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THE IMPORTANCE OF AGRICULTURE AS A SOURCE OF FINANCE AND RAW MATERIALS FOR RURAL INDUSTRIES
A Case study of small scale industries at village level in rural West Java[1)]

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Abstrak

Sektor pertanian sangat penting, baik sebagai sumber permintaan (pasar output) maupun sebagai sumber dana dan bahan baku, bagi pertumbuhan industri-industri kecil di pedesaan (RSSIs). Studi ini mempunyai dua tujuan: (1) meneliti sejauh mana pentingnya sektor pertanian sebagai sumber dana dan bahan baku bagi RSSIs di desa-desa dekat dengan suatu kota yang berfungsi sebagai pusat perdagangan bagi masyarakat di desa-desa sekelilingnya, dan (2) menganalisa tingkat keterkaitan lokal ("local linkages") antara RSSIs dengan sektor pertanian pada tingkat desa, kecamatan, kabupaten dan propinsi. Hasil studi memperlihatkan bahwa: (1) sektor pertanian sangat penting sebagai sumber bahan baku tetapi tidak sebagai sumber dana bagi RSSIs yang diteliti, dan (2) tingkat keterkaitan lokal antara RSSIs yang diteliti dengan sektor pertanian sangat rendah pada tingkat desa.

INTRODUCTION

A not inconsiderable part of the literature on economic development addresses the role and importance of rural small scale industries (RSSIs) within the economy of less developed countries (LDCs). This growing attention for RSSIs in development studies is strongly associated with the recognition of several economic and social problems currently confronting the rural areas in these countries. These problems include the continuing imbalance in the rural labour market leading to high (disguised) unemployment rates, especially for the category of low educated people; the persistence of large intra and inter-regional socio-economic inequalities and the consolidation of extremely concentrated patterns of urbanization.

It is often suggested in the literature that RSSIs are very important for the rural economy, and this is due to their characteristics, which include the following ones (Anderson 1982, Liedholm and Chuta 1976 and Staley and Morse 1965). **Firstly**, their number is large and they are distributed widely throughout the rural area and therefore may have a special "local" significance for the rural economy. **Secondly**, especially tra-

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ditional RSSIs or rural cottage and household industries (RCHIs) are highly labour intensive. So, given these two characteristics, the development of RSSIs can be seen as an important element of policy to create employment and to generate income within the rural economy. **Thirdly**, RSSIs in LDCs are mainly agriculturally based activities. This fact may explain the growing emphasis on the role of small scale industries in rural areas. Agriculture has been proven to be unable to absorb the increasing population in the rural areas. Unfortunately, rural non-farm activities together are not able to cope with the rural labour force explosion, neither the most employment creating parts like trade, services, transport and construction, nor the rural industries. As a result rural migration increased dramatically, causing high unemployment rates and its related socio-economic problems in the urban areas. Therefore, RSSIs being a potentially quite dynamic part of the rural economy have been looked at for their potential to create rural employment. **Fourthly**, although in general people in rural areas are poor, evidence shows the ability of poor villagers to save a small amount of capital and invest it; they are willing to take risks by doing so (Wickramanayake, 1988). In this respect, RSSIs provide thus a good starting point for the mobilization of both the villagers' talents as entrepreneurs and their capital; while, at the same time, RSSIs can be seen as an important sector providing an avenue for the testing and development of entrepreneurial ability (Page, 1979). Finally, RSSIs are financed overwhelmingly by personal savings of the owners, supplemented by gifts or loans from relatives or from local informal money-lenders, traders, input suppliers, and payments in advance from consumers. In this regard, the RSSIs must be seen, potentially, as an important instrument to allocate, in particular, rural savings optimally which would otherwise not be spent or used productively.

The aim of this study is to investigate the importance of agriculture as a source of finance (investment) and raw materials for RSSIs at village level. It is expected (a proposition) that this importance will be less in rural areas located near to a city. In order to test the validity of this proposition this study is focussed on RSSIs in some randomly selected villages located near a growing city which functions as an important urban centre for the villages. It is in West-Java, a province in Indonesia, which has been undergoing a process of development and industrialization since the late 1970s. Many rural areas in West Java might have undergone development processes, including improvements in infrastructure and transport facilities, under strong influences from growing cities like Jakarta, Bandung, Bogor, Tangerang and Bekasi. This might have weakened local raw materials and investment linkages between agriculture and RSSIs in that rural areas.

The organisation of this article is as follows. Section II explains the sample survey on which this study is based. Section III deals with the literature on the issue being studied. In Section IV primary data collected from the sample survey are presented and

discussed. Finally, in Section IV some conclusions are given on the basis of the findings of this study in relation to the above proposition and the main broader theoretical question on the issue being studied (as will be discussed in Section III).

RURAL LINKAGES BETWEEN RSSIs AND AGRICULTURE: A THEORETICAL CONSIDERATION

Backward production linkages with agriculture

It is often said that one main characteristic of RSSIs is that the industries are very intensive in the use of local raw materials. The majority of RSSIs are basically agro-processing activities (agribusiness), processing a variety of agricultural commodities (Anderson, 1982; Harriss, 1987 and Page, 1979). For the processing of these commodities, RSSIs are very dependent on the agricultural sector for their procurement of raw materials. The activities are usually carried out in location near to the source of supply of raw materials. This form of direct relationship between RSSIs (i.e agro-processing industries) and agriculture through backward production linkages (BPLs) from the industries to the agricultural sector is thus visible in: 1) the rural processing activities of agricultural output in small scale; and 2) the spatial structure and dispersion of RSSIs activities. For instance, rice mill activities are located close to rice fields or bamboo weaving activities are found in villages where there are many bamboo trees; though in many cases we also found that bamboo weavers buy their bamboo from far away situated villages or regions.

The density and composition of rural agriculturally oriented RSSIs activities vary, however, considerably between countries, and even between regions within a particular country, implying that there may be other factors causing such differences, without disturbing the linkage itself between agriculture and agriculturally oriented RSSIs activities. It turns out that these factors are both the pattern of growth and development in the agricultural sector and the level of overall economic development in a particular country or region (Smith, 1975, 1986).

However, amongst the rural manufacturing activities processing of food products, in particular rice hulling and milling, and manufacture of textiles are still preponderant generally, as they have been historically. These categories appear to have retained their importance no matter what level of development has been reached in a particular country (Harriss, 1987).

