WEST JAVA RURAL NONFARM SECTOR RESEARCH PROJECT

PROYEK PENELITIAN SEKTOR NON PERTANIAN PEDESAAN JAWA BARAT

PROJECT RESEARCH REPORT SERIES NO RB-5

RURAL INVESTMENT PATTERNS AND RURAL NONFARM EMPLOYMENT IN WEST JAVA

Okke Braadbaart and Willem G. Wolters

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Summary

This report presents the results of a 1990 field study which investigated the investment behavior and business strategies of leading entrepreneurs operating in the countryside of West Java province. Its objective was to find out to what extent the business undertakings of rural business elites - under favorable conditions of strong economic growth in the 1970s and 1980s - supported the expansion of rural non-farm employment, specifically in small industry, in West Java.

The study focused on two principal topics: on cross-sectoral fund transfers by business elites operating in agriculture and in the trade and services sectors. And on the investment behavior of rural industrialists. In the course of fieldwork 250 profiles of leading rural entrepreneurs were collected in 10 micro-level field studies. These included 3 studies of 'agrarian elites' in two resource-rich villages and one resource-poor village. Three studies of town-based entrepreneurs investigated tertiary sector activities. Another trio of case studies examined the business strategies of rural industrial elites. And a last field study investigated the impact of large export-oriented factories - under control of city-based industrialists - settling in the rural periphery of West Java's metropolitan centers.

1. Investment patterns of rural business elites

The field studies yielded the following main findings:

1) Business elites in the resource-rich agrarian villages - good infrastructure, irrigated land - have built up a capital basis on the rice intensification programmes which started in the 1970s. Resources keep revolving in the rice sector, but have also been diverted to high-value agricultural commodities like vegetables and shrimps.

   Surplus transfers to non-farm undertakings - holding second place behind rice in terms of income share - involve downstream investments in agro-processing - rice-milling - and agro-trade, and more recently also investments in the incoming trade in mass-produced consumer goods. There is no evidence of transfers to industry.

   Investment histories in the resource-poor village are different from the above to the extent that tertiary undertakings dominate over on-farm business in terms of income share. Tertiary undertakings include: trade in outgoing agricultural produce and in incoming consumer goods, various services like tractor and pump-set rental and informal moneylending. As in the other cases there is no trace of surplus transfers to rural industry.

2) Three cases concerned town-based business elites. These are predominantly active in tertiary undertakings. Here two investment patterns were discernable. In the first place funds are revolved between various tertiary undertakings: trade, construction, finance, the hotel and restaurant business, transport, etc. In the second place there is a varying degree of interaction with primary sector activities.
As in the above cases there is no trace of a transfer of funds to industry. Any build-up of industrial activities in the towns is initiated by urban-based industrialists. For the present indigenous business elite are not involved in these developments.

3) Another set of three micro-level studies investigated the business histories of leading entrepreneurs in various rural industry centers. Fieldwork data show that these elites are "trader-industrialists" rather than producers, as ascendancy in rural industry is based primarily on success in securing market outlets. Furthermore, the business elites directly control only about 20 to 75 % of the volume of trade channeled through their trade networks, the remainder being produced by nominally independent small firms bound to the trader-industrialists by sub-contracting and putting out ties. In only one industry are most leading entrepreneurs producers rather than traders by origin. Thus, leading entrepreneurs in rural industry appear to be primarily trade-oriented with production coming only in second place.

2. The structure of rural small and medium-scale industry

Macro-level statistical data as well as micro-level data compiled in a score of studies carried out under the West Java Non-farm Project umbrella show rural small and medium-scale industry to have the following characteristics. The scope of rural small and medium-size industries in West Java is very limited in terms of technology and product range. In most industries the share of fixed capital is insignificant in comparison to that of working capital. And a major share of rural industries has strong linkages with agriculture: rural industry is in most cases a more or less advanced form of "agro-processing", as in the dominant handicrafts and foodprocessing sectors, in leather tanning, etc.
This narrow base - narrow in relation to the unlimited supply of rural labor and entrepreneurship - leads to chronic oversupply problems through the mechanism of **'imitative competition'**: new commodity markets are immediately swamped by producers entering *en masse* after the example of one innovating entrepreneur has proven successful. This mechanism tends to depress industrial wages and product quality.
Only industries with higher entry barriers or with access to large distant markets seem to escape from the overproduction trap. In the latter case trader-industrialists play key

broker functions, linking rural industries to foreign markets. Whereas small producers in these linked industries profit from the increase in demand, they also pay a price in the form of restricted market access.

