

A Pilot Study on the Vietnamese Labour Market and its Social and Economic Context

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Auch mit seiner neuen Reihe „IAB-Discussion Paper“ will das Forschungsinstitut der Bundesagentur für Arbeit den Dialog mit der externen Wissenschaft intensivieren. Durch die rasche Verbreitung von Forschungsergebnissen über das Internet soll noch vor Drucklegung Kritik angeregt und Qualität gesichert werden.

Also with its new series "IAB Discussion Paper" the research institute of the German Federal Employment Agency wants to intensify dialogue with external science. By the rapid spreading of research results via Internet still before printing criticism shall be stimulated and quality shall be ensured.

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Abstract

Summary: This paper presents a regional case study of the labour market and its surrounding of Vinh City in central Vietnam, based on surveys conducted in 1999 and 2005. By including the time dimension and surveying samples with over 6000 individuals respectively it is possible to identify precisely the changes that have taken place within six years.

The results reflect an enormous development process. Incomes increased fast and many structural parameters of the economy adapted to the new institutional setting of a market economy. The absolute level of income and of the standard of living is still low, however. A key finding of the analyses is that vocational training is meeting with large demand in private enterprises and is therefore of considerable importance for Vietnam's development process. Another important finding is that educational investments pay more in private enterprises.

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Tables are compiled in an appendix.

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1 Introduction

In early 2006 a number of strikes took place in particular in the industrial zones surrounding Ho Chi Minh City. Tens of thousands of Vietnamese workers were involved. What received critical comment in the "Economist" of 28.01.2006 (page 60) appeared to other observers of the scene to be a perfectly understandable process. Workers complained over the violation of laws by large enterprises. Only a secondary aim was the participation of workers in the rapid expansion of production and growth. Due to the strike action, the labour market attracted attention to itself which it would not otherwise receive in the international and scientific public eye.

On the one hand this usual lack of attention is a good sign; it shows that the country has been developing so well for some time that no large frictions become visible on the labour market. Unemployment, strikes and other forms of conflicts that typically become apparent on the labour market and frequently come along with economic crises have not so far been as significant as in other developing countries. The Vietnamese economy and the labour market is developing well (cf. Table 1). However, there can be no doubt that this process is balanced on a knife-edge (Blien, von Hauff, Phan 1998). The growth of labour supply in this country is so high that it has to remain uncertain for the future whether labour demand is growing accordingly rapidly. For this reason it is important to examine the labour market more closely as one central intermediary in a developing market economy. The labour market is the place of the economy where many people's survival chances are decided and poor is separated from less poor or even rich.

To analyse the labour market and its social and economic context in Vietnam two special surveys were carried out, one in 1999 and one in 2005. The data can be used to give comprehensive analyses of causal processes determining the living standards of many people. The dynamics of a transformation and developing economy can be shown from new perspectives.

As early as 1999 the office of the Friedrich Ebert Foundation in Hanoi supported a survey about the labour market in Vinh City in central Vietnam in the context of a regional pilot study. About 2400 households with over 6000 individuals of working age (a 6.2% sample) were asked directly about their income, vocational training, employment status etc. Although

the results of the survey are only representative of Vinh City, a lot can nonetheless be learned about Vietnam from them. In a certain way this city is typical of the situation in the country as a whole. It mediates between the rural areas and the large centres of Ho Chi Minh City and Hanoi. Since the survey is representative for the whole population of Vinh it maps a lot more than only the labour market. Especially the large informal sector of this economy is included as well and this is important.

Analyses using the data gained from the survey yield valuable indications as to the situation on the labour market and beyond this on the regional economy. The data are useful for determining the central planning basis for social security and unemployment benefit. They provide information about key problems on the labour market and on the informal sector during a specific phase of Vietnam's development.

In addition to this it was important to conduct the survey in order to develop research tools adapted to the Vietnamese situation. Even today good quality data about the Vietnamese labour market are a rarity. It is not possible to obtain such data simply by imposing onto Vietnam the methods and techniques used in western social research. A survey is always a social process in which the particularities of the country's culture have to be taken into account. This means that it is only possible to improve quality by examining the approaches of social research used in Vietnam and by combining "the best of both worlds", of Vietnam and the western world.

What is remarkable is that it seems as if social-sciences approaches in Vietnam are developing more slowly than the growth of the country's economy suggests. There are certain structural reasons for this, including the fact that there is no free scientific public in the western sense. Scientific findings and techniques can therefore only spread relatively slowly. Nevertheless the development of social-sciences and economic approaches are necessary in order to improve both the basis for fundamental social and state decisions and the transparency in the political process.

Along these lines the Friedrich Ebert Foundation funded a project to continue the approach that was developed in 1999. It was originally planned to interview the same sample as in 1999 by way of a panel survey. However, this turned out not to be possible. At the time of the original survey

a panel design was not planned and therefore the address data of the old sample were no longer available. As a consequence, by way of a repeat and retrospective survey the situation of 1999 was taken up with respondents of a new sample.

In the following section the background of the project is first described by briefly portraying the initial situation on the labour market. On the basis of this description the objectives of the new project are developed in section 3. An account of how the project was conducted is given in section 4. Finally the results are presented, and the conclusions in section 6 bring this report to a close.

2 Background of the surveys

Vietnam's large economic problem is its low national income per capita. According to details provided by the World Bank (2005: 293) it was US\$ 550 per capita in 2004. If this is calculated according to purchasing power parities the figure rises to US\$ 2700. However, this is still very low. These are average figures, which also include millionaires. Anyone who earns less than the average is at any rate in great danger of falling into absolute poverty.

The unemployment rate is relatively low at only 5.3% (cf. Table 1) but underlines the labour market problem. Since there is no unemployment benefit, losing a job results in a strong pressure to take up employment in the informal sector of the economy in order to compensate for the loss. Accordingly the informal sector of the economy has grown very strongly. It consists above all of numerous people who have their own small businesses or work in a family business, for example as a soup seller at the roadside or as a rickshaw driver. Many of the jobs in the informal sector bring in only minimal income. It is difficult, however, to assess the size of this sector by using official statistics. Virtually every Vietnamese person who is affected by unemployment does some kind of work in this sector as he or she needs an income in order to survive. Therefore a figure giving the level of unemployment does not tell very much.

In order to assess the size of the labour market problem it is more appropriate to use a measure that can be called underemployment. According to the definition we use a person is underemployed when he or she earns

such a low income from his or her work that he or she is unable to live off it. The reason for this can be that the person concerned only works a few hours per week or that the income is so low for other reasons (perhaps due to low productivity). According to estimates made by experts, it would be possible to dispense with approximately 40% of the workers in agriculture without raising the technical standard and without reducing the soil productivity. In the informal sector, too, there are many self-employed people who work with very low productivity.

The structural problems on the Vietnamese labour market are further aggravated by the fact that the matching of supply and demand does not work properly on this market. The usual institutions that developed market economies have in order to improve the matching process on the labour market are barely developed. Job placement and occupational guidance are conducted at employment service centres, over 150 of which are acknowledged by the Ministry of Labour, MOLISA. However, these centres are not adequately equipped for the matching task. According to the available information the market share of the employment service centres is very low (well below 10%). Many firms and many workers are not even aware of the existence of these centres. Some measures of active labour market policy, including the promotion of vocational training, are carried out by the centres, but again their resources to fulfil this function are limited.