The weight of empirical evidence, though still limited, suggests that the BPLs from RSSIs to agriculture are frequently quite significant. There is even evidence that the RSSIs value added generated from these activities is significantly larger than that generated from producing agricultural inputs, i.e. forward production linkages (FPLs) from

RSSIs to agriculture, and BPLs from RSSIs to agriculture are more extensive than BPLs from larger industries (mostly located in urban areas) to agriculture (Liedholm and Mead, 1987).

Capital finance

There is a substantial number of studies which provide evidence on the importance of informal sources of finance for RSSIs in LDCs. An important indication from all this evidence is that RSSIs exist and operate within a very segmented capital market and that they are largely excluded from access to commercial and state banks is widely evident. They rely almost entirely on informal sources of capital. Larger industries, which are mainly located in urban areas, on the other hand, usually have better access to formal credits and get better supports from the government than do the smaller ones (Berry, 1989; Chee Peng Lim. 1987; and Patvardhan, 1988).

From Africa, a lot of studies show that within the informal sources personal savings supplemented by loans or gifts from relatives or friends dwarf all other sources of finance for initial investments in these industries. Local informal money-lenders provided only a small portion of the initial capital for RSSIs (Child, 1977; and Ndua and Ng'Ethe, 1984a,b). Evidence from rural Asia also shows the same structure of investment sources that the establishment and expansion of RSSIs were usually self-financed, either from family or personal savings or from reinvested profits (Ahmed and Rachman, 1978; Sande Sara, 1988a,b; and Suri, 1988).

Based on all this existing evidence it is then hardly surprising that in the economic development literature RSSIs are often marked as an important sector to provide an outlet for personal or family saving at low income levels or as an effective mechanism to allocate rural savings as investment funds to rural productive economic activities which would otherwise not be realized. May be more important is the predominance of self-finance, especially through reinvested profits, in RSSIs. This suggests another crucial contribution of RSSIs to the economy of LDCs in terms of generating new savings by these industrial activities from low income groups. Child and Kaneda (1975) state that: "The industry is truly small-scale and has been a vehicle for marshaling indigenous 'minor' savings/investible funds for the development of entrepreneurial and managerial talent,..(p.249). It is also important to note that although most people in rural areas are poor there is a lot of evidence on the ability of these people to save or invest it either in their own or other people's business. As cited in Mauri (1977): "The general view, influenced by official statistics on income per capita in developing countries and by estimates of rural incomes in these countries, is that it is very doubtful whether these households can save. Closer analysis shows, however, that the rural areas of these countries do have substantial savings capacity" (p.15).

In the economic development literature it is often assumed that growth of agrarian economies, especially in the early stages, requires a net "surplus" transfer from the agricultural sector for maintaining high enough rates of industrial investment and hence growth in the industrial sector (Fei and Ranis, 1966; and Papola, 1987). Especially for the RSSIs it is often stated that agriculture is quite an important sector in providing investment's funds for the industries (Dunham, 1991).

The role of development in agriculture as also an important source of investment for RSSIs[3] is also a central issue in Mellor's (1973, 1974, 1976) studies. His important proposition is that rising productivity and incomes in agriculture increase demand in rural areas and therefore encourage diversification of local production in particular and rural economy in general. The higher incomes in rural areas provide a strong basis or a large pool for investment in RSSIs.[4]

There is some evidence which shows that private investors in the rural areas such as large commercial and successful farmers have likewise channelled investment funds from agriculture to rural non-farm activities, either directly or indirectly through informal or formal intermediate financial institutions. In some cases, it has been found significant that the process of rural economic diversification, including the development of rural industries, was the result of the economic behaviour of rich peasants, commercial farmers and landlords (Altaf, 1988 and Jansen, 1986). However, not all existing empirical findings indicate that capital from agriculture appeared as the most important source of funds for investment in rural nonfarm sectors. Evidence from Africa, for example, shows that agricultural surpluses accounted for only a small part of total investment funds in rural nonfarm sectors, while, personal or family savings out of wage income earned in larger industries and profits from trading predominated as sources of investment in these sectors (Adeyemo, 1983; and Sverrisson, 1992). Evidence from some Asian countries also shows that most rich farmers and landlords are unlikely to become involved in the manufacturing activities to any significant degree. Instead, they tend either to invest their capital in economic non-industrial activities[5] or to use it unproductively on conspicuous consumption (Including purchase of jeeps, cars and television sets and on social ceremonies (Bhalla and Chadha, 1983; Dunhan, 1989; and Rutten, 1991).

With respect to the investment flows from agriculture to RSSIs in particular, also not all existing empirical findings indicate that the agricultural sector is the most important source of capital for the industries. Even in regions with a growing agricultural sector it has been found that the growth of RSSIs in those regions did not appear to have been especially financed by agrarian surpluses (Baru, 1989).

Overall, from all the empirical findings above we can safely say that the agricultural sector did not appear as the most important source of capital for the RSSIs in LDCs, as many may have expected.

METHOD OF THE STUDY AND HYPOTHESES

This study is based on a stratified sample survey of RSSIs in rural West Java. The survey was carried out during April-July 1992 in nine selected villages at different distances to a growing medium-sized city, Bogor, in Ciomas subdistrict, Bogor district (which selection represents a cross-section of different rural areas with respect to the level of development and influences from the urban economy). The survey covers 115 small producers (as the units of the analysis). The survey was conducted village by village. In every village the same procedure was used. Production units in the sample were stratifiedly selected based on local government data to obtain a balanced coverage, both with respect to geographical local and to sub-sectors or activities. The sample size was planned to constitute about 10 to 30 per cent of official data on total population of RSSIs in each of the selected villages, as shown in Table 1. The selected RSSIs in the sample cover nine different branches of activities: footwear, food, furniture, clothing and hat, bamboo products, building materials, a specific tool for the shoes industries, agricultural hand tools and "gong" music instrument.

Table 1. Total population and the derived sample size of RSSIs in each the nine villages

Villages	Total population of RSSIs (units)	Sample (units)	size (%)
1. Pasir Jaya	43	12	28
2. Ciomas	30	11	37
3. Kota batu	50	12	24
4. Sindang Barang	15	2	13
5. Sirnagalih	115	39	34
6. Dramaga	170	20	12
7. Taman Sari	25	3	12
8. Sukaluyu	43	5	12
9. Petir	100	11	11
Total	591	115	20

Source: Local government office: "Potensi Desa dan Kelurahan, 1991/92. Kantor Pembangunan Desa.