3. Rural business elites and rural industry

The fieldwork data show no signs of rural business elites entrenched in primary and tertiary activities shifting surpluses to rural industrial undertakings. On the other hand leading entrepreneurs in rural industries are primarily marketing-oriented rather than production-oriented. These trader-industrialists take control of industrial production only insofar as it enables them to secure sufficient supplies for their trade channels. This in part explains why so many rural industries retain their "cottage industry" characteristics - dispersed small family firms, unmechanised production - even when they start producing for export markets.
While we do not dare to make a direct causal connection, these investment patterns fit in with the picture of rural industry as being based on a narrow range of products, with simple technology and "agro-processing" as its main features. Concomitantly, work remuneration and work conditions in rural industry are low. The conclusion we draw is that if rural industry is to play a leading part in the growth of rural non-farm employment this product range must be widened.

Broadening the base of rural small industry

If the base of rural small industry is to be broadened, what industries would be likeable candidates? We see possibilities for three groups of industries:

a. industries serving local markets. A prime candidate are services industries for the rural economy. Jobshops for the repair, overhauling and maintenance of machinery and transport equipment and durable consumer goods and small construction workshops have a vast untapped potential. Also there is room for industries producing hand tools, simple agricultural equipment, household utensils and the like. Another possibility are various hitherto undeveloped agro-processing activities which can be carried out profitably on a small scale. The great advantage of this category of industries is that market access is no problem.

b. export-oriented handicrafts industries. The rattan furniture and handicrafts cases indicate that there is a scope for further expansion of the array of exportable wood products like furniture, toys, souvenirs, household utensils.

c. sub-contracting linkages between large and small industry. Aside from the garment and footwear industries this group of industries remains largely undeveloped. It might include the assembly of electrical equipment, simple casting or electro-plating operations, machinery parts making, precision handwork, and numerous other activities.

How could the development of these industries be promoted? The introduction of novel industries seems to be a main problem for the first group of products. However, one may be sure that as soon as the first successful firm has established itself innovations will spread quickly through imitative competition.

Technical extension can be effective in upgrading production methods, bringing a broader range of products within reach of existing industries: this has been proven by the rapid rise of a small-scale tanning industry in Garut, West Java, where modern tanning techniques were introduced by an extension unit of the Industry Department. However, there must be, as in this case, a ready market for the product if such an intervention is to bear fruit: the fieldwork findings discussed here bear out that rural entrepreneurs will only invest if profits are certain.

An important bottleneck for all rural industries is management. As has been noted time and again, many small entrepreneurs have no overview of the flows of money and materials passing through their enterprise. In many cases an entrepreneur simply does not know whether he or she is making a profit or not. As yet this matter does not get the attention it deserves, and perhaps the industry extension units could cover this field alongside technical extension.

Joint acquisition of raw materials and joint product marketing by small producers could break the hold of business elites over a number of rural industries. However, in the past the realisation of such plans has proven to be difficult. Lining up small producers for joint action is a very trying task, and a take-over of marketing functions requires the build-up of trading networks and specialised knowledge which is hard to come by. If one adds to these formidable managerial and collective action problems the circumstance that cooperatives in Indonesia have long been promoted through an inflexible top-down and bureaucratic approach, then the small number of effective producer organisations in existence elicits no surprise.

The great advantage of sub-contracting - as understood by Watanabe (1983) - is that it provides all the ingredients mentioned above in one package, and without subsidies: the principal gives its ancillary firms technical and sometimes also financial assistance, helps in setting up management, and provides a market outlet to boot. Sub-contracting relationships can only work to the advantage of enterprises big and small if led by profit motives. But in Java one sees steel plants linking up with cottage industries producing fried snacks, cement factories with plaitworking firms, and many other combinations that do not make economic sense. Furthermore, the principal firms in most cases do not invest their know-how in the small agents, but place some orders - which are rejected if not up to standard - and let the matter rest at that. Much headway could be made in this field if policymakers started attacking the matter from an economic angle instead of from the political angle which has dominated sofar.