The labour market problems directly affect the standard of living of at least some parts of the population. Furthermore they have a detrimental effect on economic growth. When unemployment and mismatch occur, parts of the production potential are not fully utilised. There is still no appropriate data basis for identifying the problems and for forming an information basis for concrete state-run measures. The labour market does not receive the necessary attention. To substantiate this statement we take a brief look at the information instruments that already exist. There are the Labour Force Surveys, the Living Standards Surveys and various special surveys.

The Labour Force Survey provides diverse essential information about the labour market. It can be compared with the German Microcensus. The large sample is intended to provide an overview of the entire country and of all of the provinces. The consequence is that comparatively few vari-

ables are available in order to reduce the amount of work and expenditure required for the survey. As a result income is recorded in a way that is not particularly differentiated. As individuals are not compared over several years it is not possible to obtain a longitudinal perspective.

The Living Standards Surveys are designed differently; they cover only smaller samples but a large number of variables. They are repeated at larger intervals. Some of them are panel surveys in which the same people are interviewed several times. The surveys have provided important information about the standard of living of the Vietnamese population and about the problem of poverty that is encountered here. However, some of the variables necessary for labour market analyses are not available.

In addition to the large surveys, many smaller ones are conducted in Vietnam: surveys of firms and workers, in the formal and the informal sector. They pursue various purposes and have contributed considerably to a noticeable improvement in the level of knowledge in ILSSA (Institute for Labour Science and Social Affairs) and other research teams in recent years. One of the first surveys which attempted to depict the labour market and in particular the income situation in Vietnam was the survey conducted in Vinh City in 1999, which was supported by the Friedrich Ebert Foundation. The aim of this survey was to record certain information about the labour market and its social and economic background in a more differentiated way than had previously been possible.

Two objectives were important for the planning and implementation: firstly important information necessary for managing labour market policy was to be obtained, secondly an instrument that was new to Vietnam was to be tried out and the experience of empirical social research was to be expanded. Following the first objective, the survey was to provide some idea of the calculation basis needed for the planned introduction of unemployment benefit. It was intended to deliver additional data about key structural factors of the Vietnamese labour market in order to improve the planning of many further measures, e.g. for the training of workers and for job placement. Only by making a survey of a relatively large sample, 6% here, was it possible to observe the local labour market adequately and intensively enough. The data collected about income, occupations, industries, household situation, the employing firms etc. were intended to

make it possible to recognise those problems on the labour market towards which labour-market and social policy are orientated. According to information from the ILSSA researchers the information gained was also used for the described purposes.

The survey shows that the available information about the Vietnamese labour market is not sufficient for assessing many important objectives of labour-market and economic policy. An unemployment benefit system has still not been introduced and is now being announced for the near future. In view of Vietnam's rapid development, the results of the survey conducted in Vinh in 1999 are already completely out-of-date. It seemed appropriate to repeat the survey.

3 The objectives of the project

Conducting a repeat survey as a follow-up to the 1999 survey in Vinh City makes it possible to identify precisely the changes that have taken place in the last six years. Once again the conceptual design was intended to improve the planning basis for social and state issues and to develop the level of social research. The survey ventures into an area between social policy, labour-market policy and social research which can still be improved in Vietnam with relatively little effort. The two objectives of the project can be specified somewhat more precisely:

- Provision of information for the planning basis for labour-market and social policy. Current information requirements of the Vietnamese state are to be taken into account in the survey. This concerns among other things the planned introduction of unemployment benefit.
- Improvement of the techniques of empirical social research and economic analysis: in this respect it appears important to bring together the experiences made in Vietnamese social and economic research with those made in Europe. This objective has two parts:
 - firstly new methods are used, especially with regard to field supervision in the survey.
 - secondly the time dimension in the analyses themselves is extended. The primary focus is no longer on the examination of cross-sections but on an analysis of development processes.

There is too little information about Vietnam's labour market because – as already demonstrated – the country's statistics are not adequately developed and suitable surveys have not been conducted to an adequate extent. This makes it difficult to implement labour-market policy measures. It has only been possible so far to make a very rough estimate of the consequences and costs of reforms. Therefore an improvement in the provision of information is seen as a basic requirement for policy management. Official Vietnamese authorities are already working on this. Again and again plans of international development cooperation included the objective of setting up a labour market information system. This has not yet materialised.¹ For these reasons the Vietnamese Ministry of Labour (MOLISA) was very interested in a labour market survey because this should help to close some of the major information gaps.

The survey was intended to provide some idea of the calculation basis needed for the introduction of unemployment benefit. So far there is only very vague information as to the amount of benefits that would have to be raised by the unemployment insurance and what level of contributions would have to be collected for it. Not even the size of the population for which the unemployment benefit is intended, in other words the number of people employed in the formal sector of the economy, is known with sufficient certainty. Without this information the introduction of unemployment benefit would be doomed to failure. If the worst came to the worst there could also be additional negative side-effects on the development of the Vietnamese economy or the national finances.

The third function of the survey was to be to obtain additional data about key structural variables of the Vietnamese labour market and its embedding in a transformation economy with a large informal sector. This objective, too, is in turn linked with social and labour-market policy, since it is unclear to what extent unemployment benefit can help to alleviate the pressing problems at all if it is restricted to the formal sector.

Fourthly it is important to gain information about the development of individual sections of the labour market, about the development of industries

¹ A new EU project has the aim of developing such a system. However, some years will pass before any results are available.

and occupational groups. So far there is hardly any basis for the planning of education and training measures. Bottlenecks on the labour market can not be recognised in time. There is far too little information available for the occupational guidance and job placement conducted in so-called employment service centres.

Finally there are hardly any data stocks available for detailed multivariate analyses. The numerous studies conducted by various Vietnamese and international research groups generally only publish tables with descriptive information. One objective here was to remedy this and to examine the events on the Vietnamese labour market in intensive in-depth analyses using modern statistical and econometric methods.

To sum up it can therefore be said that information about the labour market is of great importance in order to gain general insights into the labour market, to prepare the introduction of an unemployment benefit system and to improve the advisory and placement roles of the employment service centres. The data picked up by the survey should make it possible to recognise those problems on the labour market towards which labour-market and social policy are orientated. These include, among other things, the distribution of income across different groups of workers, the relationship between the wage and its determinants (such as the qualification level, occupational group or age of the workers concerned, the ownership form of the employing firm etc.) and the occurrence of poverty. The data obtained can then, in a suitably prepared form, be used by those responsible for national planning and by the employment service centres to prepare vocational training.

Only by surveying a relatively large sample is it possible to observe the labour market in sufficient detail and intensively enough. At the same time there are relatively strong demands as regards the quality of the data. In the 1990s it was almost impossible to gain detailed information about income. Information on the income variable was also collected in the labour force sample, but only in a very rough and not particularly reliable way. More precise details were essential in order to be able to understand the events on the Vietnamese labour market. In the meantime clear improvements in the level of social research can be seen which are to be pushed further again in order to obtain the information needed for the

analyses. This applied both to the variables included and to the reliability of their measurement.

Until the end of the 1990s the opinion prevailed in Vietnam that it was not possible to gather information about income in that country. The respondents were said to be too reserved with their information because they feared state taxes and enquiries. A first step towards overcoming this attitude was the inclusion of the income question in the labour force samples. However even after this the Vietnamese experts were generally of the opinion that it would not be possible to determine income with adequate reliability by means of surveys.

