data has been found to support this theory, consisting generally of evidence gathered from a very specific segment of the informal sector, that is low-income areas. In Thailand especially, research on the informal sector has generally been conducted among selected low-income households, in order to gather data to be used for social welfare policy. Although the quality of these studies might be excellent and the objective of these policies be laudable, it cannot be used to prove anything about the characteristics of the informal sector, since the conclusions are already contained in the premises: it is obvious that the average income of a sample of households selected based on their low earnings will be low! And such a population is likely to be poorly educated, not well-prepared to meet the needs of a modern economy, etc.

The objective of this paper is to examine entrepreneurs in small-scale industries, who indeed are in the informal sector whatever definition is chosen, by looking closely at their educational and training backgrounds. After a discussion of the educational level in Thailand, focusing on the labour force (section 1), we shall see the characteristics of entrepreneurs in small-scale industries in this respect (section 2). Then, we shall try to analyze the impact of their educational and career characteristics on their success, through their income (section 3).

1. Education and Training Background of the Labour Force

Lagging behind many other Asian countries in education for many years, Thailand has made considerable efforts to upgrade the educational level of its population. This policy has been crowned with success: Thailand has now one of the highest levels of literacy in Asia. However, the legacy of the past is still be evident.

1.1 Education Level of Labour Force in Thailand

Since 1992 primary education has been compulsory in Thailand. Enforcement of education laws took decades, while full schooling of children was achieved only in the 1960s. In 1962, compulsory schooling was raised from four years of primary to complete primary (six years). However, the 4th year ("Prathom 4") continues to be the basic education level attained by the majority of the population.

Thailand now has one of the highest literacy rates of Asia. This is due to the stringent policy set up by the Government after the 1932 revolution. While these considerable improvements have favoured primary school enrollment, the rate of schooling in secondary schools remains low, as compared with neighbouring countries.

Table 1 : Enrollment Ratios in Selected Asian Countries, Mid 1980s

	Primary	Secondary	Higher	% adults literate
Thailand	97	30	20	91
Malaysia	99	53	6	74
Indonesia	118	42	6.5	74
Philippines	106	65	38	86
India	92	41	9	43
Viet Nam	102	42	na	88

Enrollment ratios are the ratio of pupils on the total population of an age group. In primary, it can be over 100, since children above the age limit are enroled.
Source: Jee-Peng Tan, Alain Mingat (1989) except for Viet-Nam. Data based on UNESCO sources. For Viet Nam, World Bank, (1990) and General Statistical Office (1991).

The Thai school system is characterized by a very low enrollment ratio in secondary school. While enrollment in primary school is satisfactory, there is a drop at the start of secondary school with half the children leaving the system. On the other hand, the drop at the other end of the system (end of secondary) is low, as compared with other countries.

This unique situation holds heavy consequences for the educational level of the labour force. As Charles N. Myers and Chalongphob Sussangkarn (1991) point out, "The current secondary enrollment ratios are below the sixth Plan targets, the lowest in ASEAN, less than half of what they were in Korea when GNP per capita in Korea was at Thailand's current level, and less than half of what they are now in Sri Lanka which has about a third of Thailand's current per capita income. While increases in these ratios according to the Seventh Plan target will improve the situation considerably, there are long lags before the improvement will have significant impact on the average quality of the Thai labor force. This is because improvement in the education system only affects the new entrants into the labor force, and there are still a very high proportion of those with low education in the current Thai labor force." (p. 31)

The structure of average education levels of the labour force reflects the general situation with a lag of one generation, therefore at a lower average level. In urban areas where the educational level is much higher, less than half of the entire labour force has an education level beyond primary. Among production workers, the education level is especially low: less than 30% have studied beyond primary. We shall later compare this group (urban production workers) with our sample of entrepreneurs.

Table 2 : Percentage of Labour Force Having Completed Primary School, by Gender, in the Whole Urban Labour Force and Selected Categories, 1988

	Under prathom 4	Lower primary	Upper primary	Lower secondary	Upper secondary	Tertiary
Whole labour force, males	5.3	33.3	13.4	16.8	14.9	16.3
Whole labour force, females	7.3	37.2	14.2	9.1	13.9	18.3
Production workers	6.1	46.2	19.2	13.5	10.3	4.7
Sales workers	12.4	42.9	14.8	9.1	14.2	6.7

Source: Labour Force Survey, 1988, 3rd round , National Statistical Office.

