



The Management of Risk: Informal Trade in Indonesia

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Summary. — Small traders face risk and uncertainty in carrying out their business activities. On the basis of a large-scale survey on informal sector trade in Central Java, Indonesia, the economic conditions of the informal trade sector and risk avoidance strategies of traders are analyzed. In particular, petty traders have to solve “the traders dilemma” by extracting themselves from the moral obligations of sharing and redistribution to relatives and neighbors. Inventory minimization by daily replenishment of stocks, avoidance of long-term credit, and formalization of relations with government agencies are among the risk-reduction strategies. Policy measures to aid petty traders in their endeavor to reduce risk and maintain their businesses are outlined.

1. INTRODUCTION: RISKY BUSINESS

Petty trading in the informal sector is a risky activity. Easy entry often results in quick exit. Despite its high-risk nature, virtually no attention has been paid to this serious problem in the large literature on informal sector (Portes, Castells and Benton, 1989, Danesh, 1991).¹ This contrasts sharply with the literature in economic development in which risk analysis is an often used tool. The assessment of risk in unpredictable future market conditions is standard procedure in project appraisal or foreign exchange transactions (Yotopoulos and Nugent, 1976, pp. 376-377), and farm income stabilization schemes (Meier, 1989, pp. 364-365).

What exactly is risk? Economists regard it “as a situation in which the probability of obtaining some outcome is not precisely known” (Todaro, 1981, p. 547). Sociologists refer to risk as the unintended consequences of rational action. Applied to the informal sector, risk will be defined as the probability of a new petty trader achieving sustainability, i.e. emerging as a profitable entrepreneur growing to permanence, eventually formalizing his enterprise by recruiting paid workers and obtaining the necessary business permits from relevant authorities. But what is “profitability” for petty traders? It will be argued that these traders have, at best, unclear concepts of such key terms as income, cost and profit — a fact which directly contributes to high rate of failure.

Accordingly, a major aim of this paper is to docu-

ment risk and uncertainty and its consequences in the Indonesian informal sector. The study will utilize some recent data resulting from a field survey conducted in Central Java.²

Section 2 offers a selected literature survey to highlight the evolution of the informal sector debate. Section 3 describes a special survey of petty trading in Central Java conducted during August-October 1992. Section 4 summarizes empirical findings of this survey from the standpoint of risk and uncertainty. Section 5 presents the policy implications of the data, particularly in terms of risk-reduction strategies centered on greater formalization. Section 6 summarizes the main conclusions of the paper.

2. THE INFORMAL SECTOR DEBATE

In order to properly evaluate the informal sector research and to determine its relevance for employment policy it is necessary to place it in a wider intellectual context, tracing the origins of the concept, its subsequent evolution, and the latest thinking on the subject.

The division of employment into formal and informal sectors was originally proposed by Hart (1973). It was quickly legitimized by the International Labour Office (ILO) in its Kenya

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Employment mission in early 1973, and in subsequent research in ILO's World Employment Program (Sethuraman, 1974; Standing and Tokman, 1991, Chapters 3, 4, and 5). From the beginning, the concept of the "informal sector" has been the subject of extensive controversy. Early research focused attention on two crucial aspects: (a) its definition based on such alternative criteria as size, permanence, and legal status, and (b) its linkages to poverty, more precisely its accessibility for the "working poor."

At first, the dominant view was that the informal sector was a transitory "reserve army" of recent rural migrants waiting in some invisible line for job opportunities in overcrowded urban labor markets. As it gradually became evident that the informal sector was, for the foreseeable future, a more or less permanent fixture in developing countries, Victor Tokman (1978), formerly head of the department in ILO concerned with employment planning, became a leading advocate of the "benign" view of the informal sector. He argued that, regardless of definition problems, the informal sector was a major source of self-employment and provided income opportunities for microentrepreneurs; therefore, governments in developing countries should adopt supportive policies in aid of this sector. Several studies sponsored by ILO during Tokman's tenure were in the "benign" mode of thinking (Fluitman, 1989; Standing and Tokman, 1991).