Ciomas subdistrict is subdivided into 40 villages, and the nine villages of this study have been selected chosen: Sirnagalih, Petir, Pasir Jaya, Dramaga, Ciomas, Kota Batu, Taman Sari, Sindang Barang, and Sukalayu. Table 2 shows some indicators of the nine villages. The villages chosen can be considered as representative of the varying level of rural development (from "low" to "middle" level), influence from an urban economy (Bogor city and Jakarta) and diversification of RSSIs' activities. As in Sukaluyu and Taman Sari, in Petir agriculture plays a very prominent role in the economy; in the

other six villages this is not so any more. According to some local government officials agriculture had played a very important role as a source of local income generation in these villages, like, generally, in other villages in Ciomas subdistrict or in Bogor district, until the 1970s. But, since then the role of agriculture has decreased. Moreover, there is some indication that the percentage of local people in these villages working in non-farm activities, including Bogor city and Jakarta, has been increasing. Also since the mid-1980s infrastructure and transport facilities which connect the villages with Bogor city have been improved.

Table 2. Some indicators of the sample villages

Village of	Distance to the goverment office Ciomas sub-distric (km)	Distance to the centre of Bogor city (km)	Population density (persons) 1)
1. Pasir Jaya	0,1	7	110
2. Ciomas	1,5	8	83
3. Kota Batu	2	9	34
4. Sindang Barang	5	12	70
5. Sirnagalih	8	15	60
6. Dramaga	8	16	68
7. Taman Sari	11	18	7
8. Sukaluyu	12	19	18
9. Petir	16	23	17

1) Population (1992) - had area (ha) ratio

During the survey, a structured questionnaire was used and the owner-operators of the RSSIs covered in the sample were interviewed personally. But, an attempt was also made to talk to the owners in an open and informal manner, raise extra questions not formulated in the questionnaire, related specific issues, which are important for the study.

Three hypotheses are formulated for this study:

Hypotheses I : There is a strong variation in the location of market (i.e. mostly outside or local) for raw materials of the sample RSSIs engaged in different subsectors;

Hypotheses II : RSSIs in villages which are more isolated or further away located from a city or an urban centre have "strong" local market linkages than those in villages situated near to the city (urban centre);

Hypotheses III : Agriculture is an important source of finance for RSSIs.

The first hypothesis deals with the relationship between the subsector and location of market (for raw materials) in the sample population of RSSIs. For the purpose of the test, the chi-square statistic (x^2) is used in order to know whether there really is a relationship between them (at 0.01 level of significance) of the relationship has arise by chance (e.q. due to sampling error). **The second hypothesis** deals with the degree of level linkages of the sample RSSIs by location of villages. It is expected that a negative (positive) relationship exists between the distance of a village from a city (in km) and the proportion[6)] of local RSSIs in the village which sell their products mostly to outside (local) markets (in percentage): the smaller the distance the higher (lower) the proportion. The meaning of the test depends, however, on the representativeness of the sample. With regard to hypothesis II, there are the following two questions: 1) is there a statistically significant relationship between the two variables (i.e. location of village and the degree of local linkages); if there is, 2) whether the relationship is linear. Thus, in the context of hypothesis II, this first test only looks whether there are significant differences between the villages, as numerical categories, irrespectively of their distance to Bogor city, regarding the above mentioned proportion. We may find that a linear relationship between, say, a and b does not exist, but it does not always the a and b are independent. That is why the first test is applied before the second one. For the purpose of the first test Chi-square statistical test of association is used, while for the second test regression analysis is adopted. **The third hypothesis** concerns the importance of agriculture income as a source of finance for RSSIs. To examine this hypothesis, primary data collected on sources of finance of the sample RSSIs are analysed and compared by village.

THE EMPIRICAL FINDINGS

Branches of activities of the sample RSSIs

As shown in Table 3, the majority of the RSSIs sampled (86 per cent) produce simple consumer goods which cater to the needs of the low and middle income populations. In the sample, there are only sixteen producers who engaged in the manufacture of non-daily consumer goods: one blacksmith who makes traditional agricultural hand tools, eight producers who produce a variety of wooden, bamboo and other raw materials-based building materials, and seven producers who make a specific tool for the shoes industry. Clearly, the majority of the sample RSSIs make abundant use of agricultural outputs, implying a dominantly agro-based orientation of RSSIs in the study area.

Ciomas subdistrict is known as a concentration place (in many villages) of footwear industries, mainly small scale, which has been in existence since the 1920s. Traditional skills owned by the local people in the villages (footwear as a traditional activity) and the presence of wholesalers in Bogor city and their business relationship with

the footwear producers (as distributor of their output and suppliers of their capital) seem to be more relevant as explanatory factors than the availability of local raw materials and other local facilities for the survival or continuation of footwear industries these days in Ciomas subdistrict. As we will see later on in this section, all footwear producers in the subdistrict buy their raw materials (e.g. leather or imitation leather) in Bogor city.

Table 3. Types of goods produced by the sample RSSIs

Tipe of product	Charac-teristic of pro-duct	Absolute frequency (product. units)	Percentage	Average workers per pro-duction unit (persons)
1. Footwear	C	45	39.1	9
2. Clothig and hat	C	7	6.1	3
3. Furniture	C	6	5.2	6
4. Food	C	31	27.0	5
5. Building material	NC	8	7.0	4
6. Bamboo product	C/NC	9	7.8	1
7. Agricultural had tool	NC	1	0.9	1
8. Tool for the shoes industry	NC	7	6.1	3
9. Gong	C	1	0.9	19
Total		115	100.0	6

Notes: Food, bamboo products, furniture, a specific tool (made of wood) for the shoes industry, clothing and hat, and to a smaller extent footwear and some building materials can be considered as agro- based products. C: daily consumption goods and NC: non-daily C goods. The absolute number of workers excludes the owners, with the exception of branche no 6. In this activity, all the nine units in the sample are self-employment (one-person) units. The footwear subsector includes a variety of shoes and sandals (made mainly from imitation leather). The food subsector includes pala manis, krupuk, emping/crackers, rice (mills) and tahu. Bamboo products include baskets, cooking utensils and children's toys.

As said before in Section II, in every village studied, production units in the sample were selected in a stratified way with an attempt to obtain a balanced coverage, both with regard to geographical areas and to subsectors of activity. The high number of food and footwear industries in the sample survey may reflect the fact that food processing is the dominant activity of RSSIs in rural Java in particular and RSSIs in Indonesia in general, and as said before footwear is the dominant activity of RSSIs in Ciomas subdistrict.