Improving general education remains a major concern of governments, but since full schooling of children has been almost achieved, emphasis is now being given to the secondary school as well as to matching of education to the needs of the economy.

Besides general education, Thailand has had to face dramatic challenges in training its labour force. In the last twenty years, the economy grew at one of the highest rates in the world. Over the same time period, the total labour force has doubled, from 16.7 million in 1970 to 32 million in 1990. Vocational training, which is fairly developed in Thailand, has to adapt very quickly to the needs of economy.

2. Education and Training among Small Entrepreneurs

We shall now examine the situation of education and training of entrepreneurs of small enterprises. The data are drawn from a random survey made by the ORSTOM and CUSRI project on some 735 entrepreneurs of individual enterprises in five selected activities in urban areas of Thailand. The five activities are: garment making, metal production including aluminium, restaurants- either

inside buildings or the street, wooden furniture production, and electrical appliance repairs. Further in the text, these five activities are merely referred to as garment, metal, restaurants, wood and electric. Some results for the first three activities, focusing on the behaviour of entrepreneurs vis-à-vis the institutional background, have already been published (Naruemol Bunjongjit and Xavier Oudin (1992)). The referred publication contains information on the methodology and scope of the survey, as well as detailed information on the characteristics of the entrepreneurs.

Small entrepreneurs of these five activities do not represent the "informal" sector of Thailand. Beyond the limitation of activities and the exclusion of rural areas, the sample is representative of all kind of entrepreneurs, provided their enterprise is not registered as a company. No assumption has been made prior to the survey, such as the size of the enterprise, the level of income, technological characteristics, etc., to draw the sample. Thus, the sample consists of self-employed or home workers with no employee at all or only family helpers (55% of the sample have no employee or only family labour), as well as small enterprises with employees. But the sample is not weighted by activities. No correction has been introduced in order to give a weight to each activity proportionally to their importance at the national scale (which could be estimated from various sources). For this reason, most results are presented here by activity. Finally, the sample is representative of urban areas at the national scale (the sample was weighted by main region, proportionally to the estimated whole population of individual enterprises in each activity).

2.1 Results for Thailand

As in other countries, available data show low average levels of education among people involved in informal activities. Data differ according to the unit surveyed. When the unit consists of members of households, the average level of education is lower. When the unit is defined as the entrepreneur alone (i.e., the head of enterprise, including one-person enterprises), the levels of education are higher. This is the case in the CUSRI-ORSTOM survey. In table 4 where we consider average duration of schooling, the Department of Labour and ILO survey gives quite high figures: more than 9 years on average for entrepreneurs (end of lower secondary level). This is due to the fact that a two-step sampling gave more weight to entrepreneurs in units with at least 5 employees (see tables 3 and 4).

Though difficult to compare because of the various methods used to draw the samples and differences of definition of the informal sector, these data are to an extent consistent. They show that the average level of education of people involved in informal activities is not much below that of the labour force. If we consider the whole labour force, including rural areas, 6% of the labour force never attended school, and 37% have attained upper primary or over. When considering entrepreneurs, including self-employed and home-workers, it cannot be assessed that these people fall into the informal sector because they are blocked from entering the modern sector due to their insufficient levels of education. Further evidences on incomes will later support this idea. But first, a closer look at the educational level of entrepreneurs in small-scale activities is needed.