Among academics, the informal sector concept found a particularly receptive response especially from sociologists (de Soto, 1986) and geographers (McGee, 1989) who argued that the informal sector represented a new and profound process of class-based exploitation of labor in a state captured by the powerful, capitalist interests. In particular it was argued that the informal sector, because of its close ties to nonmarket-oriented subsistence production in the household (Evers, 1981), was actually subsidizing formal sector employment by allowing wage levels below the cost of the reproduction of labor. But there have also been critical voices, doubting the analytical power of this school of thought (Breman 1986, Elwert, Evers and Wilkens, 1983).

During the 1980s the informal sector debate shifted its focus from definitional issues to the social costs of World Bank-inspired structural adjustment and stabilization programs. Increasingly, these programs were criticized on grounds of high social costs of adjustment, specifically for their negative impact on the "working poor." In an influential report sponsored by UNICEF (Cornia, Jolly, and Stewart, 1987) the critics argued that economic adjustment programs in the formal sectors lacked a "human face"; the evidence showed that the heavy social costs of adjustment were pushing the "vulnerable groups" into expanding "informal sectors."

The World Bank at first opposed both the concept of the "informal sector" and the "benign" view of it, putting its confidence rather in the efficiency of neo-classical labor market clearing. For example, Mazumdar (1989) reflects the standard neoclassical Bank view, derived from a single labor market effectively clearing supply-demand forces without any policy intervention, that what is required is greater wage flexibility and elimination of social security rigidities which reduce labor mobility. More recently, Mazumdar and his co-researchers (Horton, Kanbur and Mazumdar, 1991) have presented evidence from a sample of 12 developing countries supporting their contention that labor market efficiency can be enhanced through lowering relative wages. More recently, however, and in view of mounting social costs of structural adjustment, the Bank has been obliged to pay attention to the social dimensions of adjustment, and to earmark funds targeted for victims of adjustment (World Bank, 1990).

Thus, after two decades of research and controversy surrounding the informal sector debate, it appears that some convergence of positions seems to be emerging. While the World Bank has adopted a more constructive position acknowledging the need for social adjustment, the ILO, for its part, now recognizes that the informal sector presents a "dilemma" to planners and policy makers, including for ILO itself (1991) in determining the proper balance of policy interventions between the formal and informal sectors.

At the grassroots level, however, the informal sector remains largely a "shadow economy" (Evers, 1991a), because one of its major characteristics remains the lack of information on its dynamics as well as its economic and social organization, its labor absorption and capital stock. It is also, according to conventional wisdom, largely free of government control. Students of the informal sector are still a long way from being able to offer concrete guidelines as regards the most effective or appropriate policy interventions for the informal sector workers and enterprises without harming a sector which nevertheless provides livelihood for millions of people. Clearly more and better information is required on informal sector institutions and dynamics.

In Indonesia the concept of the "informal sector" made its appearance with a book by ILO expert Sethuraman (1976, more recently 1989) and a large survey by LEKNAS-LIPI (Moir, 1978) only a few years after the concept was first used in Hart's study on Ghana (Hart, 1973). It has meanwhile been accorded official status and has been used both in the GBHN (State Guidelines) and in REPELITA, Indonesia's Five-Year-Plan. The current change of Indonesia's development strategy from a production-oriented to a human resources development-oriented approach will again bring the informal sector into the

forefront of discussion in preparation for REPELITA VI, starting in 1994.

The concept has found ready acceptance in Indonesia not so much because its analytical value or empirical relevance but because it fitted in very well with the scholarly tradition of writing on Indonesia. The formal and informal sectors resemble Boeke's dual economy, whereas the informal sector embodies all the characteristics of an involuted economy as described by Geertz (1963). In all three cases the "oriental," "the involuted" and the "informal" part of the economy and society are defined as unorganized, underdeveloped, and stagnant. Though in recent years a few studies have appeared to challenge this view it is still widely and erroneously held. A major objective of this paper is therefore to stress the dynamic changes that have occurred in the informal sector and to outline some of the consequences of this process.

Despite all the definitional acrobatics the informal sector remains small-scale economic activities on own-account, sometimes single-handed, sometimes with the help of family members or friends. Trade is predominant, but also included is handicrafts, small industrial production, services of the most diverse nature, and peasant agriculture.

3. THE INFORMAL TRADE SECTOR SURVEY

Indonesia has one of the largest informal sectors in the world (Rodgers, 1989). In fact, as shown in Table 1, most Indonesians work in the informal sector. The Indonesian Department of Statistics defines the informal sector in the country as self-employed plus family workers. This definition is used throughout this paper, including the tables derived from our survey.