Location of markets for output at village level

Before we investigate the location of markets at village level for raw materials of the sample RSSIs, first we examine the location of markets for their output, also at village level.

Table 4 show that whereas the products of about 5 per cent of the units sampled cater mostly or only for local demand (i.e. in the same villages where the sample producers are located), markets for the majority of the sample RSSIs are highly non-localized, as their products are sold mostly to markets outside their villages. The remaining units in the sample distribute their products to both local and outside markets. Of those who sell their products mostly to out-side markets, some have been found to have sold their output only to wholesalers or retailers in Bogor city, while others have also sold their products to e.g. warung owners and street sellers in other villages as well within Ciomas subdistrict or Bogor district. There are some producers in the sample whose products were also sent to Jakarta, Tangerang, Sukabumi, Bandung and to some other districts within West Java province, and Semarang and Yogyakarta (Central Java province) and many other places as far as Medan and Jambi (Sumatra), or Bali.

Table 4. Number and percentage of the sample RSSIs by market location for output at village level

Market location	Absolute frequency (units)	Percentage
Mostly outside	80	69.5
Mostly local	6	5.3
Both local and outside	29	25.2
Total	115	100.0

Note: If a producer located in a village sells/buys his product/ inputs for 60 per cent or more of his total goods produced/total inputs required to/from markets in the village or outside the village. then he is included in the category of "mostly (or entirely if 100 per cent) local" or "mostly outside". For the percentage between 41 and 59, then he is in the category of "both locations".

Location of markets for raw materials

Branches of RSSIs activities in the villages studied: some evidence

Based on direct (own) observations, some local government data, and additional information obtained from a number of people interviewed, Table 5 shows the branches of activities of RSSIs in the villages studied. Most of the activities have direct (e.g. food, bamboo weaving and some building materials) or indirect (e.g. footwear, clothing and hat, furniture, a specific tool made of wood for the shoe industries and some building

materials) inputs from the agricultural sector. The RSSIs which use such inputs establish strong (direct or indirect) BPLs with the agricultural sector. All this indicates that at the input side of the industries agriculture is a very important source of growth for RSSIs: the growth of the majority of RSSIs also depends strongly on the growth of output in the agricultural sector. High intensification in the sector, for instance, in rice production ("green revolution"), is very important as a source of growth for e.g. rice mills, and high diversification in the sector, leading to the production of other crops, may create diversification of RSSI activities using non-rice agricultural commodities as their main inputs. Both high intensification and diversification in agriculture also create RSSIs producing implements, tools and other equipments for the sector. An important implication of this is that agricultural policies stimulating diversification and intensification (productivity growth) in agriculture and policies on technology, i.e. labour intensive process of production, in the sector will also have an important effect on the diversification and growth of RSSIs.

Table 5. RSSI activities in the nine villages studied

Village	Type of activities														Traditional activities *
	1a	1b	2	3	4	5	6	7	8	9	10	11	12	13	
Pasir Jaya						x	x	x	xa)						7 and 8
Ciomas	x		x	x	x										1a
Kota Batu		x	x				x			x					9
Sindang Brg	x		x		x						x				4
Sirnagalih	x	x		x	x		x				x				1a and 1b
Dramaga			x	x			x		xe)		x			x	8f)
Taman Sari	x								xb)			x			8c)
Sukaluyu			x				x		xd)				x		12
Petir			x				x						x		12

1a footwear shoes; 1b footwear sandals; 2 rice mill; 3 metalworks; 4 clothing; 5 blacksmith; 6 furniture; 7 gong music instruments; 8 food; 9 a specific tool for the shoe industry; 10 building materials; 11 flowers; 12 bamboo weaving; and 13 had making industries.

a) Tahu;

b) Emping, kripik, processed sweet banana and pala manis;

c) Emping;

d) Pala manis, dried cassava and kripik;

e) Pala manis, tahu, kripik, krupuk and dried cassava

f) Pala manis.

* Activities which have been conducted by the local people for more than one generation.

Source: own observation, some local government data and additional information from a number of people interviewed informally (1992 and 1993).

Market orientation at village level

Table 6 shows that at village level the market for raw materials for the majority of the RSSIs surveyed lie, however, outside their villages. Only about 2 per cent of them get their raw materials mostly locally, and almost 15 per cent of them procure their raw materials both locally and outside. Table 6 indicates the great importance of Bogor as the market for raw materials for RSSIs in villages surrounding the city.

Market orientation at subdistrict, district and province level

It can be seen that at village level the majority of the sample RSSIs have weak local BPLs. But, at higher levels of local economy it is found that the degree of their local linkages with respect to the procurement of raw materials increases strongly. As snown in Table 6, at subdistrict level, about 6 per cent of them procure their raw materials mostly locally, as compared to only 1.7 per cent at village level, while at district level, almost 82 per cent of them procure their raw materials mostly locally. The latter suggests that the market radius for raw materials of the majority of the sample producers is within Bogor district, mainly in Bogor city. At province level, all producers in the sample buy their raw materials (and intermediate inputs and capital goods) mostly from local market.

Table 6. Market location for raw materials of the sample producers by different level of local economy

Level of local	Degree of local likages (%)		
	A	B	C
1. Village	83.50	1.70	14.80
2. Subdistrict	80.87	6.09	13.04
3. District	1.74	81.74	16.52
4. Province	0.00	100.00	0.00

Notes: "A": mostly outside, "B": mostly local, "C": both locations. This figure includes only village, subdistrict, district and province levels. At above regional level, i.e. outside West Java province (including export), "B" is per definition 100 per cent. Local 1 is each of the villages studied, local 2 is Ciomas subdis-trict (thus, including all the villages), local 3 is Bogor district (including Bogor city and Ciomas subdistrict) and local 4 is West Java province (including Jakarta and Bogor district). Notice that the percentage concern only the number of units in a category, unweighted by e.g. employment or output.

As an important implication of this finding, it seems very important for RSSIs that policies, which influences the functioning of the markets for raw materials, are directed and implemented not only at national but also at district level. Policies at district level may affect directly the development of RSSIs more than those at national or province

level, because many RSSIs are more related to the "local" economy at district level than to the national economy. Policies at district level include policies on distribution and price determination of raw materials and on market structure of the items.