Table 3 : Education Level of Different Categories of Entrepreneurs and Workers, from Several Surveys in Thailand

Survey	Date of survey	Place	Pop surveyed	No. cases	% min. educated*	% not educated	Notes
NIDA	1981	Bangkok	Households in slums	1851	20.3%	8.6%	a
NESDB, ILO-Artep	1986	Bangkok	Self-employed in 2 sub districts	235	37.0%	13.2%	
TDRI	1990	Bangkok + 4 towns	Heads of households e: in small activities w:	373 153	36.5% 38.5%	10.7% 6.9%	b
CUSRI-ORSTOM	1991	Urban	Head of individual enterp.	735	53.6%	4.6%	
Urban Labour Force	1988				58.7%	3.9%	
Production workers	-				47.7%	3.4%	

Notes: * Above 4th year of primary; e: employers; w: workers.
a: The sample is made up of households in selected slum areas. The households must have at least one person working in the informal sector (self-employed, casual workers, workers in units with less than 10 persons or earning less than minimum legal wage).
b: From a sample of households, heads of households engaged in activities either as self-employed or as a worker, provided that the activity does not employ more than 10 people. Bangkok's weight is 70% of the starting sample. 80% of households were drawn in slum areas.
Sources: NIDA, see Suwatee (1982); NESDB, see: ILO-ARTEP (1988); TDRI, see: TDRI (1992); Urban Labour Force: see table 2.

Table 4 : Average Duration of Education of Different Categories of Entrepreneurs and Workers in Selected Surveys

Survey	Date of survey	Place	Pop surveyed	No. cases	Entrep.	Workers	Notes
Dept. of Labour, ILO	1990	Bangkok	Enterprises with less e: than 10 workers w:	275 1753	9.1 y	6.7 y	a
CUSRI-ORSTOM	1991	Urban	Head of individual enterp	735	7.0 y		

a: Sample of 300 enterprises in six activities, divided into two sub-samples: one for enterprises with 0 to 4 workers (131 cases), one with enterprises with 5 to 20 workers (169 cases). Source: see above.

2.2 Discrepancies between Genders and Ages

The distribution of entrepreneurs by school attainment varies tremendously by age, showing the improvement of the school system nationwide over the last 30 years. Two-thirds (68%) of male and three quarters (77%) of female entrepreneurs older than fifty have a level of education below or equal to prathom 4. Among younger entrepreneurs (under 31), the figures are 16% and 24 % respectively. During the same period, those who have at least reached upper secondary level are more than 40% among younger males, and one third (34%) of their age categories among females.

Beyond the dramatic improvement of education levels that has affected the whole population, these data show a strong discrepancy between males and females, except among the youngest

entrepreneurs. This gap between genders is evident in other aspects of small-scale activities, females having generally a smaller level of business and turnover.

However, improvement in education is clear. It is faster for females, who start from a lower level (5 years of schooling among the elder), and overtake the males in the youngest generation, with an average of 8.4 years (8.2 for males). Since there are still fewer females with higher degrees and more with low degrees, the higher average duration of schooling suggests that females take more time to reach a given attainment, but also that the ones who carry on lengthy studies do it longer than their male counterparts.

2.3 Family Background and Education

In addition to gender and age, family background is one cause for major educational gaps between entrepreneurs. Due to the improvement of education in Thailand that we have described, access to primary school is now possible for everyone, whatever the social background. However, a social gap --that is the disadvantage of being the child of a farmer-- appears at the end of primary school. The children of farmers make up 44% of our sample. They also comprise 44% of entrepreneurs who have completed primary school, but are only 30% of those who studied upper secondary school, and 8% of those who went beyond secondary school. Comparing this share at different levels with the share of each social group in the whole sample, we can set up a ratio that can measure the advantage or disadvantage of each social group at different educational levels.

While in primary school, all social groups are represented according to their share in the sample, but a gap appears from this point and widens as we look at higher levels. The farmer's ratio goes down to 0.6 at upper secondary level, and to 0.2 at higher level. By contrast, children of industry workers, and even more so children of government employees are over-represented in higher educational levels.

By comparing the ratio of all groups to that of children of farmers, we can compute an "index of selectivity", the relative probability of entering the next stage of education as compared with farmers. Thus, children of government employees are nearly three times more likely to attend upper secondary school than children of farmers. The probability of entering university is 30 times higher than entrepreneurs from farmers' families. The gap in the population of entrepreneurs is however narrower than the one for the whole population. Jee-Peng Tan and Alain Mingat (1989), from whom this method is drawn, compute a share of enrollment in upper secondary level and university level of 0.3 and 0.2 respectively for people from farming families (in the case of social equity, the ratio should be 1, that is more than three and five times respectively).