Protection of small industry is another option. The rattan export ban is a successful example of the creation of forward linkages through intervention, but such a straightforward measure is not open to other industries. As protectionist measures for small industry have too often led to counterproductive results the scope for this kind of intervention seems limited.

More roundabout and long-run strategies for fostering the growth of rural industry might be to concentrate on education and continued investment in rural infrastructure. Rising educational levels may help to redirecrect the investment strategies toward industrial production. Various empirical studies have found a strong correlation between educational levels and investment strategies of rural entrepreneurs. The West Java study shows that rural elites have enjoyed primary or at most secondary general education. Their educational background, then, has no relevance for business. It may be expected that degrees in business administration, economics, or engineering, but also vocational training have a considerable influence on investment decisions.
Our fieldwork data already indicate that the coming generation of rural industrialists will much better-educated than the present one, as many of the rural well-to-do presently send their children to the city for higher education. A moot question is, however, whether their offspring will return to the countryside after receiving their certificates. This points to the importance of a continuing build-up of rural infrastructure. By curbing a rural-urban "brain drain", such a policy can make an important contribution to the dispersion of economic activities.

Ringkasan

Laporan ini menyampaikan hasil penelitian lapangan yang dilaksanakan pada tahun 1990 mengenai perilaku investasi dan strategi bisnis para pengusaha di daerah pedesaan propinsi Jawa Barat. Tujuan penelitian adalah untuk mengetahui sejauh mana usaha-usaha bisnis kaum elite pedesaan --dalam kondisi yang menguntungkan selama pertumbuhan ekonomi yang kuat pada tahun 1970-an dan 1980-an-- telah memperluas kesempatan kerja sektor non-pertanian pedesaan, khususnya dalam sektor industri kecil di Jawa Barat.

Studi ini mengarahkan perhatian pada dua topik utama. Pertama, penelitian mengenai pengalihan dana lintas sektoral oleh elite pengusaha desa yang bergerak dari sektor pertanian ke sektor perdagangan dan jasa. Kedua, penelitian mengenai perilaku investasi para pemilik usaha industri pedesaan, untuk mengetahui dampak perilaku mereka terhadap kesempatan kerja. Selama penelitian lapangan, telah dikumpulkan profil tentang 250 pengusaha pedesaan terkemuka dari 10 studi kasus tingkat mikro. Yaitu, tiga studi kasus mengenai elite petani di dua desa kaya sumber dan satu desa miskin sumber. Tiga studi kasus mengenai pengusaha pedesaan yang beroperasi di kota dalam sektor tersier (jasa dan perdagangan). Tiga studi kasus lainnya mengamati strategi bisnis elite pengusaha pedesaan yang bergerak di bidang industri. Dan satu studi kasus terakhir meneliti dampak dari suatu konsentrasi pabrik-pabrik besar yang berorientasi ekspor --di bawah kendali para industriawan yang beroperasi di kota-- yang berlokasi di pinggiran pusat metropolitan Jawa Barat.

1. Pola investasi elite pengusaha pedesaan

Penelitian lapangan menghasilkan temuan-temuan utama sebagai berikut:

1) Para elite pedesaan di daerah kaya sumber pertanian --prasarana baik, irigasi-- telah menghimpun modal dasar mereka sejak pelaksanaan program intensifikasi padi yang dimulai pada tahun 1970-an. Sumber kekayaan tetap berpusar di sektor padi, tetapi juga sudah mulai dialihkan ke komoditas pertanian lain yang berharga jual tinggi seperti sayur-sayuran dan udang.
   Pengalihan surplus ke berbagai usaha non-pertanian --menduduki tempat kedua setelah padi dalam hal pangsa pendapatan-- yang melibatkan investasi hilir (*downstream investments*) dalam proses pengolahan hasil pertanian, misalnya penggilingan padi, dan perdagangan hasil pertanian (arusnya ke luar daerah pedesaan), dan akhir-akhir ini juga investasi dalam perdagangan barang-barang konsumsi (arusnya ke dalam daerah pedesaan). Tidak ada petunjuk tentang adanya pengalihan ke sektor industri.