Branchwise differences in market location for raw materials at village level

Table 7 shows that the pattern of procurement of raw materials of the sample RSSIs, however, varied to some extent, depending on the nature or types of goods produced, and hence the kind of raw materials required. The variation is found not only between subsectors but also between producers within a subsector. All footwear producer procure their raw materials from outside. The majority of them get their primary raw materials (i.e. leather or imitation leather) in markets in Bogor city via wholesalers and only a very small number of them buy the materials directly from e.g. shop-keepers. For other secondary materials, e.g. lime, cord for shoes, and harness, some of the items are also provided locally in small amounts by small shopkeepers or warung owners. The furniture subsector is also externally oriented, as all of the six sample producers buy their raw materials, e.g. plywood, in outside markets. Other secondary materials like yarn come also from Bogor city. In the sample, there are two carpenters who have established BPLs with some larger, urban located industries, one for the procurement of his wood and the other one mainly for some of his secondary materials. Almost 86 per cent of the sample RSSIs in the clothing and hat subsector depend for their raw materials mostly on outside markets. The owners of ready-made clothing industries and hat makers in the sample usually get their raw materials and buy mainly second-hand manual sewing machines operated by foot all in Bogor city.

From the total of 31 sample food producers, 26 of them also fully depend for their raw materials on outside markets. Within the food subsector, however, there is also some variation among the producers surveyed, depending on the kind of food processed and hence the kind of commodity (raw material) used. For instance, for rice mills, their primary raw material (paddy) is supplied by local farmer and, to a lesser extent, by farmers from nearby villages[7]. Most owners of the rice mills interviewed stated that they were used to procure their paddy locally when there were still many rice fields in their villages. In Dramaga, the majority of pala manis producers buy pala fruit as their primary raw material in markets in Bogor city or in nearby villages where the fruit is abundant. Only some of them buy pala fruit sometimes from traders[8] who visit the local central market place in Dramaga or directly from farmers who come from nearby villages and sell their pala fruits to individual local pala manis producers or shop-keepers in Dramaga.

Further, Table 7 shows that only the bamboo weavers and, to a lesser degree, the producers of building materials, tend to be locally oriented for the procurement of their raw materials. As regards the metal subsector, metal work activities in rural West Java

produce a variety of goods, from kitchen utensils, children's toys, traditional agricultural hand tools, to automobile and motor-scooter body, based on the shaping and soldering of sheet-metal. They use both new and recycled materials which they purchase mostly from traders in Bogor city, but also from local individual households.

Table 7. Number and percentage of the sample RSSIs by market location for raw materials and type of products at village level

Type of goods	Market location						Total production units	
	Mostly outside		Mostly local		Both location			
	No	%	No	%	No	%	No	%
Footwear	45	100.0	0	0.0	0	0.0	45	100.0
Clothing ad hat	6	85.7	0	0.0	1	14.3	7	100.0
Furniture	6	100.0	0	0.0	0	0.0	6	100.0
Food	26	83.9	1	3.2	4	12.9	31	100.0
Const. material	4	50.0	1	12.5	3	37.5	8	100.0
Bamboo product	0	0.0	0	0.0	9	100.0	9	100.0
Agric. hand tool	1	100.0	0	0.0	0	0.0	1	100.0
Tool for the shoe industry	7	100.0	0	0.0	0	0.0	7	100.0
Gong	1	100.0	0	0.0	0	0.0	1	100.0
Total	96		2		17		115	

Finally, the majority of producers who make a specific tool for the shoe industries get their primary raw material (wood) directly from farmers in other villages within the subdistrict. But, some of them also use local woods. The producer of gong music instrument in Pasir Jaya buys his materials in Bogor city, but his primary material to make gong itself is provided by a medium-sized enterprise in Jakarta.

To sum up, the foregoing analysis indicates that at village level (as also at subdistrict level) the importance of RSSIs as a place for processing local raw materials, mainly from agriculture, is in general limited, though there is some variation among different subsectors. Even, small agro-processing activities such as pala manis industries and tahu producers have been found to be fully dependent on Bogor city for their raw materials procurement, and many rice mills have been found to be also dependent on paddy from other villages. The analysis' finding suggests that at village level the abundance of local raw materials does not play an important role in explaining the presence, development and growth of RSSIs in villages located near to a city (ies). Other factors such as large demand and more access to capital (e.g. from wholesalers) in urban areas and traditional skills owned by local people seem to play also (or even more) a crucial

role. In Dramaga, for example, there are not so many pala trees. This fruit is not locally abundant. Based on its estimated total outputs per year of agricultural commodities, Dramaga, as a matter of fact, has more paddy or other crops than pala fruit. Thus, we might expect that rice mills or industries of other non-pala based foods will or should predominate RSSIs activities in Dramaga. So, the development of pala manis industries in the village is not really based on a "comparative advantage" in terms of local abundance of e.g. pala fruit and sugar. Some local officials said that before being in pala manis, local RSSIs were engaged in other food processing activities. But, since the early 1970s these activities have been gradually replaced by pala manis industries. Some local people said that marketing problems were the main cause of the decrease of these non-pala based food processing activities and, especially, the reduction of hectares of agricultural land has been the main reason for the almost disappearence of local rice mills.

The development of pala manis industries in Dramaga since the 1970s can be explained, not merely by the local abundance of pala fruits and other important secondary raw materials, but by other two factors. **First,** Dramaga is situated very close to a good provincial road that connects Bogor city with some other districts which has been improved in the 1970s. This good infrastructure provides more marketing opportunities for the local pala manis producers. **Second,** the local producers get much support from the agricultural university of Bogor (IPB), especially in terms of technical services. For instance, a group of local pala manis producers got a big dry machine constructed by some people from the university.

SOME FINDING OF THE TEST

Relationship between the local of market and the sub-sector (hypothesis I)

The aim of this part is to examine the variation in the location of market for raw materials of the sample producers engaged in different subsectors on the basis of the empirical findings presented above. We need to know whether there is a relationship between subsector and location of market in the population of RSSIs in the nine villages studied from which the sample was derived. So, the important question is, if a relationship is found in the sample, whether there really is a relationship between differences in the subsectors or types of good (X_1) and differences in the market locations for raw materials of the sample producers (X_2), or whether the relationship between these two variables has arisen by chance, for example as a result of sampling error (i.e. the sample is in fact not representative) having engendered an idiosyncratic sample.