It can also be shown that despite a dramatic improvement in school enrollment in all groups of society, which benefited much to people from farmer families as far as primary school is concerned, the gap between social groups does not shrink with time for females. Average duration of schooling is similar for younger male entrepreneurs from all family backgrounds, while there is a gap of nearly two years between elder children of farmers and others. This gap has disappeared in younger groups, showing that nowadays, social background is no longer a cause of discrepancy in this class of small-scale entrepreneurs.

But things are different as far as female entrepreneurs are concerned. The gap between daughters of farmers and others is widening due to the presence in the sample of many female home-workers in garment, but more, street workers in restaurants.

Table 5 : Average Duration of Schooling by Gender, Age and Social Background

Parents	Males			Females		
	Not farm.	Farmers	Δ	Not farm.	Farmers	Δ
Under 35	10.3	10.5	-0.2	10.7	7.7	3.0
36-42	9.1	8.4	0.7	8.0	6.1	1.9
Over 42	8.4	6.5	1.9	6.6	6.1	0.4

Including duration of vocational school.

Source: CUSRI-ORSTOM-OECD Survey, 1991

2.4 Acquisition of Skills

In addition to improved education, entrepreneurs need skills to succeed in their businesses. The source of acquisition of skills can be divided into two main systems: 1) schools (including vocational school in the national school system) or specialized institutions, either public or private; 2) on the job experience, either through a specific period of training (apprenticeship), or through work without specific training.

On the job --or informal-- training is by far the main source of acquisition of skills for small entrepreneurs. Not surprisingly, formal training --especially public vocational school-- is more common for people with a higher level of general education.

Table 6 : Source of Acquisition of Skills by Level of Education

	Prathom 4 or less		Comp.primary or lower sec.		Upper sec. & over		Total	
	No.	%	No.	%	No.	%	No.	%
No training (by oneself, with friends...)	160	46.8	98	42.8	74	45.7	332	45.3
Apprenticeship	139	40.6	73	31.9	19	11.7	231	31.5
Vocational school	0	0.0	5	2.2	47	29.0	52	7.1
Long term training in vocational private instit.	22	6.4	20	8.7	12	7.4	54	7.4
Short term training courses	21	6.1	33	14.4	10	6.2	64	8.7
Total	342	100.0	229	100.0	162	100.0	733	100.0

Source: CUSRI-ORSTOM-OECD Survey, 1991

The importance of apprenticeship in Thailand's informal sector is one of the striking results of this survey. There are more former apprentices among younger entrepreneurs than among older ones. In garment and metal, the activities where this kind of training is the most widespread; apprenticeship has

been the source of skill acquisition for 45% of entrepreneurs under 35 years old, but for those aged 42 and above, it was 36%.

In these two activities, people with a low level of education are more likely to have been apprentices (53% of those with a level of prathom 4 or less). In the same way, 53% of farmers' children also are former apprentices (32% for the other). Finally, apprenticeship is more often a type of training addressed to males (52% are former apprentices against 28% of females).

Furthermore, when entrepreneurs are asked what has been the most useful training for their present job, apprenticeship receives the higher rate of satisfaction, as compared with technical education.

Apprenticeship appears definitely as a way to obtain skills for people who suffer a disadvantage in their family or education background. In this sense, it has been (and probably still is) a powerful tool of integration of disadvantaged people into the labour market. Apprenticeship is also well adapted to managerial training for small entrepreneurs since it teaches more than technical skills. While apprentices, young boys and girls are often initiated into all the aspects of the management of the enterprise. Nowadays, many entrepreneurs still train apprentices. This function of informal entrepreneurs as trainers should be fully recognized and encouraged.

3. Factors for Success of Entrepreneurs

Having seen that the education level of entrepreneurs in the informal sector is not a factor that would prohibit them fromentering the modern sector, it is worth considering the benefit they receive from being educated. This is possible inside our sample only, and we shall consider the benefit from education and individual characteristics of the entrepreneurs relative to the others.