However, there have been some efforts in the form of surveys in which work was done with a relatively large investment of time, energy and expenditure and with the support of international organisations. This applies in particular to the waves of the Vietnamese Living Standards Survey (as early as 1993, but in particular in 1998). A different kind of exception was the labour market survey conducted in Vinh City in 1999, in which the budget was smaller, but there have been other solutions leading to an improvement in quality.

In the meantime the situation has changed considerably. Social research has adapted to the situation in Vietnam. It is clear that valid and reliable information concerning income can be obtained using suitable techniques. There are a number of special surveys and the new waves of the Living Standards Survey, which provides a valuable source of data for analyses of poverty and for studies on the standard of living. Nonetheless, even in the first decade of the 21st century there is still a lot to be done and the available instruments need to be improved further still.

The new regional labour market survey in Vinh makes it possible to include the time dimension. This is of great importance since the comparison of two cross-sections from 1999 and 2005 opens up completely new analytical possibilities. Trends can be identified. Furthermore it is possible to analyse the stability or volatility of the labour market. It was intended that the new survey should provide data on the following areas:

- employment status and, if applicable, labour market status
- detailed information on income with reliable quality

- status information for the social insurance
- integration in the household context
- information about the employing firm
- information about the social context
- basic information and employment-risk information about the work performed
- training
- savings
- consumption

4 Carrying out a repetition survey

Most of the information required was already gathered in the 1999 survey. It was possible to base the design of the new study on the preceding one as the questionnaire used in 1999 had proved to be a success. This judgement is based on the exact observation and analysis of the interview situation at the time and on the evaluation of the data obtained using the questionnaire. The experience made with the survey showed that the interviewers were able to use the complex survey instrument, albeit only after careful training. Too much was not expected of the respondents either. The data analyses yielded valuable information about the dimensions addressed. Only very few variables were identified for which implausible results had been obtained.

Correspondingly the basic framework of the questionnaire is maintained. This makes possible a true repeat survey. Only when the questions are posed in exactly the same way can one be sure that changes in the results really must be attributed to changes in the reality on the labour market and not to variation in the questions. Studies such as those conducted by N. Schwarz (cf. also Diekmann 1995 for an overview) revealed strong effects of changes in the wording of questions. The predetermined answer categories, too, influence the result to a certain degree. It makes a considerable difference for example whether narrow or broad answer categories are given. For this reason it was necessary to maintain as strictly as possible the original formulation of the questions.

As a result of the experiences made previously, individual optimisations and amendments were nonetheless necessary. Amendments to the questionnaire were useful in particular in three areas:

- Vocational training
- Pension receipt and redundancy payments
- Interest in various branches of social insurance.

Some additional amendments were made. In the case of training a surprisingly large number of university graduates had been found in 1999. This time a more precise wording of the questions – in particular regarding the duration of the university education – was intended to ascertain whether the large shares are realistic. In the case of pension receipt, precise enquiries also made sense as in 1999 a relatively large number of people reported that they drew a pension although they were nowhere near reaching retirement age. This is actually ruled out by Vietnamese legislation. This phenomenon was therefore to be investigated.

Despite the various changes made to the questionnaire, the order of the questions has to be maintained at any rate. Major studies on methods of empirical research (cf. once again Diekmann 1995) show effects firstly of the order of the questions and secondly of the context. The order of the questions had already been particularly carefully planned in 1999. At that time – as mentioned earlier – Vietnamese experts had claimed that it was not possible to obtain reliable information about income in Vietnam as the subjects would be reluctant to reply. They claimed that if people felt they were being forced to reply, they might give false answers. In order to rule out such behaviour as far as possible the following action was taken: the subjects were first asked about their consumption and the expenditure associated with it. This is possible as the normal consumption basket in Vietnam is much smaller and its variety is much lower than it is in Central Europe. Therefore, the respondents committed themselves to a certain level of expenditure in the first phase of the interview. If the interviewer was working reliably, then it was no longer possible to fall far below the reported level of expenditure in the subsequent questions concerning income.

The construction of the questionnaire for the surveys in Vinh represents up-to-date techniques of social research. Particular importance was at-

tached to structuring the questionnaire in such a way that the respondents were led step-by-step to correct answers. The basis for this was knowledge from cognitive social psychology, which has been mobilised for survey research since the 1980s. This research is represented by Norbert Schwarz, who was mentioned earlier. He used to work for ZUMA in Mannheim and now works at the University of Michigan. In the cognitive approaches it is assumed that the respondents are unable to recall certain information immediately but first have to mobilise this information. Targeted questioning helps them to find the right answers. The technique developed for this, however, requires the available methodical work to be studied very closely and, on the basis of this, very many detailed questions to be asked in the interview.

The design of the questionnaire firstly follows the example of large surveys conducted in Germany, in particular the Socio-Economic Panel and the BIBB-IAB career history study. Secondly the questionnaire was based on the Vietnamese Labour Force Survey and a Vietnamese labour market panel. The questionnaire was discussed with experts from the Institute for Employment Research (Institut für Arbeitsmarkt- und Berufsforschung) and revised in Vietnam. In addition my (Van's) many years of experience in designing surveys and conducting interviews in Vietnam had an influence on the questionnaire. In this way it was hoped that the questionnaire for the labour market in Vinh firstly represents the modern level of empirical social research, and secondly that it could focus on the particularities of the transformation process in Vietnam and the specific conditions in this country.

As it was not possible to conduct a panel survey in 2005 because the original respondents' addresses were no longer available, it was necessary to use a special method in order to make the time dimension as accessible as possible for analyses. The connection with the situation in 1999 was sought by asking additional questions about the employment status and household context at that time. The longitudinal reference is achieved by means of this retrospective questioning. In this case more changes have to be made to the questionnaire than in the panel design. The comparison of the results from the 1999 survey with those from the current retrospective questions permits a longitudinal design in the evaluations without panel questions being available. In particular it is possible to monitor the

populations, as it is possible to determine which of the respondents had already been in the population in 1999.

Once again there were discussions about whether the questionnaire could be simplified and whether e.g. the laborious questions about consumption could be put at the end of the questionnaire. For the reasons stated earlier, however, such a solution was not possible. Nonetheless the situation had improved, as we ourselves, just like the ILSSA experts, could build on the experiences made with the old survey and after initial discussions the new survey then ran more smoothly.

The improved field supervision that was striven for in both variants of the survey required relevant checks to be made during the survey. For this a team had to be nominated by MOLISA/ ILSSA which, in cooperation with one of the authors (Van), made random checks on the questionnaires and assessed the interviewers' work. This was provided for accordingly.

In 1999 the city of Vinh in Central Vietnam, with its approximately 200,000 inhabitants, was selected for the survey. In 2005 too, the target group of the study was people aged between 13 and 65. In a random selection a 5.6 percent sample of the population was drawn. It was possible to have the sampling ratio somewhat lower than last time (6.2%) as the population had grown. When the sample is extrapolated, the population of working age comprised 117,446 (2005) and 112,081 (1999) persons. The procedure used to gain a random sample is described in detail in the report by MOLISA/ILSSA (2006). It appears to be very efficient and ensures that the results can be transferred to the population. The study population consists of people in the households of the sample. The questionnaire is a household questionnaire with sections for individual people.