In view of this reality, the Indonesian development planners have therefore targeted the informal sector as a focal point. For the sixth national five-year

development plan (REPELITA VI), starting in 1994, more detailed policy interventions will be needed to enhance the productivity and income levels of informal sector workers, while preserving the sector's labor absorption capacity. In order to enable development planners to formulate policy recommendations, a sound data base needs to be established. To this end, a special survey was designed and carried out during August-October 1992 in Central Java. We now turn to an analysis of this survey.

The survey took place in the Klaten Regency of Central Java, a Province accounting for an estimated 21% of the total employment in the trade sector of Indonesia. The questionnaire is partly based on the schedules for national CBS (Central Bureau of Statistics) surveys, but individual questions had to be modified to suit local conditions. Additional questions were asked to allow a more detailed analysis of informal sector conditions. Data have been collected on an establishment basis.

The questionnaire was prepared in colloquial Indonesian and in Javanese. The survey covers a stratified area sample of 331 establishments (including self-employed persons) in the trade sector, both urban and rural, representing medium and small establishments, the latter being the largest group including self-employed petty traders and food vendors. The survey also supplies data on a total of 600 workers (including unpaid family members).

A sampling procedure similar to that used in national sample surveys of BPS has been used, though on a smaller scale and without access to BPS sampling bloc data. Two sample areas representing an urban and a rural area were selected. In these areas five sampling blocs represent the following socioeconomic areas:

Bloc A: Pasar (a market owned by the local government)

Bloc B: Luar Pasar (a commercial area just outside the official market)

Bloc C: Kaki Lima (a street primarily used by street vendors)

Bloc D: Toko (a commercial area with small and medium-sized shops)

Bloc E: Kampung (a residential area with small shops and itinerant traders).

Interviewing has been done, as far as possible at or near the place of work to check the accuracy of the information provided. The survey has yielded the following data sets.

(a) Labor force data

Standard labor force data have been collected which can be compared to provincial and national level data, as far as available.

Table 1. Proportion of informal sector employment in selected sectors, Indonesia 1980 and 1990.

	Percentage in Informal Sector	
	1980	1990
Agriculture	82.31	83.08
Mining	57.62	12.61
Manufacturing	45.23	28.74
Electricity	21.21	10.47
Construction	32.80	25.93
Trade	88.73	85.08
Transport	43.21	48.71
Bank, Finance	10.05	03.66
Other Services	34.17	20.54
Total	69.11	63.39

Source: Hugo 1992, p. 79, Population Census 1980, 1990

(b) Data on trade sector enterprises

The survey allows for a detailed analysis of the type of operation, the sources of finance, the working capital, turnover and profits of enterprises. Number of employees, working family member, wages and special payments are also enumerated. These data also show differences between formal and informal sector enterprises and indicate the length of operation, the labor absorption capacity, the ease and difficulties of entering the informal sector, and the past and expected performance of small and medium-sized trading enterprises.

(c) Impact of government programs on the trade sector

Respondents have been asked to provide information, whether or not they had access to government training or other assistance programs. Furthermore licensing procedures, registration, payment of fees and access to credit facilities have been surveyed.

Selected data from this survey will now be analyzed from the perspective of risk and risk-avoidance strategies.

4. RISK AND UNCERTAINTY IN THE JAVANESE INFORMAL SECTOR

(a) Risk and risk avoidance

Riskiness of informal sector trading can be demonstrated by the business failure rate. This rate can be expressed as the ratio of petty traders quitting in failure to total number of traders in a given market. The basic cause of business failure in informal sector trade is extremely risky market conditions facing traders. Often traders, especially new entrants, who are forced to take to petty trade because of lack of farm land or insufficient formal sector employment appear to underestimate the risks and uncertainty awaiting them, in part due to strong cultural reasons. In particular, the path to profitable survival is beset by five major sources of risk: (i) fluctuations in market conditions, (ii) cultural pressure to redistribute profits to kin, neighbors and government officials, (iii) the traders' own limited understanding of such key concepts as income, cost, and profit, (iv) their failure to impute cost of own-labor or unpaid family labor, and (v) inadequate depreciation of working capital. Evidence, reported below, shows that the principal source of working capital is from own-sources.