3.1 Measuring the Benefit of Education and Training

It is widely hypothesized in all areas of the social sciences that education and training bring benefits. In industrialized societies and in most of others, the "benefits" can be measured by wealth. This value is held so strongly nowadays, that any training program of education or training for skills is considered as an investment (and a cost) and must return benefit under the form of better income for the recipients. In economics, the theory of human capital has formalized and elaborated this basic idea.

The basic idea is still very simple. It consists of examining the effect of a difference in investment (here, education is the investment) on the income, among several individuals. Two factors however make the relation between education and income more complex. The first one is that there are several kinds of investment in education and training: besides general education, there are specialized courses, vocational training for different kinds, on-the-job training, and other work or educational experience that is not necessarily formal. The impact of these different factors is likely to be unequal. All career experiences, not necessarily educational, should also be taken into account, all the more since we have seen that on-the-job experience is the first source of skill acquisition for entrepreneurs.

The second thing is that income is the effect of many other factors that are not at all or indirectly related to education and other individual characteristics. The income of entrepreneurs is

calculated here from the enterprises' accounts. It is the difference between all receipts and all expenses of the enterprise. All factors that may influence the different steps of the calculation have thus an impact on the income. For instance, better equipment is likely to raise production, and as a consequence, the income of the entrepreneur.

Statistical techniques provide tools to deal with these problems. Using multiple regressions allows us to study the effects of different variables on the variance of the revenue. We shall first consider the importance of individual characteristics (education, training, experiences...) as compared with economical factors (labour and capital), but shall not comment on function of production. Then we shall examine more precisely the effect of education on revenue. We shall conclude by presenting some typical career paths depending on some characteristics we have seen.

3.2 Importance of Individual Characteristics in the Success of Entrepreneurs

Many different factors contribute to the value of revenue. Two of them, labour and capital, which are essential explanations of the process of production, have retained the attention of economists in economic theory. Among other factors, we shall focus on individual characteristics of the entrepreneurs, that is, their social background, their education and training, and different stages of their work life.

As expected, employment and capital (defined as the value of all machines, tools and vehicles used by the enterprise, but not including buildings or land) are the main variables that determine the level of production of small enterprises. Employment has the strongest effect, and this is not surprising in labour-intensive industries with a low level of capital. Depending on the activities, employment can account for 25% (restaurants) to 70% (garment) of the variance of the revenue. It should be noted also that labour productivity increases significantly with the size of enterprise. Though trivial, this result simply shows that these small-scale enterprises are rationally managed.

Additional factors will therefore explain the difference in revenue between entrepreneurs whose enterprise has the same characteristics of employment and capital. Though somehow significant, the effect is weak, given the importance of economic factors. The level of education appears as the third factor in explaining revenue for all activities. In garment (more precise analysis shows more effect of education among male entrepreneurs) and electric, the effect of education is the strongest.

The next individual factor taken into account in the model is migration, meaning that all other things being equal (i.e., for enterprises of the same size and entrepreneurs of the same education), those who have migrated from their province of origin tend to get higher revenue. This is the return of a kind of dynamism for the entrepreneurs who leave their birthplace to work.

Employment and capital, or the size of the enterprise itself, depends on ability, educational background of the entrepreneur and other non-economic factors. Here again, education is part of the explanation for the size of the enterprises. To summarize, it can been shown that enterprises with better equipment are generally owned by people who are younger and better educated than the average. In other words, the biggest enterprises in the sample are not the result of a long and patient accumulation, but rather the evidence of a different kind of entrepreneur, probably better introduced into the modern circuits of the economy. Age, experience and even technical knowledge are not of any use

for greater success, while being younger, better educated and having contracts with modern enterprises have positive effect on success (working as a subcontractor is a positive factor of success).

When considering only non-economic factors, we still can explain between 10 and 30% of the variance of the production, depending on the activities. This means that regardless of the enterprise's size, production is determined by the factors, in descending order, of education, migration, training and miscellaneous experiences. Among them, the length of time spent as a wage worker or farmer has a negative effect, meaning that the longer the individual remained in this stage, the lower his revenue (these effects are however marginal). The relations are quite different between activities, and while we cannot go into detail, we can provide a few examples. In metal, 15% of the variance of the production is significantly explained by non-ecconomic factors. The first is education (number of years of schooling, for 8%). Then come different stages in the career, with a negative effect (having wage-work experience or having been unemployed is more characteristic of those with lower revenue).