There were two reasons for selecting Vinh City as the survey location (in 1999 and 2005), one of them content-related and the other associated with survey technique. Vinh City is located in the centre of the country of Vietnam and can represent the situation of comparable towns on the labour market. The concentration of international studies on the centres of Hanoi and Ho Chi Minh City which can frequently be observed appears to be problematic. This study attempts to compensate for this. In addition, Vinh City can serve as a regional experimentation field for labour market policy in order to test measures.

It was necessary to concentrate on just one town for reasons of survey technique. As the available budget was limited, it was not possible to tackle a national study, which would necessarily have been more expensive. Conducting a pilot study concentrating on one region had advantages, too, however: it made a precise supervision of the entire survey process possible. The study team was able to practise the techniques mentioned earlier of intensive field supervision. This would not have been possible if the survey had been conducted across the entire country.

In the 2005 survey it was possible to overcome certain other restrictions of the 1999 survey. Questions were asked about occupations and industries in plain language in both of the surveys, but only relatively roughly coded in 1999. Only 34 occupation characteristics were recorded. This is not enough to use for occupational guidance for example. In 2005 it was possible to record this in a far more differentiated way.

In Germany further quality assurance measures are conducted, some of which were also used for the surveys in Vinh. Rigorous checks on the questionnaire revealed problems: communication problems between researchers and interviewers or simply poor work on the part of the interviewers. In many cases it was possible to remedy this matter here.

Other measures were not carried out in 1999. For example no repeat interviews were conducted. Only with this measure is it possible to assess the reliability of the questionnaire. For this, in so-called test-retest surveys, a household is interviewed a second time, once in the actual survey and a second time for checking. In 2005 we interviewed three households again in repeat interviews. First it became clear that it was actually possible to find all the selected households. This proved to be difficult in some cases and required a longer period of searching in a town where a system of house numbers is only in its early stages.

The interviews conducted by Van largely confirmed the details from the main survey. However, there were also significant differences. This does not come as a surprise, but is known from parallel tests in industrialised nations (e.g. from a test-retest study of the ALLBUS (Allgemeine Bevölkerungsumfrage der Sozialwissenschaften – General Population Survey of Social Sciences) in Germany). It has to be accepted that interviews can only be standardised as social situations to a limited extent. Social situa-

tions of this kind depend on the interviewers' skills as well as on their personality, and are influenced by the dynamics of the interaction in the interview situation. The accuracy of measurement achieved in natural sciences can not be achieved in social sciences.

It is not possible here to judge whether the bounds that are given by this principal 'law' of social research had really been exhausted as regards the quality of the survey. Three test-retest interviews are definitely not sufficient for a quantitative estimate of data reliability. For this reason we asked the ILSSA team to arrange for 50 such interviews. These interviews were actually conducted, but with the same interviewer as in the main survey. There was therefore no independent repeat measurement. It is in the interest of the interviewer to report as few differences as possible. Accordingly there were only small discrepancies between the first and the second interview, which are not suitable for assessing the reliability of the survey. On this point the survey practice fell slightly behind what we had asked for.

5 Results

5.1 Some population characteristics

One great advantage of the study design used here is that it is possible to draw comparisons between the results obtained in 1999 and those obtained in 2005. These comparisons permit an assessment of the development of the labour market and the economy in Vinh. In addition, a certain appraisal of the validity and reliability of the surveys is possible. If the structures of 1999 and 2005 diverge to a considerable extent it will have to be assumed that something went wrong with at least one of the two surveys. Fortunately this is not the case, however, as is demonstrated below.

Table 2 shows the study population for the two surveys. The first line shows the number of people who live in the sample households and are at least 13 years old. If the labour force potential is measured in terms of the population of working age (men aged 15-60 and women aged 15-55 according to Vietnam's legal regulations) then the populations decrease somewhat. If the number of people in gainful employment is compared with this potential, labour force participation rates of 54.5% (1999) and

61.9% (2005) are obtained. This clear increase points towards a favourable development of the economy and the labour market.

The age structure of the Vietnamese population is reflected in the large proportion of people who are in training. The proportion of unemployed people is falling. If the unemployment rate is calculated on the basis of the entire labour force then it was 7.31% in 1999 but only 3.46% in 2005. This is the result of the increasing labour force participation rates. The number of pensioners is relatively low as the Vietnamese population is very young. Some pensioners are still working.

5.2 The basic structure of the economy

When presenting the results it is particularly important to differentiate between the formal and the informal sectors of the economy. The informal sector consists of people who are self-employed and do not employ anybody else. Small firms with fewer than 10 employees continue to be included in this group because some regulations of the labour code and other laws do not apply to them and those which do apply are frequently not enforced by the state. In a different classification all the people in employment without a formal contract of employment could be classified as belonging to the informal sector. We checked with our data that the two definitions are virtually interchangeable. People working in agriculture were excluded from the income analyses as it must be assumed that they produce some of their food themselves. People employed in state-owned industry and in private enterprises with at least 10 employees and those employed by the national administration are classified as working in the formal sector of the economy.

Table 3 shows the distribution of people across the main sectors of the economy and their respective average incomes in 1999. People working in agriculture are excluded. The status of self-employed also covers unpaid family workers. The tables make clear the special circumstances in Vietnam, which differ considerably from the conditions in a western country. The informal sector of the economy is very large. In 1999 no less than 44% of the economically active people in the sample (outside agriculture) were self-employed. Only very few of these very small businesses had any employees. By 2005 the proportion of self-employed people had fallen to 35%, as can be seen in Table 4.

The share of the formal sector has grown correspondingly, namely from 45% to 53%. What is remarkable here is that only a small part of this increase occurred as a result of employment growth in the larger private enterprises. It is also important that the share of the national administration remained virtually constant at over 20% each time.

The share of people employed in private enterprises in the formal sector only grew from 2.6% to 4.1%. The number of people employed in the informal sector remained virtually constant. What is sometimes formulated in general for the Vietnamese economy, that its astonishing development is not predominantly a development of the private sector but that the state sector continues to play an important role (Van Arkadie, Mallon 2003) can be seen here once again in a drastic way at the regional level of Vinh City. The state-owned enterprises have increased their employee numbers clearly. However, it has to be taken into consideration that in Vinh no export-orientated production zones are located and there are only a few large joint-ventures. The further division of the formal sector can be seen in Tables 5 and 6.

5.3 Development of income in the various sectors

The last column of Table 7 shows virtually astonishing income increases for the individual sectors of the economy. Most of the nominal increases were over 100%. According to official information (General Statistical Office of Vietnam), in the six years between the two surveys the inflation amounted approximately to 27.5% (if the inflation during the whole of 1999 and 2005 is calculated – cf. Table 1). Economic growth per capita in real terms stood at 47.6 (once again calculated for full years according to Table 1 and taking into consideration that the population has grown). It is obvious that the growth rates of personal income in Vinh were higher again. How is this possible? It might be that the official statistics underreport the economic upswing in Vietnam – at least this is a conjecture of international experts (Van Arkadie, Mallon 2003). This could be due to a concentration on the state sector and an underreporting of the informal economy. On the other hand, the development in Vinh can not be extrapolated to the country as a whole. It must rather be assumed that towns and cities benefit to a greater extent from the development than the rural areas, which dominate in terms of population. Inflation, too, may

differ more between regions than it is the case in western countries. Nonetheless the income increases are impressive.