By using chi-square statistic (x^2) it is found that the statistically significant relationship exists between differences in the location of markets for raw materials and differences in the subsector[9]. We can explain this result as follows. Small producers face

many factors, e.g. local availability of raw materials, role of small traders in distributing raw materials, government supports in terms of preserving raw materials for small producers, technology, which determines the kind of raw materials required (as well as the type of capital goods and intermediate inputs used), structure of domestic markets for raw materials, and the nature or form of integration between small and large producers. Within a subsector there is a similarity in facing these factors, which is different between the subsectors. This leads to the question whether this factor of similarity can be identified. Most probably it is the nature of the product or raw material and its "transportation or marketing costs" in the widest sense mixed with the spread or density of the market.

Degree of local linkages by location of village (Hypothesis II)

Among many other factors, distance from the nearest larger city is also important to be taken into account in the analysis of the market location orientation of RSSIs. Although, we can argue that this factor is less relevant for RSSIs in a highly urbanized region with relatively good infrastructure and transport facilities as in rural West Java than in less developed or less urbanized provinces in Indonesia.

In this part, the problem of considerable concern is the question of whether there is a statistically significant and strong association between differences in the village location with respect to "nearess to a city" (Bogor) and differences in market location orientation (i.e. mostly outside or local) of local RSSIs for raw materials at village level.

Table 8 shows that in the more far away villages from Bogor city, like Taman Sari, Petir, and Sukaluyu, the proportions of the sample RSSIs which buy their raw materials mostly from outside are lower than that of the RSSIs surveyed in Pasir Jaya, Ciomas, Kota Batu or Sirnagalih which are located relatively near to the city.

Results of the first and the second tests

It is found that differences in villages display a statistically significant relationship with differences in the proportions of the sample producers who bought their raw materials mostly or entirely from outside markets. It is always suggested that RSSIs use primarily local raw materials. But, the result of this test indicates that RSSIs located near a city (ies) become more non-localized in the procurement of their raw materials. While the former results (with respect to the first test)[10] indicate that there are systematic factors at work which make for differences in market orientation of RSSIs between villages, the result of the second test (regarding the second question) show that "distance to Bogor" (in km) may be one of these factors and in a linear way, or the only or the dominant one. The regression coefficient (the metric regression slope) between the distance of the villages from Bogor city and the proportion of those who buy raw materials

from the city is negative, as expected theoretically, and the relationship is statistically significant[11].

To sum up, the foregoing tests suggest that a linear relationship exists between differences in villages' distance to Bogor city and differences in market orientation of the sample producers giving significant results in the second test and having a high Chi-square statistic above the "critical" value (i.e. 90.101) in the first test.

Table 8. Number and percentage of the sample RSSIs by market location (i.e. mostly outside versus mostly local) for raw materials and village location at village level

Village	Distance to Bogor city (km)	Sample	Raw material			
			Outside		Local	
			No	%	No	%
Pasir Jaya	7	12	12	100.0	0	0.0
Ciomas	8	11	11	100.0	0	0.0
Kota Batu	9	12	12	100.0	0	0.0
Sindang Barang	12	2	1	50.0	0	0.0
Simagalih	15	39	39	100.0	0	0.0
Dramaga	16	20	18	90.0	0	0.0
Taman Sari	18	3	2	66.0	1	33.3
Sukaluyu	23	11	0	0.0	0	0.0
Petir	23	11	0	0.0	0	0.0
Total		115	96	83.5	2	1.74

Sources of capital finance

Internal and external sources

Table 9 shows that the sample producers mobilized funds from a number of sources to make their initial investments and to finance their working capital. It appears that a large percentage relied mostly or entirely on "informal" sources of capital, either on "internal" sources, e.g. personal saving, or "external" sources of funds, e.g. credits from wholesalers or small traders or money from individual consumers in terms of payment in advance, to start their industrial enterprises and to expand their business. As few as 14 per cent of them used funds from government bank (Bank Rakyat Indonesia) or co-operatives. The paucity of funds obtained from banks may provide an indication of the rather fragmented and underdeveloped nature of the formal capital market in Indonesia for RSSIs.

Only 40.0 per cent of the sample producers (or 46 out of 115) financed their capital goods and tools as well as working capital (i.e. capital requirements which cover

typically outlays for tools, stocks, raw materials and the wage bill) mostly with their "own" money. But, for many of the sample producers their working capital were financed out of their retained earnings, reflecting perhaps, the limited opportunity of getting finance from other sources,[12] including, the limited role played by banks in providing finance to industries in the villages.[13] Only 8 per cent of the sample producers used both internal and external sources of capital (e.g. using own saving plus some credit from government bank). Finally, Table 8 indicates that about 61 per cent of the total of 46 producers who used mostly or entirely internal sources of funds derived their funds from local sources.

Place of origin of the sources: some evidence at different levels of local economy

With respect to place of origin of the sources, it is to some extent possible to trace their location. At village level, Table 9 shows that for those who used only internal sources of finance (46), nine of them (19.6 per cent) used their own money which originated from outside sources and the other nine from both locations. Only 60.9 per cent of them (28 producers) who utilized entirely internal funds used their own savings which originated from local sources. This variation in location of sources of internal funds among the producers is to some extent related to their prior occupations or their other present activities, either as a primary or a secondary source of their income. As regards those who used external sources of finance entirely, only 14 per cent of them, as mentioned before, have received loans from "formal" sources, e.g. government banks (BRI) or cooperatives. They did so both for their initial investment as for working capital needs. It can be said that these formal sources of finance originated from outside as banks of BRI are mainly located in cities. Only two of them ever borrowed some money from a cooperative which is located outside their villages within the subdistrict. Further, only about 5 per cent of the sample producers were dependent on individual customers or small traders (in terms of payments in advance), either local ones or from outside, for their working capital requirements. They are garments, hat and furniture makers.

Table 9 also shows that the majority of the sample producers in the category of those who utilize entirely external sources of finance are fully dependent on capital from urban wholesalers. In fact they are only so for their working capital, i.e. to pay wages and buy raw materials. For example, almost all footwear producers have been found to be fully dependent on wholesalers in Bogor city for their working capital.