The typical counterstrategy of petty traders is that of risk avoidance. They work long hours; they diversify their operations by indulging in mixed trading; they seek supplementary income from agriculture or elsewhere (Evers, 1991); they trade in small quanti-

ties (Alexander, 1987); but, above all, they assume many costs of petty trading themselves. In brief, they minimize profit per unit of time, trying to compensate for this low return by excessively long hours of work. Of the petty traders in our sample 87.5% worked every day for the whole month, a third of the traders 10 hours and more per day.

(b) Income, cost and profit

Petty traders are profit-seeking entrepreneurs with certain expectations. Income expectations of most petty traders are shaped largely by cultural norms. For the majority, the operating cultural norm is a fixed set of needs and satisfactions; these are typically translated into fairly constant daily income expectations. As soon as the targeted income is reached, trading operations are suspended and the income is instantaneously utilized to buy supplies to satisfy the household's basic needs. There is also a smaller, upwardly mobile group of petty traders who transcend fixed income expectations and are willing to assume greater business risk. For these traders, income from petty trading fluctuates daily as market conditions vary considerably over time.

Data from our trade survey show that traders who have recently entered the field take risks and suffer uncertainty as evidenced in daily fluctuations of average gross profits (*untung*). Old established traders have reduced risk and incomes and were therefore able to avoid total business failure.

The petty trader is not an optimizer because the objective function is unclear. The standard Indonesian term for profit is *untung*, meaning gain or revenue, and it clearly differs from *untung bersih*, net profit, which is closer to (but not the same) as the standard economic concept of profit as a residual return of the entrepreneur calculated as excess of total revenue over total cost.

The petty trader's cost concept, too, is incomplete and misleading. The general practice is to deduct from gross daily revenue from trading such direct

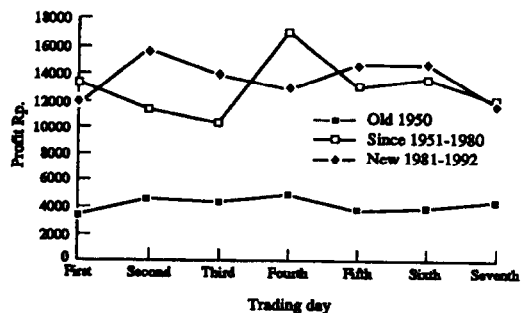


Figure 1. Outcome of risk avoidance strategies: Fluctuation of profits of old and new trading enterprises.

Table 2. *Income from trade below and above the opportunity cost of agricultural labor*

	Informal Trade Sector		Formal Trade Sector	
	Female Rp. 1750	Male Rp. 2500	Female Rp.1750	Male Rp. 2500
% below	50.9	37.7	20.0	15.8
% above	49.1	62.3	80.0	84.2

Source: Informal Sector Trade Survey, Central Java 1992

costs as cost of goods sold, wages of paid employees, transport cost and market fees paid. But imputed labor costs and capital depreciation are not counted. Thus, own labor cost and the cost of unpaid family members, or depreciation of working capital are assigned the value of zero. As a result, *untung*, as profit, exaggerates profitability. If we deduct a sum of Rp. 2,000 as the daily minimal wage or the wage of unskilled agricultural labor (i.e. the typical opportunity cost of labor in rural labor markets), many petty trading enterprises would end up with a trading loss. Hence, informal petty trading manifests a high turnover of small shops (*warung*) or market stalls (*kios*), which may be opened and closed in quick succession, in cycles coinciding with injection, termination and subsequent reinjection of capital or additional labor (Evers, Clauss and Gerke, 1988).

Income from trade varies considerably, but is generally low—but so are rural incomes in general. Half the women trading in the informal sector receive a gross profit (*untung*) of less than the average wage rate for female labor in the agricultural sector. Men are better off (as usual). In the formal trade sector the results are reversed. There are more women and men receiving more than the minimum wage through their trading enterprises. In other words normalization of trading practices and movement from the informal to the formal sector pays.

Table 2 could also be interpreted more optimistically. As current government-set minimum wages are frequently undercut by small and medium entrepreneurs the gross income from informal sector trade can be substantially higher for about half the traders than wage labor in industry.

(c) Working capital

To reduce risk of enterprise failure, petty traders attempt to minimize working capital.³ Thus, in the Central Java survey, two out of every three informal sector establishments reported a working capital of less than 265,000 Rupiah (US \$135); almost a quarter had less than 25,000 Rupiah (US \$12.5).