Perkembangan investasi di desa miskin sumber berbeda dengan desa kaya sumber tersebut di atas. Pangsa kegiatan usaha tersier telah lebih besar dari kegiatan usaha pertanian. Sektor tersier meliputi: perdagangan hasil pertanian (ke luar desa) dan perdagangan barang konsumsi (ke dalam desa), berbagai jasa seperti penyewaan traktor dan pompa air serta peminjaman uang secara tidak resmi. Seperti yang terjadi pada kasus desa kaya sumber di sini pun tidak ada tanda-tanda pengalihan surplus ke industri pedesaan.

2) Tiga kasus yang menyangkut kegiatan usaha para elit pengusaha pedesaan yang beroperasi di kota. Para pengusaha ini terutama aktif dalam kegiatan usaha tersier. Di sini terdapat dua pola investasi. Pertama, modal beredar di berbagai kegiatan usaha tersier: perdagangan, konstruksi, keuangan, bisnis restoran dan hotel, transportasi dan sebagainya. Kedua, terdapat berbagai tingkatan interaksi dengan berbagai kegiatan sektor primer.
Seperti dalam berbagai kasus terdahulu tidak ada tanda-tanda pengalihan modal ke sektor industri. Setiap kegiatan industri yang tumbuh di kota diprakarsai oleh para industriawan yang berasal dari kota. Pada saat penelitian beralngsung para usahawan pribumi terkemuka tidak melibatkan diri dalam pengembangan ini.

3) Tiga penelitian tingkat mikro meneliti perkembangan bisnis para elite pengusaha terkemuka di beberapa pusat industri pedesaan. Data lapangan menunjukkan bahwa para elite ini lebih merupakan "industrialis-pedagang" (trader industrialist) ketimbang sebagai produsen, karena hal yang paling penting dalam industri pedesaan adalah keberhasilan untuk mengamankan berbagai saluran pemasaran. Lagipula para elite bisnis tersebut hanya menguasai secara langsung sekitar 20% hingga 75% dari volume perdagangan yang disalurkan melalui jaringan perdagangan mereka, sisanya diproduksi oleh berbagai kegiatan usaha berskala kecil yang tampaknya mandiri, tapi sebenarnya tidak sepenuhnya bebas karena terikat pada para industrialis-pedagang melalui ikatan sub-kontrak atau sistem 'putting out'. Hanya dalam satu cabang industri sebagian besar pengusaha lebih merupakan produsen ketimbang pedagang. Jadi, para elite pengusaha industri pedesaan tampaknya lebih berorientasi pada pemasaran, sedang produksi hanya menempati tempat kedua.

2. Struktur industri pedesaan berskala kecil dan sedang

Data statistik tingkat makro dan hasil penelitian tingkat mikro yang dikumpulkan dalam sejumlah penelitian yang dilaksanakan di bawah lingkup "Proyek Penelitian Sektor Non-Pertanian Pedesaan Jawa Barat" menunjukkan bahwa industri pedesaan berskala kecil dan menengah mempunyai beberapa karakteristik berikut. Lingkup

industri pedesaan berskala kecil dan menengah di Jawa Barat sangat terbatas dalam hal teknologi dan skala produksi. Pada sebagian besar industri peran modal tetap ternyata tidak penting dibandingkan dengan peran modal kerja. Dan bagian terbesar industri pedesaan mempunyai kaitan kuat dengan pertanian: pada umumnya industri pedesaan merupakan bentuk lebih lanjut dari "pengolahan hasil pertanian", seperti misalnya sektor kerajinan dan sektor pengolahan makanan, sektor penyamakan kulit dan sebagainya.

Basis minimal ini --minimal dalam hal tuntutan keterampilan tenaga buruh dan keahlian berwiraswasta-- menimbulkan masalah kelebihan pemasokan kronis, yang kemudian diperparah oleh kebiasan meniru: pasar komoditas baru segera dibanjiri oleh para produsen lain setelah melihat contoh keberhasilan seorang pengusaha. Kebiasaan ini cenderung menekan tingkat upah dan kualitas produk.