However, the absolute level, which is still very low, must not be forgotten here. A monthly income of 1.194 million Dong in the formal sector is approximately equivalent to US\$ 76 at an exchange rate of 1:15,800. The World Bank converts the nominal incomes of a multitude of countries into purchasing power parities (World Bank 2005: 292f.). According to these calculations the income cited above is equivalent to a value of US\$ 2700 in real terms because many things are cheaper in Vietnam than in developed countries. Nonetheless this average value is still very low. Compared with western European standards most of the people are poor. The stock of people living below given poverty lines is examined more closely in later sections of this paper.

It is also remarkable that of the various sub-populations under examination in 2005, those employed in private enterprises show the lowest average incomes and also below-average growth rates. Those employed in private enterprise in the formal sector even stand out definitely.

5.4 Qualification levels

Tables 3 – 6 provide information about the education and training levels of the two populations of 1999 and 2005. To understand the rows of the tables it is necessary to know that in order to keep the definitions short the four types of education/training at the bottom of the table are defined as “qualifications”. So when it says in line three “vocational school: incomplete, without qualifications” it means that a respondent attended vocational school but left early without taking examinations and that he (or she) has not gained a university degree or similar either.

Analyses of the 1999 data showed, that 32.4% of the employees in the formal sector had gained a university degree (Table 3), therefore doubts arose about the reliability of this result. In the 2005 survey in the case of higher education the respondents were therefore asked whether they had taken a regular course of studies, in order to be able to exclude doubtful cases. Furthermore, information about the education and training level was obtained in two questions (not only in one as it was the case in the 1999 survey), to see whether someone had gained double qualifications. The more practical training courses (categories 1-4, Table 4) were re-

corded in one question, the higher qualifications (categories 5-8) in another one. The details shown in Table 3, on the other hand, are based on one single question that was asked 1999.

The changes in the interview instrument led to interesting results as regards methodology. Some shifts become apparent but they are not large. If Tables 3 and 4 are compared, very similar structures are revealed which were shown by independent measurements at an interval of six years. This is what was meant above when it was stated that the comparison of results yields positive indications as to the validity and reliability of the two studies. In fact one has the impression that even the details of the 2005 structure arise from a development of those of 1999.

The global picture does not only remain relatively stable, a clear trend towards higher qualifications can also be recognised. In the formal sector no less than 45% of the employees have a university degree. This is a very high figure, which must be judged in relation to the Vietnamese education system, however. Many of the educational institutions that are regarded as universities would not be classified as such in a western country.

The informal sector has a completely different employee structure from the formal one. The proportion of highly qualified employees is lower by a factor of approximately ten. University education is obviously a key requirement for access to the formal sector. This is a clear example of a special form of segmented labour markets.

In addition to showing the number of people in the sample, Tables 3 and 4 also present the qualification-specific average wages. It becomes clear that the differences in particular at the lower education levels are not very pronounced. This needs to be examined more closely in a multivariate analysis.

5.5 Qualification-specific wages

Tables 8 and 9 show the results of multivariate wage analyses using the survey data of 1999 and 2005. In this case not the monthly wage but the hourly wage was chosen as the dependent variable in order to be able to control for working time effects. As we are interested primarily in differences in education and training, we include the different qualification levels as independent variables, and age and gender as control variables.

Therefore we estimate a classic Mincer type earnings function. In accordance with this standard approach the dependent variable is in logs. The model is:

where W is the wage level, B are dummy variables for the education level, B_i and X_j are further control variables, the β are the coefficients (incl. the regression constants) and ε is the usual error term. The semi-logarithmic form results in a shift from an additive to a multiplicative model. It is assumed that the causal process on the labour market and beyond has a multiplicative effect, i.e. is reflected in percentage differences.

Each coefficient in Tables 8 and 9 is to be interpreted such that the income rises approximately by the given value when the relevant independent variable changes by one unit. In the semi-logarithmic approach used here the result (for small βx) is approximately the percentage effect of a coefficient β of a variable x :

The coefficient of the categorical variable "woman" therefore indicates that in the model for the formal sector (1999) a woman earns about 16% less than a man (see line 4, column 1 in Table 8). This difference is far greater in the informal sector, where the corresponding value is 28%. In the corresponding analysis for 2005 the difference in the informal sector decreases slightly, to only 24%, whereas a slight increase can be found in the formal sector. These differences materialise when the other variables included, which are assumed to be constant, are controlled for. The effects are significant, as can be seen from the star markings in the tables.

The effects of general school education on income are given in relation to the level "primary school, no qualifications". Tables 8 and 9 show the surprising result that although people with completed schooling earn more, this result is not significant anywhere. It is therefore not possible to be certain whether it comes about by random. The group in question is not exactly a tiny minority: 26.8% of the labour force have not completed secondary education.

The effects of vocational training on income are shown in relation to the level "no vocational training, no qualifications". In order to achieve a uniform modelling, the variables of 2005 were recoded so that they correspond to the scale of 1999. These analyses are intended to answer an im-

portant question: is training worthwhile in Vietnam? Or conversely, is it worthwhile for the state to set up training courses?

There is a paper on training by Friedman (2004) which has already investigated related questions and whose results are therefore comparable with ours. Friedman has at his disposal data about production workers in Ho Chi Minh City and the surrounding area. On the basis of this data (a linked employer-employee data set from 1999) he comes to the conclusion that a "compressed wage structure" can be ascertained in the Vietnamese state-owned enterprises. He claims that the state-owned enterprises pay their employees above all according to age and less according to qualification levels. In Vietnamese private enterprises and joint ventures he finds the wage structure to be completely different; there better qualifications are found to pay off. Friedman claims that the workers in the state-owned enterprises are offered inefficiently low incentives for their performance and for the acquisition of qualifications. Since in other socialist countries the state-owned enterprises changed their similarly compressed wage structures when they switched to a market economy in the early 1990s (cf. Munich, Svejnar, Terrell 2005 for the Czech economy), Vietnam is an un-typical case in this respect according to Friedman. He claims that the transformation at enterprise level is proceeding with some delay.

Our results (using a larger population than was available to Friedman) show a differentiated picture, however. In 1999 it is indeed possible to speak of a compressed wage structure in the state-owned enterprises. In fact the wage effects of the different education and training levels in the state-owned enterprises (last column of Table 8) are without exception smaller than those for the employees in the private enterprises of the formal and informal sectors (third column from last).

Table 9 shows, however, that by 2005 the difference had decreased. Only the education/training level of the lowest category, behind which courses at employment service centres lasting several months and similar are concealed, seems to be remunerated above all in the private enterprises and to be uninteresting for the state-owned enterprises. At any rate a vocational school qualification for example is worth 24% more wages in private enterprises (for employees) but only 15% more in the state-owned enterprises.

Other categories of employment have different remuneration patterns again. Surprisingly a better vocational qualification is remunerated even better in the national administration than in the private sector. This is different in the informal sector. If the sector is taken as a whole, in other words including the self-employed, then relatively erratic structures come to light. This is no wonder, however, as the success of self-employment is influenced by many other factors (not least by capital endowment) and is not so closely associated with the education and training level as is the case with employees.