Somewhat surprisingly, Table 9 (at village level) does not show the predominance of self-finance, i.e. financed by own or family savings, as we might expect, but of external sources of finance for RSSIs in the villages. Also the survey's findings do not conform to experience in many other LDCs. For instance, a case study of RSSIs in Southern Sri Lanka conducted by Wickramanayake (1988) shows that the majority of his sample entrepreneurs relied either on personal savings or funds from relatives. Liedholm and

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Table 9. Number and percentage of the RSSIs surveyed by main sources of finance and location of the sources at village level

Source	Number of units location of the sources			Total units	Percentage
	Local	Outside	Both		
External sources: 1)					
1. Government bank or cooperative 2)	0	16	0	16	13.9
2. Private bank	0	0	0	0	0.0
3. Indiv. consumer or small trader	3	1	2	6	5.2
4. Wholesaler	0	38	0	38	33.1
Sub Total				60	52.2
Internal sources: 3)	28	9[4)]	9[4)]	46	40.0
Both sources: 5)	0	0	9	9	7.8
Total	31	64 (27.0)	20 (55.6)	115 (17.4)	100.0 (100.0)

1) Sources no 1 and 2 are considered as "formal" sources of finance;
2) Koperasi Unit Desa;
3) including from friend or relatives;
4) except for working capital; they all financed it out of retained earnings from their existing enterprises, which means that they used local source of finance;
5) partly from bank or wholesaler and partly from own source.

Chuta (1976) report that about 60 per cent of the RSSIs in Sierra Leone have used funds from personal savings. Tambunlertchai and Loohawenchit (1981) show that about 75 per cent of initial capital for RSSIs in Thailand was financed by personal savings and only about 12 per cent came from formal financial market. For Punjab (Pakistan) Child and Kaneda (1975) report that virtually all original capital for RSSIs came from personal or family savings. In Ghana, Steel (1977) shows that over 90 per cent of his sample firms used personal savings or loans from relatives for initial investments.

Perhaps, the most particularly striking result presented in Table 9 is the indication that despite the RSSIs isolation from the institutional (formal) market for credit, no credits from informal money-lenders appear as a source of working or/and initial capital for the industries, as we might have expected. Though, small scale, informal credit markets are well established in rural Java, not even one producer in the sample stated that he had ever obtained loans from rural (informal) money lenders. During the survey, efforts were also made to find individuals or households in the villages studied who may act as money lenders for the local producers, but without any success.

To sum up, at village level the findings show that the majority of the sample producers, i.e. 55.65 per cent (64 producers), are entirely outside oriented for their capital. Only about 27 per cent (31) used mostly or entirely local sources of finance, as shown in Table 10. At subdistrict level the proportion of those who use mostly local sources of finance is 28.70 per cent and at district and province level it is about 99 and 100 per cent, respectively. If Bogor city is not included as local economy, the proportion at district level decreases to 51.30 per cent, suggesting the importance of the city as a source of finance for many RSSIs, and only one producer from the sample who's source of finance was originated from Jakarta.

Tabel 10. Location of capital sources of the sample producers by different level of local economy

Level of local economy	Degree of local linkages (%)		
	A	B	C
1. Village	55.65	26.96	17.39
2. Subdistrict	53.91	28.70	17.39
3. District	0.87	99.13	0.00
4. Province	0.00	100.00	0.00

Note: for information, see Table 6.

Sources of personal saving

In the case of internal funds used for initial investment (and working capital), it is to some extent possible to trace their sources, as Table 11 shows four main sources: past income, current income, money from parents, and "other" source. In this latter category of source, there is only one producer in the sample who obtained some financial support from friends or relatives to finance his business. Other (8) producers in this category are those who have saved some money from sales proceeds of e.g. land, fruits and household items. The category of money from parents includes three producers who took over their parents' firms, which can be seen as a "transfer of capital" from their parents' businesses to their existing enterprises. This means that they did not really have to pay their initial investments themselves. So, from those 46 included in the category of producers using mostly or entirely internal sources of funds, it can be said that the majority of them or 41 producers (33 from the category of past and current income plus 8 from the category of "other" source) used "personal savings" to start their enterprises. Money from parents and financial support from friends or relatives are not considered in this study as a personal saving of the producers.

Table 11. Number and percentage of the sample producers who use mostly internal funds by source at village level

Source	Absolute frequency	Location of source 1)		Percentage
		L	NL	
Post income from:				
Agriculture (as farmer or labour)	1	1[1)]	-	2.2
Large industries (as employee)	1	-	1	2.2
RSSIs (as employee)	6	-	6	13.0
Construction (as labourer)	1	-	1	2.2
Goverment	0	0	0	0.0
Trade	9	-	9	19.6
Other	1	-	1	2.2
More than one source	2	2[2)]	-	4.4
Current income:				
Agriculture	12	12	-	26.1
Money from parents	4	4	-	8.7
Other source	9	9[3)]	-	19.6
Total	46	28	18	100.0

1) location: L=local and NL= non-local;
2) the first producer was a farmer and a trader during the slack season in agriculture. The second one was a farmer and a warung owner, but he also saved some money from the proceed of a sale of some building materials.
3) one of them gets financial support from friends or relatives.

With respect to sources of (past and current) income from which personal savings were derived, Table 11 indicates that incomes derived from previous occupations as traders (including two producers who have more than one source) and wage labourers in industries and construction rank together as the most important sources of personal savings (46.3 per cent, or 19 out of 41 producers), followed by personal savings derived from agricultural income which represents about 36.6 per cent (or 15, including two producers who used more than one source, out of 41 producers) of the sample producers who used only personal savings to finance their activities. But, amongst individual sectors, agriculture appears as the most important source of personal savings of the sample producers who used only own savings to finance their business, as 13 (excluding those

two producers who also had other income from trade) out of 41 (or 31.7 per cent) have (had) income from agriculture. Trade appears as the second important source of personal savings (22.0 per cent), as 9 (excluding those two producers who had also income from agriculture) out of 41 had income as traders. Working as paid labour in RSSIs turns out to be the third important source of personal savings (14.6 per cent) of the sample 41 producers.

The importance of agriculture for finance

The importance of agriculture as a source of finance for RSSIs has relevance for our theme of local (financial) linkages in as far as we may safely assume that agriculture as a source of finance means by and large a local source of finance for RSSIs.

In the literature, it is often assumed that in regions where agriculture has a dominant place in the economy agricultural income is an important source for investment in rural non-farm activities. Mellor (1973), among many others, states that higher incomes in agriculture provide a large pool for investment in RSSIs. There is some evidence which shows that private investors in the rural areas such as large commercial and successful farmers have likewise channelled investment's funds from agriculture to rural non-farm activities, either directly or indirectly through informal or formal intermediate financial institutions. In some cases, it has been found that the process of rural economic diversification, including the development of rural industries, was the result of the economic behaviour of rich peasants, commercial farmers and landlords. For example, Altaf (1983, 1988) found that the rapid growth of RSSIs in various parts of Pakistan at the end of the 1960s was partly based on the economic diversification (investment) strategies among the upper stratum in rural society. Studies of Husken (1989) and Husken and White (1989) in a Central Javanese village also show that the majority of the large land-owners in the village have invested their cash surplus in diverse non-farm activities, including in RSSIs.