3.3 Effect of Formal Education on Success

Formal education (i.e., school) proves to be the main non-economic factor that affects the success of entrepreneurs, as measured by the performance of their enterprise.

Direct effect of education on the income of the entrepreneurs can be seen from the results shown in table 7:

Table 7 : Average Yearly Income of Entrepreneurs by Activities and School Attainment

	Prathom 4 or less	Comp.primary or lower sec.	Upper sec. & over
Garment	72 000	120 000	277 000
Metal	238 000	294 000	519 000
Restaurants	108 000	131 000	201 000
Wood	545 000	233 000	986 000
Electric	58 000	127 000	135 000

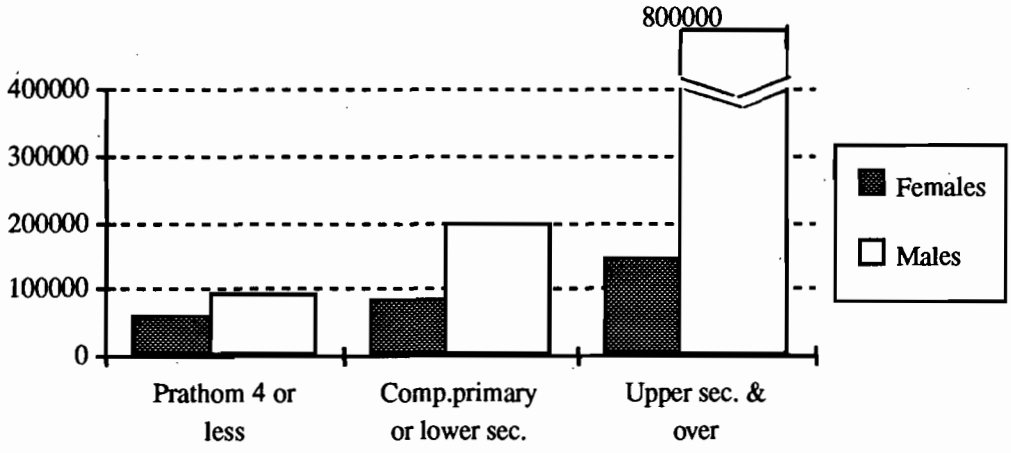
Source: CUSRI-ORSTOM-OECD Survey, 1991

However, the effect of education is neither linear nor automatic. This means that it cannot be assessed that supplementary schooling brings in all cases a supplementary income. Rather the data above show an effect of education on income by stage. They show that after a certain level of education, the income tends to be higher. In electric repair for instance, those who have gone to school beyond the 4th year of primary have, on the average, an income twice as high as those with less education. But after this level, supplementary income due to a higher school attainment tends to be very small. In restaurants, the gap starts after lower secondary level.

The case of wood is extreme. Under lower secondary, there is no relation between school attainment and income (some experienced and older entrepreneurs with a prathom 4 level have reached a higher level of income than less experienced entrepreneurs with a primary degree). But the difference can be seen clearly among entrepreneurs with an upper secondary --or higher-- level.

The figures above do not take into account discrepancies due to gender, social background or experience. It can be shown however that the general trend of higher income matched with better education remains when these characteristics are taken into account. For instance, incomes by gender and by school level among garments' entrepreneurs are as following:

Graph 1: Yearly Production by Gender and Education Attainment in Garment Industry



In garment industries, males have more than one "step" advantage, i.e., males of the first category (prathom 4 of less) earn a bit more than females who have completed primary, etc. The same pattern happens when considering those who have migrated as compared with those who never left their province. In both cases, one can see a better income with a better educational level, but the general level of income is higher among those who have migrated, whatever school attainment they have reached.

This pattern could be checked in further sub-categories, by age, social background, etc. In fact, the trend we have seen by gender is not repeated whatever characteristic we consider. For instance, among entrepreneurs with a given level of education --say lower secondary--, income does not change significantly with age. In other words, older , educated entrepreneurs do not earn more than younger, educated ones. The same thing can be seen with social background. As we have seen previously, there is an important gap in school access between children of farmers and others. But when we consider all the entrepreneurs of a given level of education, there is no more difference in income by social background.