When examining the R² values of the individual analyses, it becomes clear that they are lower than in comparable studies in a western country. Only a relatively small part of the dispersion of the dependent variables can be "explained" (in the statistical sense) by means of the models. But this is no wonder in the case of a country that is going through such a dynamic development process as Vietnam is. The labour market is still a long way from any kind of equilibrium. At any rate the R² values increase from 1999 to 2005 in all the analyses apart from one. The labour market is therefore gradually settling down and leaving behind its chaotic phase.²

To summarise the findings it is important to note that general education does not pay off in higher incomes. This is different, however, in the case of vocational training, which leads without exception to higher incomes. A wage compression in state-owned enterprises can be determined in particular for 1999 but is far less pronounced in 2005.

The higher incomes for people with vocational qualifications show how important this form of education is for Vietnam. Especially the private enterprises would hardly pay higher wages if they did not expect productive returns. Our findings support the diagnosis which is sometimes expressed

² Another interpretation of the relatively low R² could be ruled out. In this view the low proportion of variance 'explained' by the model refers to low data quality. 'Noise' in the data interfere with the assumed connection between exogenous and response variables. To assess the data quality analyses with other data sources can be used. In this respect Gallup's (2004) wage analyses with the Living Standards Surveys of 1993 and 1998 are helpful. In fact his R²s are lower than those reported here. Gallup's data base includes the whole country giving therefore more space to the variation in the exogenous variables. Therefore, the relatively high R²s in the analyses obtained with the data about Vinh City indicates a relatively good data quality.

that investment in vocational training is important for the further development of the country and that it represents the necessary complement to the general educational level of the Vietnamese population, which is high for a development country (Blien, von Hauff, Phan 2005).

5.6 Occurrence of absolute poverty

Table 10 shows the number of households whose monthly income per head is below three defined poverty thresholds. The two lower ones, at US\$ 7.6 and US\$ 10 respectively were taken as a basis by Vietnamese official bodies in 1999 (source: MOLISA). The lowest one was given up recently and instead a higher one was defined at US\$ 16. The lowest limit indicated the threshold below which not even the physiological minimum of food can be obtained via the market. Someone whose income is below US\$ 7.6 cannot purchase enough food to live off without health damage.

The two other thresholds also take into consideration elementary needs besides food. They are, however, still absolute poverty thresholds. In Vinh City, however, there is probably an above-average price level, especially compared with purely rural areas, which still dominate in Vietnam. For this reason it is better to take the upper threshold as the basis.

In 1999 at any rate 4.5% (2005: 0.67%) of the employees in the formal sector and 10.2% (2005: 0.67%) of the self-employed in the informal sector earned an income that was below the threshold of US\$ 10. Their earnings were so low that they were not able to survive from them alone. In this sense they were underemployed. The higher value for the informal sector shows that far greater income differentials occur here than in the formal sector. Here the risk of earning only a low income is far greater especially for women than in the formal sector.

Whether a low income really results in poverty is decided by the household context. Table 10 shows the number of households with a percapita income below the poverty line. If only the earned income is taken into account, then at any rate 8.4% of the households have to be regarded as being absolutely poor in 1999. They live in danger of hunger and misery. If other sources of income such as pensions, support from friends, relatives etc. are included, the proportion falls to 5.8%. The occurrence of such absolute poverty is a very serious problem.

If the higher poverty threshold of US\$ 16 is taken as a basis for 2005, then the proportions of households below this threshold are 8.7% and 4.8%. It can be gathered from the table that the development process of the regional economy is also benefiting the poor. Comparing 1999 and 2005 their proportion decreases clearly.

However, such analyses of poverty have their limits since the sample is only representative of the population registered in Vinh. Anyone who is staying in the city illegally is not recorded. Here a poverty potential could exist which is not included in the data.

5.7 Model calculations for unemployment insurance

One of the planned labour market policy measures in Vietnam is the introduction of unemployment benefit. To demonstrate the applicability of the data obtained in the labour market surveys of Vinh, in accordance with Table 11 a small model calculation is conducted here based on the assumption that an unemployment benefit system is introduced only in Vinh City. For this we calculate how much revenue flows if, as planned, the contribution rate is 2.5% of the wage. This is paid by employers for the employees of the formal sector (or only for those employed by the state).

In addition we calculate the expenditure on unemployment benefit for a group of people who are eligible for benefit. This group consists of those unemployed people who have so far been unemployed for less than 12 full months and previously worked in the formal sector. We also assume that those working in the informal sector who had lost a job in the formal sector less than a year before the survey would also register as unemployed if unemployment benefit were introduced. As a good many unemployed people have already been out of work for several years, only relatively few people fulfil the given criteria. Using the inverse of the sampling ratio of the survey this amounts to 946 (of a total of 2286) unemployed people entitled to benefit. Another 89 people belong to the group mentioned above of people who previously worked in the formal sector but are now working in the informal sector, which brings the overall figure of people entitled to benefit to 946+89 people. For the unemployment benefit a rate of 55% of the net wage is taken as a basis. This corresponds to the current plans of the Vietnamese state, as does the assumed contribution rate.

The calculation of the revenues and expenditure for unemployment benefit in Vinh City in Table 11 shows that an unemployment insurance would cover its own expenses. The revenues of approx. 1051.4 million dong (VND) (at a 2.5% contribution rate) per month are sufficient to cover the expenditure on unemployment benefit amounting to approx. 624.6 million VND for 946 unemployed people and to support other people who are working in the informal sector.

It is to be expected, however, that an unemployment benefit system would mean an incentive for more people to register as unemployed. There is for example a certain number of people who draw a pension and do not have a job but are still of working age. There are people who used to work in a state-owned enterprise and are still relatively young, e.g. in their mid-forties. Some of this group would register as unemployed. In this case the burden on the unemployment benefit system would be considerably greater.

Of course further expenditure is conceivable for this branch of social insurance, which represents additional burdens. After all, we have ignored administrative costs here although they will certainly occur. However, these costs make up only a fraction of the overall finance volume of such a benefit if it is organised reasonably. Despite these misgivings, however, unemployment benefit can be expected to be fundable, as the discrepancy between revenues and expenditure is so large. As long as the economic development in Vietnam does not change in principle, i.e. as long it is going on with high rates, unemployment benefit can be implemented. It is not possible, however, to examine here whether it is sensible in economic policy terms for general reasons in Vietnam's current situation.

6 Conclusions

The analyses presented here do not exhaust the potential of the data collected, but are to be understood as examples of applications which may be joined by others. The data could for example be used for analyses of occupations in order to improve the occupational guidance of the employment service centres. Further possible applications for educational planning arise almost inevitably.

The analyses contained in this paper confirm the value of the data collected. The study design used permits cross-validation by comparing the results of the two waves and the individual variables in the two cross-sections. It can be seen here that the strategy pursued of collecting data about the labour market and the informal sector in a particularly differentiated and refined way has proved to be worthwhile for Vietnam.

Due to their quality the data can be of use for diverse applications and questions from the field of science as well as from labour-market, education, economic and development policy. One example is the model calculation for the funding of unemployment benefit. Since the data are very reliable and very detailed they permit the calculations required.