Own savings still appear to be the major source of finance for informal sector trade. Moneylenders were mentioned by 13% of respondents as an additional source of working capital, but this may be an underestimate, as 21.1% of enterprises are currently indebted to moneylenders.

Access to credit is often cited as a major concern of informal and small-scale enterprises (Schrader, 1992). This was partly confirmed by our respondents. The survey indicated that 44.4% had borrowed money for business purposes, but mainly from informal sources (friends 21%, family 4.8%, moneylenders 21.1%, banks 29.9%). Bank loans are not often used. In contrast to other studies stressing lack of access and difficulties of bureaucratic procedures we would interpret the limited use of formal bank loans as a deliberate risk-avoidance strategy.

This view is confirmed by answers to our survey questions on the reason for difficulties and decline of business. Those, who found it difficult to develop their business cited reasons other than lack of credit. Lack of capital was mentioned by 14.8% of respondents, whereas 26% stressed lack of customers and declining sales.

Whether an establishment has access to credit from the formal banking sector and the various government schemes providing subsidized credit is very

Table 3. Working capital of formal and informal trading enterprises

Capital, Rp.	Formal	Informal	Total
3,500–25,000		66 (22.9)	66 (20.0)
26,000–82,500		66 (22.9)	66 (20.0)
83,000–265,000	3 (7.0)	62 (21.5)	65 (19.6)
266,000–1,219,000	7 (16.3)	60 (20.8)	67 (20.2)
1,220,000 and more	33 (76.7)	34 (11.8)	67 (20.2)
Total	43 (13.0)	288 (87.0)	331 (100)

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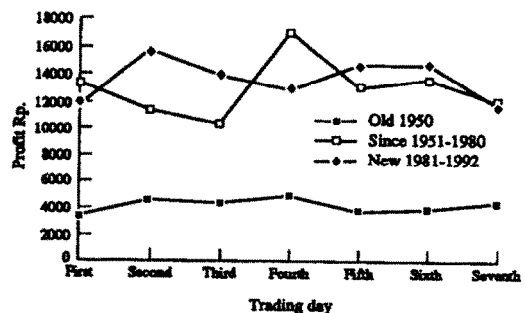


Figure 1. Outcome of risk avoidance strategies: Fluctuation of profits of old and new trading enterprises.

The more successful traders appear to have evolved coping strategies to solve the "traders' dilemma" in their own specific ways. First of all there is a strong emphasis on a "cash and carry economy." Trade is carried out in very small quantities and credit relations are avoided to reduce the risk of being obliged to support neighbors or relatives burdened with debt. Another strategy is inventory minimization by daily replenishment of tradable stock. This entails using profits to buy daily needed goods, thus reducing the risk of being subjugated to moral pressure to share cash at hand with others.⁴

As Gerke (1991) has shown in her recent study of Javanese petty traders, "one of the changes that took place during the last ten years is the nearly total replacement of bargaining" (p. 12). Earlier poorer women were given price reductions or slightly larger quantities of goods. This way poor villagers were supported in a face-saving way, but bargaining as a social process worked in general to the detriment of petty traders.

(b) *Registration and licensing*

The informal sector is currently undergoing a period of formalization, which partly explains the relative decline of the informal versus the formal sector (Evers, 1992). The Indonesian Department of Trade in particular has stepped up its licensing procedures, but enterprises are also more likely to take out licenses as this reduces the risk of being evicted from a favorable trading location.

Our survey data from Central Java show that 12% of all traders and 43% of formal sector traders were in the possession of a SIUP license issued by the Department of Trade. In the Outer Islands, where local Department of Trade offices were only opened recently, licensing rates are considerably lower. The additional licensing and registration procedures carried out by local government offices lead to a duplication of administrative procedures. Some small or medium trading enterprises had to obtain up to four licenses in costly and time-consuming procedures. From the individual trader's point of view obtaining a license, though costly and troublesome, reduces business risks, in particular the risk of being evicted from a favorable trading location.

(c) *Self formalization*

In recent years traders have also taken steps to formalize their businesses. Some have formed or joined cooperatives and have sought access to formal banking institutions. The number of irregular traders without a permanent place of operations is still large (37.8% plus another 8.8% of itinerant traders), but declining, if comparing data from our survey in 1987 (Evers, 1991b) with data in 1992. Security of operat-

ing a business at the same place is not necessarily guaranteed but at least improved.