These are very important results. It shows that education is a definitive advantage, which neither experience nor training out of school can replace. It also tends to prove that school is the only way to overcome the disadvantages of being born in a farmer family. In other words, school has been a powerful means of overcoming social differences.

On the other hand, it shows that acquiring general knowledge is a condition for success. But this does not necessarily constitute a good evaluation of school. As we have seen, once a certain level is reached (before complete primary, except in the case of wood, where it is higher), additional studies

in secondary do not bring a definitive advantage (exceptions to this are the few who completed university degrees, and who now range among the highest income in the sample). Undoubtedly, while a general educational background is a condition for success, the knowledge itself is not necessarily useful, nor is further vocational training, as we will examine in the next section.

3.4 Effect of Technical Training

Unlike general education, vocational training --whatever kind of training it is-- does not seem a major factor in determining the success of entrepreneurs. There is no direct effect: people who have had vocational training in an institution or who have been apprentices do not have higher incomes than the others. Technical training thus seems to be overall neutral. This can be interpreted as an equal benefit from whatever kind of training entrepreneurs have had, including training on the job. In other words, those who had technical courses from institutions do not enjoy any advantages as compared with those who acquired skills on the job, including those who worked as apprentices. However, there are some specific cases where training and success can be related, and these are examined hereafter.

People who have been engaged in vocational training generally have had longer work experience. However, this is not a positive factor since it indicates that it took them longer to reach the position of entrepreneur. This is because institutions train people at technical skills only, and the recipients tend to enter wage-worker positions, rather than be self-employed. They are not trained, in either case, to run an enterprise.

Apprenticeship does not bring better benefits than institutional training, as measured by the level of income of the entrepreneurs. As for those who attended vocational training, apprentices tend to continue in their career as wage workers. On average, this kind of experience is not favourable for success. (To be exact, it should be noted that the number of years of such an experience is not --or even negatively-- related to the level of income, but a short experience as a wage-worker can be useful).

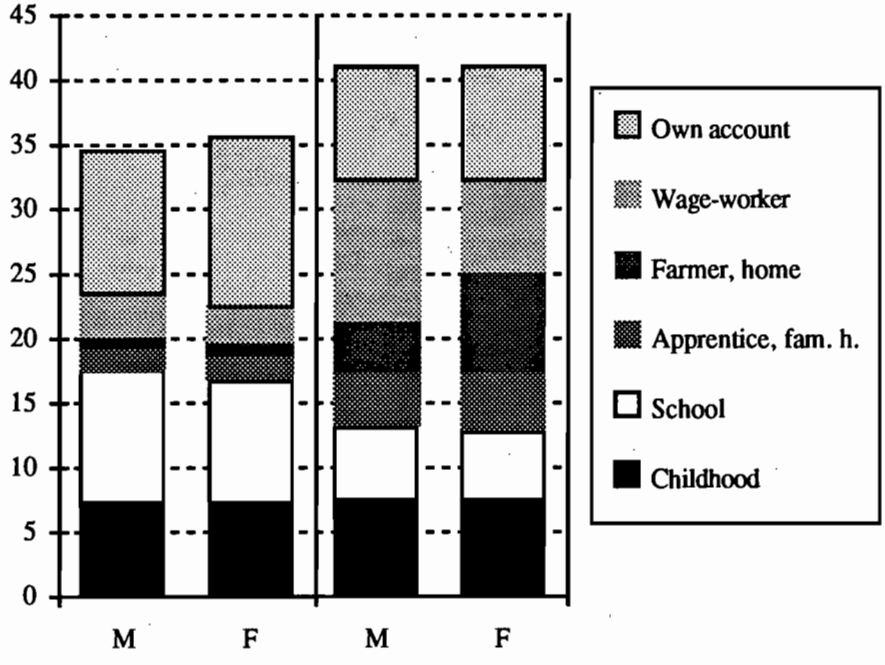
This does not mean than apprenticeship is not useful. If we take into account the social cost of different kinds of training as compared with their rate of return, apprenticeship would certainly be well ranked, as compared with public vocational training. As a matter of fact, the social cost of apprenticeship is nil. For people coming from poor families, apprenticeship is a substitute to school -- or at least to vocational school--, and gives returns faster than other kinds of training (apprentices are generally paid after a few weeks of work).