Further interesting conclusions concern the education and training establishments. The wage analyses show that the returns on investment in education and training are generally somewhat greater in private enterprises than in state-owned enterprises. This points to the effectiveness of the investments. The finding supports the assumption that an expansion of vocational training reinforces the development process in Vietnam.

Beyond the practical use of the analyses, their scientific value is to be measured in the light of the fact that there are not many reliable sources of data about Vietnam. The survey conducted in 1999 was used by Vietnamese social research as a key input for further work. According to information from ILSSA, the questionnaire was the basis for the design of other surveys as far as the global Labour Force Survey. It is to be hoped that more impulses for social research result from the 2005 survey. In particular the longitudinal perspective seems to be important for understanding the Vietnamese economy and the labour market.

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Appendix

Table 1: Indicators of economic development in Vietnam

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
GDP per capita (US\$)	214	250	326	317	330	374	401	410	430	475	540	640
Growth rate in real terms (%)	8.8	9.5	9.3	8.2	5.8	4.8	6.79	6.9	7.04	7.24	7.7	8.4
Inflation rate	9.5	12.7	6.5	6.0	9.2	0.1	-0.6	0.8	4	3	9.5	8.4
“Residual growth”	6.37	6.01	3.05	1.09	0.11	5.88	4.24	2.00	-4.00	6.53	-10.74	
GDP (bn Dong VN)	178534	228892	272036	313623	361017	399942	441646	484493	518601	605566	644700	
Population (m)	70.8	72	73.2	74.3	75.5	76.6	77.6	78.7	79.7	80.9	82	83.12
Export (US\$m)	4054.3	5198	7330	9145	9365	11540	14449	15027	16706	19880	26505	32230
Import (US\$m)	5825.8	8353	10483	10461	10341	10460	14072	14401		24990	31958	36880
Balance of payments on current account (US\$m)	-1772	-3155	-3153	-1316	-976	1080	377	626		-5110	-5453	-4650
Foreign debt burden (US\$bn)	5.6	6.9	8.5	8.8	19.9	20.5	11.6	12.2	13.3	17.2		
Unemployment rate			5.9	5.8	6.9	7.4	6.44	6.28	6.01	5.78	5.6	5.3
Foreign investment: - carried out	1729.9	2986.6	2940.8	2334.4	1805.6	693.3	1525.6	1044.1				1825.8
- announced (both US\$m)	3765.6	6530.8	8497.3	4649.1	3897.0	1568.3	2012.4	2503				3600

Sources: General Statistical Office, internal information from MOLISA, CIEM

Table 2: Distribution of the population aged 13 to 65

Unit: persons

	2005			1999		
	Total	Women	Men	Total	Women	Men
Total	6577	3393	3184	6949	3554	3395
of working age	5766	2864	2902	6030	3037	2993
1. Working	3571	1794	1777	3285	1686	1599
2. Retired people doing spare-time work	547	306	241	813	476	337
of working age	346	171	175	613	366	247
4. Retired people without spare-time work	464	279	185	422	203	219
of working age	225	103	122	248	97	151
5. Training without spare-time work	1577	775	777	1985	916	979
of working age	1296	630	642	1478	715	763
6. Unemployed	128	46	82	259	96	163

Source: own calculations using the data from the labour market surveys conducted in Vinh in 1999 and 2005

Table 3: Qualification-specific wages (averages) 1999

Vocational training	Formal sector			Informal sector								
				Total			Employees			Self-employed		
	N	%	wage	N	%	wage	N	%	wage	N	%	wage
No vocational training, no qualifications	162	9.7	421	896	30.3	407	163	39.8	284	733	44.5	435
Lowest vocational training without qualifications	93	5.6	478	181	6.1	405	30	7.3	274	151	9.2	431
Vocational school – incomplete, without qualifications	93	5.6	388	271	9.2	459	90	22.0	395	181	11.0	492
Vocational school – completed but no qualifications	261	15.6	478	248	8.4	543	73	17.8	502	175	10.6	560
Full-time vocational school	516	30.8	475	360	12.2	504	38	9.3	383	322	19.6	519
Polytechnic, university, other institution of higher education	507	30.3	613	98	3.3	647	15	3.7	541	83	5.0	666
Master's degree, doctorate	35	2.1	991		0.0			0.0			0.0	
Other qualification	7	0.4	720	3	0.1	500	1	0.2	100	2	0.1	600
Total	1674	100	520	2057	69.6	459	410	100	364	1647	100	482

Source: own calculations using the data from the labour market survey conducted in Vinh in 1999

Table 4: Qualification-specific wages (averages) 2005

Vocational training	Formal sector			Informal sector								
				Total			Employees			Self-employed		
	N	%	wage	N	%	wage	N	%	wage	N	%	wage
No vocational training, no qualifications	90	4.6	802	958	55.0	889	198	45.9	610	760	57.9	972
Lowest vocational training, without qualifications	133	6.7	1023	147	8.4	1081	41	9.5	1002	106	8.1	1114
Vocational school – incomplete, without qualifications	56	2.8	835	158	9.1	1100	60	13.9	710	98	7.5	1372
Vocational school – completed but no qualifications	260	13.1	1085	190	10.9	1228	70	16.2	1252	120	9.1	1213
Full-time vocational school	448	22.6	1114	182	10.4	1182	35	8.1	740	147	11.2	1299
Polytechnic, university or other institution of higher education	823	41.6	1377	96	5.5	1950	23	5.3	976	73	5.6	2295
Master's degree, doctorate	68	3.4	1652	3	0.2	1133	2	0.5	1100	1	0.1	1200
Other qualification				9	0.5	1318	2	0.5	475	7	0.5	1600
Total	1978	100	1194	1743	100	1062	431	100	797	1312	100	1149

Source: own calculations using the data from the labour market survey conducted in Vinh in 2005

Table 5: Qualification-specific wages (averages) 1999

Vocational training	Formal sector			Private enterprise			State-owned ent.		
	N	%	wage	N	%	wage	N	%	wage
No vocational training, no qualifications	162	9.7	421	26	27.1	742	136	8.6	360
Lowest vocational training, without qualifications	93	5.6	478	4	4.2	400	89	5.6	482
Vocational school - incomplete, without qualifications	93	5.6	388	24	25.0	502	69	4.4	349
Vocational school – completed but no qualifications	261	15.6	478	17	17.7	492	244	15.5	477
Full-time vocational school	516	30.8	475	19	19.8	550	497	31.5	473
Polytechnic, university or other institution of higher education	507	30.3	613	5	5.2	910	502	31.8	610
Master's degree, doctorate	35	2.1	991	1	1.0	800	34	2.2	997
Other qualification	7	0.4	720		0.0		7	0.4	700
Total	1674	100	520	96	100	595	1578	100	515

Source: own calculations using the data from the labour market survey conducted in Vinh in 1999

Table 6: Qualification-specific wages (averages) 2005

Vocational training	Formal sector			Private enterprise			State-owned ent.		
	N	%	wage	N	%	wage	N	%	wage
No vocational training, no qualifications	90	4.6	802	34	22.1	618	156	8.6	841
Lowest vocational training, without qualifications	133	6.7	1023	14	9.1	1228	119	6.5	999
Vocational school – incomplete, without qualifications	56	2.8	835	10	6.5	704	46	2.5	863
Vocational school – completed but no qualifications	260	13.1	1085	29	18.8	1027	231	12.7	1092
Full-time vocational school	448	22.6	1114	29	18.8	1275	419	23.0	1102
Polytechnic, university or other institution of higher education	823	41.6	1377	36	23.4	1509	787	43.1	1371
Master's degree, doctorate	68	3.4	1652	2	1.3	1100	66	3.6	1669
Other qualification					0.0			0.0	
Total	1978	100	1194	154	100	1097	1824	100	1202