(d) *Disguised formal sector employment*

Furthermore formalization is progressing through the spread of the institution of *borongan* (out-putting). Small traders do not work on own-account but sell goods on commission. What looks like small-scale business and self-employment is often disguised formal sector employment. Census or SAKERNAS (National Labor Force Survey) data would classify workers of this type as self-employed whereas in fact they may be part of a very large-scale business operation. We have come across cases where a large trader (ethnic Chinese) owned 11 trucks and 45 push carts, which were operated by 67 traders, selling dumplings on commission. This large trading enterprise was statistically classified as 45 self-employed and 12 self-employed assisted by family members and 10 family workers, all of them belonging to the informal sector.

Again, risk is reduced for the individual petty trader as he or she sells goods on commission on a fairly regular basis. Capital outlay is minimal and the risk of total failure and ensuing indebtedness greatly reduced. Goods not sold can be returned by the petty trader and the loss, if any, is absorbed by the larger trading firm, that usually has access to credit facilities.

(e) *Differences in risk behavior*

We found little difference in the risk-related behavior by type of commodity sold. Traders in industrially produced goods were more prone to take up credit than sellers of products of home or cottage industries. Though men generally ran more profitable enterprises, women tended to stay longer in business. This may indicate that men are more likely to take more risks, but then may either fail or change their occupation or enterprise. This line of inquiry certainly merits further attention.

6. SUMMARY AND CONCLUDING REMARKS

The informal sector is a high-risk activity manifesting not only easy entry but also quick exits due to a high probability of failure. Our empirical results from Indonesia point out that petty traders have designed several risk-averting or risk-avoiding strategies, in which they have been fairly successful. In general, these traders are profit-seekers, but for cultural reasons and because of unclear concepts of income, cost and profit, they carry out trading under conditions of uncertainty. Other major findings are as follows:

First, the Indonesian informal sector absorbs the majority of the growing labor force, but, it appears that this high labor-absorption capacity is now slowly declining. In consequence, the ease of entry into the informal sector has been reduced.

Second, macroeconomic policies, such as a tight money policy, the deregulation of the formal sector and increased administrative efficiency have contributed to the formalization of the informal sector.

Third, access to informal sector employment, particularly by women, has become more restricted. Access to secure business space in the informal sector has also been adversely affected by rising transaction costs due to a great multiplicity of permits and licensing required by various levels of government authorities.

Fourth, policy measures for human resources development, such as training programs appear to have had little impact on entrepreneurship development in the informal sector. Proper bookkeeping, accounting and other essential ingredients of good

management need to be nurtured through on-the-job training and self-help.

Fifth, government credit programs have an increasing impact on medium-size trading enterprises, but have barely touched petty traders, who tend to rely on the mobilization of own savings and on informal credit institutions, especially moneylenders. Failure to allow for depreciation of working capital (and build a reserve) is a significant cause of business failures, especially among smaller enterprises where depletion of capital necessitates closing down.

Sixth, although petty traders have developed many risk-avoidance or averting strategies, there are also powerful cultural forces at work, such as the unsolved "traders' dilemma," which perpetuate riskiness of informal sector activities. In the long-run these cultural forces may disappear in line with increasing formalization. In the shorter term, however, human resource development policy interventions (Mehmet, 1988) are the most effective means to reduce risks for informal sector enterprises and to introduce better techniques of risk management in line with changing economic, social and administrative environment.

NOTES

1. For an exception see Dasgupta (1992). The author draws attention to the strategies adopted by petty traders to reduce risk. Most studies on risk deal with the agricultural sector, e.g., Kimball (1988) and Bromley and Chavas (1989). There may be additional studies on risk, especially in the Caribbean and in Africa, to which we had no access.

2. The survey was carried out in Central Java in 1992 by Hans-Dieter Evers and Tadjuddin Noer Effendi, Population Studies Center, Gadjah Mada University, Yogyakarta under

the auspices of the BAPPENAS-ILO Sectoral Employment Policy and Planning Project. For details see Evers (1992) and section 3 of this paper.

3. This finding supplements the statement of Bromley and Chavas (1989, p. 729), that "risk can be managed privately through capital accumulation."

4. Other means of solving the "traders' dilemma" are discussed in Evers and Schrader (1993).

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