3.5 A Path to Success

The effect of education and other work experiences in determining the success of entrepreneurs can be summarized in a unique factor, the time it takes to become an own-account worker. This is the duration between the end of formal studies (including vocational courses) and starting at one's own account. Generally, those who did not study long held positions such as family helper (sometimes in agriculture) and wage-worker a long time before being able to start their own enterprise. On the other hand, those who finished at an older age spent less time in various experiences before starting their own enterprises. It did not take them long to become self-employed. The graph below shows the

average duration of different stages of education and career, by gender, in two patterns: on the left, those who got to the position of own account in no more than 12 years, on the right, the others.

Graph 2: Average Duration of Different Stages of Educational and Work Career, by Pattern of Career and Gender



On average, entrepreneurs falling into the first pattern have spent 10 years at school (including vocational), while the average of the second group spent in under 6 years (in both cases, females have a lesser duration at school). Duration in other positions is of course shorter in the first category, due to the criteria to define it. Duration as a farmer (or at home, especially for females) is negligible in the first group. This actually means that very few entrepreneurs in this group ever worked as a farmer. Experience as an apprentice is also lower in the first category (20% have at one time been apprentices, 45% in the second category), because apprenticeship is more typical of a low education profile. It can be seen in the chart below that the time spent as an apprentice or family helper in the second category nearly fills the gap of school duration. It clearly indicates the role of this kind of training as a complement to school, for those who did not have the chance (often because of their family background) to continue in school.

As a result of their short duration of work experience before becoming own-account workers, and despite a longer duration at school, people in the first group have become entrepreneurs at a much younger age than the others, nearly 10 years before, on average. The average age of starting as an own-account worker is 23 years old in the first case, 32 years old in the second case. Despite their relative youth, more entrepreneurs in the first category now have longer experience as head of enterprise (or

self-employed). Thus, the length of life --and stability-- of the enterprise is not merely a result of the age of entrepreneurs (though within each category, it is related to age), but is also related to the educational and career profile of entrepreneurs.

The better-educated entrepreneurs in the first category, who were very young when they started their enterprise, are also more successful than others. They have on average bigger enterprises and better results.

Table 8 : Average Size and Income of Enterprises, by Career Patterns of the Entrepreneurs

	Pattern 1		Pattern 2	
	Tot. employment	Income*	Tot. employment	Income*
Garment	5.0	129000	4.6	102000
Metal	6.7	401000	4.8	259000
Restaurant	2.5	155000	1.8	117000
Wood	6.8	892000	5.0	295000
Electric	2.2	129000	1.7	89000

* Average yearly gross profit of the enterprise

Source: CUSRI-ORSTOM-OECD Survey, 1991

Education allows entrepreneurs to reach a certain level of income earlier. In this sense, it can be considered a very profitable investment.

Conclusion

The entrepreneurs in urban small scale industries have an educational level comparable to the rest of the labour force, and especially with production workers. There is no evidence in Thailand that entrepreneurs work in the informal sector because a lack of education prevents them from entering the modern sector (some of them were previously wage-worker in modern factories). The average income of these entrepreneurs is also higher than the average salary of the modern sector. Thus, not only does education bring benefits, but so does the entrepreneur position. The distribution of income is, however, very unequal. There is also specific segments of the society, where people run informal activities, that would not allow for an optimistic diagnosis.

Within the group of small entrepreneurs, a better education is also a main advantage. It helps the individual to reach the entrepreneur position earlier and to achieve a decent level of income. Especially for children from farmer families, education, even at a low level, has been a powerful means of social -- or at least income-- upgrading. The same thing can be concluded for the position of small entrepreneurs in general. Far from being a supplementary barrier to social moves, the "informal sector" in Thailand, as represented here by self-employed and small entrepreneurs in urban areas, seems to be on the contrary a way of moving upward socially.

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