Source: own calculations using the data from the labour market survey conducted in Vinh in 2005

Table 7: Average wages (in thousand VND) by sector in comparison

	2005		1999		Change as a
	Number	Income	Number	Income	percentage
Formal sector	1978	1218	1674	520	134.2
of which: state administration	779	1248	768	523	138.6
state-owned enterprises	1045	1168	868	499	134.1
private enterprises	154	1097	96	595	84.4
Informal sector	1743	992	2057	459	116.1
of which: employees	431	797	410	364	119.0
self-employed	1312	1151	1647	482	138.8

Source: own calculations using the data from the labour market surveys conducted in Vinh in 1999 and 2005

Table 8: Regression analyses for the year 1999

Dep. variable=logarithm of the hourly wage	Formal sector			Informal sector		Employees in priv. ent.	State admin.	State-owned ent.
	All N: 1560 R ² = 0.21	Private N: 83 R ² =0.17	State N: 1477 R ² = 0.23	All N: 1259 R ² = 0.10	Employees N: 318 R ² = 0.31	N: 401 R ² = 0.22	N: 644 R ² = 0.23	N: 833 R ² = 0.24
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
_cons	0.7**		0.500	0.65*	0.490	0.240	0.170	0.690
Age	0.04***		0.04***	0.08***	0.08***	0.09***	0.04**	0.04**
Age2	-0.0003**		-0.0003**	-0.001***	-0.001***	-0.001***	-0.0004*	-0.0003
Woman	-0.16***		-0.17***	-0.28***	-0.37***	-0.27***	-0.12**	-0.20***
Primary school, no qualifications (reference cat.)								
Primary school qualification	0.390		0.500	-0.02	-0.06	0.030		0.390
Lower secondary school qualification	0.350		0.470	0.040	0.200	0.080	0.740	0.370
Upper secondary school qualification	0.380		0.500	0.100	-0.07	0.040	0.800	0.380
No vocational training, no qualifications (ref.)								
Lowest vocational training, no qualifications	0.060		0.080	0.002-	0.32*	0.180	0.020	0.110
Vocational school – incomplete, no qualifications	0.130		0.02-	0.060	0.13*	0.13*	0.040	-0.06
Vocational school – completed but without qualifications	0.110		0.13*	0.19**	0.42***	0.35***	0.29**	0.070
Full-time vocational school	0.13**		0.15***	0.850	0.170	0.23*	0.14*	0.15*
Polytechnic, university, other institution of higher education	0.32***		0.34***	0.37**	0.370	0.60***	0.38***	0.31***
Master's degree, doctorate	0.54***		0.56***				0.75***	0.42***
Other qualification	1.06***		1.08***					1.08***

Results for private enterprises in the formal sector can not be interpreted due to low case numbers

* significant at the 5% level, ** significant at the 1% level, *** significant at the 0.1% level

Source: own calculations using the data from the labour market surveys conducted in Vinh in 1999

Table 9: Regression analyses for the year 2005

Dep. variable=logarithm of the hourly wage	Formal sector			Informal sector		Employees in priv. ent.	State admin.	State-owned ent.
	All N: 1901 R ² = 0.33	Private N: 139 R ² =0.35	State N: 1762 R ² = 0.31	All N: 1323 R ² = 0.15	Employees N: 373 R ² = 0.23	N: 512 R ² = 0.24	N: 734 R ² = 0.38	N: 1028 R ² = 0.27
	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
_cons	1.66***	2.8***	1.67***	1.32***	1.33***	1.72***	1.4***	1.94***
Age	0.05***	-0.18	0.05***	0.07***	0.06**	0.040	0.07***	0.03**
Age2	-0.0003**	0.0005	-0.0004***	-0.0007***	-0.0006*	-0.0003	-0.006***	-0.002
Women	-0.18***	-0.32**	-0.17***	-0.24***	-0.28**	0.28***	-0.16***	-0.19***
Primary school, no qualifications (reference cat.)								
Primary school qualification	-0.18	-0.11	-0.02	-0.18	-0.12	-0.14	0.360	-0.015
Lower secondary school qualification	-0.12	-0.33	-0.09	-0.03	0.060	-0.0007	-0.57	0.070
Upper secondary school qualification	0.030	-0.03	0.040	0.050	0.050	0.060	-0.22	0.140
No vocational training, no qualifications (ref.)				0.120				
Lowest vocational training, no qualifications	0.11*	0.270	0.070	0.20**	0.25**	0.27***	0.29**	0.025
Vocational school – incomplete, no qualifications	-0.03	-0.06	-0.05	0.120	0.040	0.020	-0.03	-0.014
Vocational school – completed but without qualifications	0.15***	0.012	0.14**	0.68***	0.34***	0.24***	0.23*	0.15**
Full-time vocational school	0.27***	0.37*	0.23***		0.030	0.23**	0.29***	0.22***
Polytechnic, university, other institution of higher education	0.45***	0.41**	0.44***	0.160	0.47***	0.50***	0.44***	0.46***
Master's degree, doctorate	0.64***	0.350	0.62***			0.420	0.60***	0.63***
Other qualification					-0.39	-0.44		

* significant at the 5% level, ** significant at the 1% level, *** significant at the 0.1% level

Source: own calculations using the data from the labour market survey conducted in Vinh in 2005

Table 10: The number of households below defined poverty thresholds

	2005				1999			
	Only earned income		All sources of income		Only earned income		All sources of income	
	No.	%	No.	%	No.	%	No.	%
With a monthly income below US\$ 7.6 per head	49	2.23	12	0.55	31	1.41	20	0.91
With a monthly income below US\$ 10 per head	62	2.83	18	0.82	185	8.42	128	5.83
Income below US\$ 16 per month (according to new poverty threshold)	191	8.71	106	4.83	374	17.02	308	14.02

Source: own calculations using the data from the labour market surveys conducted in Vinh in 1999 and 2005

Table 11: Unemployment benefit (only formal sector, insurance contribution 2.5% and benefit rate 55%)

The first three columns with values from the sample

The last three columns with extrapolated values

	Unem- ployed people	All employees of the formal sector	Only people employed by the state	Unem- ployed people	All employees of the formal sector	Only people employed by the state
Sum of wages (VND 1000s)		2,169,310	2,355,227		42,057,625	38,737,679
Employees		1806	1962		35,036	32,250
1) Average wage per person		1201	1200		21,436	21,449
Sum of contributions (VND 1000s) at contribution rate of 2.5%		54,233	58,881		1,051,441	968,442
Individual contribution		30	30		536	536
Unemployed (pers.)	128			2286		
Unemployed people with a period of unemployment <12 months	53			946		
Employees in the informal sector who lost their job in the formal sector	96			1714		
Employees in the informal sector who lost their job in the formal sector less than 12 months ago	5			89		
2) Sum of benefits: for 53 persons	34,980			624,643		
for (53+5) persons	38,293			683,812		
3) Average unemployment benefit	660			660		

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