However, several case studies in other LDCs show that even in regions where agriculture is the dominant sector in terms of local income generation or employment creation, agricultural income has been found to be an insignificant source for personal savings for a large number of rural entrepreneurs. Wickramanayake (1988), for instance, found from his survey in two districts in Southern Sri Lanka that only 13.7 per cent of his sample entrepreneurs derived personal savings from farming alone.

From all these findings, we can reduce that in those particular regions the direct transfer of money surplus from the agricultural sector to rural non-farm activities in terms of investment is limited. A number of possible explanations for this: 1) the surplus generated in agriculture may not be large enough to support non-agricultural investments; 2) those farmers or land-owners who do generate sufficient surplus may prefer to invest their surplus in other activities which could represent a more secure investment

such as in real estate; 3) it could be that savings from agriculture are being shifted out of the regions for investments in other regions or urban areas. So, although many people in rural areas are engaged in agriculture, it does not always mean that investment linkages from that sector to RSSIs activities will be significant.

Table 12. Employment structure in the nine villages, 1992[1)]

Sektor	Village								
	Pasir	Ciomas Jaya	Kota	Sindang Batu	Sirnagalih Barang	Dramaga	Taman	Suka-Sari	Petir luyu
Agriculture	12	189	1668	514	522	462	4881	2162[2)]	3119
	(0.1)	(2.2)	(18.0)	(4.6)	(7.4)	(5.6)	(70.9)	(40.5)[3)]	(36.2)
RSSIs	210	180	120	90	690	480	312	120[5)]	2106
	(1.4)	(2.1)	(1.3)	(0.8)	(9.8)	(5.8)	(4.5)	(2.3)	(24.4)
Labourer	521	770	708	2398	1375	38	1197	202	57
	(3.4)	(8.9)	(7.6)	(21.4)	(19.5)	(0.5)	(17.4)	(3.8)	(0.7)
Trader	na	82	856	281	350	304	175	190	480
		(1.0)	(9.2)	(2.5)	(5.0)	(3.7)	(2.5)	(3.6)	(5.6)
Transport	13	28	76	25	25	116	40	42	24
	(0.1)	(0.3)	(0.8)	(0.2)	(0.4)	(1.4)	(0.6)	(0.8)	(0.3)
Civil Serv.	835	196	225	621	200	54	124	7	50
	(5.5)	(2.3)	(2.4)	(5.6)	(2.8)	(0.7)	(1.8)	(0.1)	(0.6)
Teacher	67	22	75	237	75	46	23	7	25
	(0.4)	(0.3)	(0.8)	(2.1)	(1.1)	(0.6)	(0.3)	(0.1)	(0.3)
Repaires	na	20	na	na	na	na	16	na	na
		(0.2)					(0.2)		

na: not available;

1) other sectors are not taken in this table because either data were not available or the number of people engaged was too small;

2) persons;

3) as a percentage of total population;

4) estimated data which are based on the estimated total population of RSSIs for 1992 issued by local government office in each of the villages and the calculated average number of workers per industry (6 persons) from the survey' findings.

Source: Local government office: Potensi Desa dan Kelurahan, 1992-1993, Kantor Pembangunan Desa, Pemerintah Kabupaten Dati II Bogor.

In the case of Ciomas subdistrict, comparing agriculture with other sources of finance of the sample RSSIs does not, however, support the notion of the importance of agriculture as a dominant source of finance for RSSIs. This limited role of agriculture is to a large extent related to the importance of agriculture itself as a local source of income or employment in the villages. As Table 12 shows, only in Petir, Sukaluyu and Taman Sari, agriculture still plays an important role, as this sector accounted for 36.2, 40.5,

and 70.9 per cent, respectively, of total local population working in agriculture. This evidence suggests that in villages located near a city the agricultural sector is much less important than in villages situated far from the city as a local income source. Although it is difficult to prove the connection between this characteristic (i.e. villages with a lot of agricultural employment) and finance from agriculture to RSSIs in the villages) based on these data, we can expect that agricultural income is more important as a source of investment for local RSSIs in the latter than in the former villages. Indeed, all producers (15) in the sample whose personal savings were derived from agricultural income are found in Petir (all the 11 producers), Sukaluyu (3 out of 5) and Taman Sari (1 out of 3). This total represents about 48 per cent of the total sample producers (31) who used local source of funds (see Table 9).

SOME CONCLUSIONS

The main aim of this study is to investigate the degree of local raw materials and investment linkages between RSSIs and agriculture at village level (in comparison with that at subdistrict, district and province levels) in villages situated near a growing medium-sized city. The related hypothesis is agriculture is the most important local source of raw materials and capital finance for the development of RSSIs.

In this study it was found that the level of local linkages of the sample RSSIs is much lower at village level than at district or province level, though there is some variation amongst subsectors. Most of the sample producers sell their output and buy their raw materials in Bogor city. This suggests the radius of RSSIs activities in Ciomas subdistrict, in terms of output supply and demand for raw materials, is mainly within Bogor district, though we may expect some of their goods are redistributed from Bogor city to other places or raw materials they bought in the city originate from places outside the district. Further, from the sample it has been found at village level a negative association between distance from the villages studied to Bogor city and proportions of the sample producers who buy their raw material mostly or entirely from outside markets. This suggests the more far away villages are from a city the less the above proportion, or RSSIs in a more isolated or less developed rural area have more extensive "local"[14] linkages than those in a more open or developed rural area.[15]

As regards the investment linkages, the finding may suggest that in more isolated or far away villages are from a city the proportion of local small producers in the villages who use local sources of finance is higher than in a village located closer to the city; though it also depends to a large extent on the sub-sector in which the particular producers are engaged. Agriculture is found not important as a source of capital for the majority of the sample producers. This can be explained probably by the fact that the agricultural sector itself in the majority of the villages studied does not appear as the

main source of local employment or income generation. As the main source of raw materials, agriculture is indeed found very important for RSSIs, though in the case of the sample producers most of the raw materials were bought from outside markets, mainly in Bogor city. In other words, it is important but not at village level. The findings indicate that, at least in the study area, the abundance of local raw materials does not play a crucial role in explaining the presence, development and growth of RSSIs in the area. Other factors like demand and access to capital (e.g. from wholesalers) in Bogor city and traditional skills owned by local people seem to play a more crucial role.

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