Hanya beberapa cabang industri yang mempunyai tuntutan lebih tinggi pada para pendatang baru, atau mempunyai sasaran pasar jarak jauh yang nampaknya dapat lolos dari perangkap kelebihan produksi. Dalam pemasaran jarak jauh, para industrialis-pedagang memainkan peran kunci sebagai pedagang perantara, misalnya menghubungkan industri pedesaan dengan pasar luar negeri. Bagi para produsen kecil hubungan pemasaran seperti ini menguntungkan karena permintaan meningkat, tetapi dengan konsekuensi sasaran pasar yang lebih terbatas.

3. Elite bisnis pedesaan dan industri pedesaan

Hasil pengamatan di lapangan tidak menunjukkan adanya tanda-tanda bahwa para elite bisnis pedesaan yang melakukan kegiatan usaha di sektor primer dan tersier mengalihkan surplus yang mereka peroleh ke kegiatan usaha di sektor industri pedesaan. Di pihak lain, para elite pengusaha industri pedesaan lebih berorientasi pada pemasaran ketimbang pada produksi. Para industrialis-pedagang ini hanya berusaha menguasai produksi untuk mengamankan pasokan bagi jaringan perdagangan mereka. Hal ini menerangkan mengapa begitu banyak industri pedesaan masih tetap dalam tahap 'kerajinan rakyat' (*cottage industry*) --tersebar dalam sekian banyak kegiatan usaha rumahtangga, praktis tidak menggunakan mesin-- bahkan pada saat hubungan perdagangan mereka sudah mulai mencapai pasar ekspor.

Walaupun kami tidak berani menyatakan adanya suatu hubungan kausalitas langsung, pola investasi seperti ini cocok dengan gambaran tentang industri pedesaan, yaitu berdasarkan pada skala produksi yang rendah, menggunakan teknologi sederhana dan terutama merupakan "pengolahan hasil pertanian". Sejalan dengan itu, upah dan kondisi kerja pada industri pedesaan relatif rendah. Kesimpulan kami adalah jika industri pedesaan ingin dikembangkan sebagai pemacu bagi perluasan kesempatan kerja di sektor non-pertanian pedesaan, skala produksinya harus diperbesar.

Perluasan basis industri kecil pedesaan

Apabila basis industri pedesaan harus diperluas, jenis industri apa saja yang patut untuk dikembangkan? Kami melihat peluang dari tiga kelompok industri:

a. Industri yang melayani pasar-pasar setempat. Calon utama adalah industri yang melayani ekonomi pedesaan. Bengkel-bengkel untuk perbaikan dan pemeliharaan mesin-mesin, alat-alat transportasi dan barang-barang konsumsi yang dapat tahan lama, serta bengkel-bengkel kontruksi kecil mempunyai potensi yang belum banyak digunakan. Juga ada peluang untuk industri-industri yang memproduksi perkakas, peralatan pertanian sederhana, alat-alat rumahtangga dan sejenisnya. Kemungkinan lain adalah berbagai kegiatan pengolahan hasil pertanian yang belum dikembangkan, yang dapat dilaksanakan secara menguntungkan dalam suatu skala kecil. Keuntungan terbesar dari industri-industri kategori ini adalah peluang pasar yang masih terbuka lebar.

b. Industri kerajinan-tangan berorientasi ekspor. Kasus meubel dan kerajinan-tangan dari rotan menunjukkan bahwa masih ada peluang untuk pengembangan lebih lanjut produk-produk kayu yang dapat diekspor seperti meubel, mainan, cindera mata, dan alat-alat rumahtangga.

c. Hubungan-hubungan sub-kontrak antara industri besar dan kecil. Kecuali pakaian dan alas kaki, industri-industri dalam kelompok ini sebagian besar tetap belum berkembang. Mungkin termasuk dalam kelompok ini perakitan peralatan listrik, pengerjaan elektro plating atau penuangan sederhana, pembuatan bagian-bagian mesin dan sejumlah kegiatan-kegitan lain.

Bagaimana industri-industri seperti ini dapat dikembangkan? Penemuan berbagai jenis produk baru nampaknya masih menjadi masalah utama bagi kelompok pertama. Akan tetapi kami percaya, segera setelah seorang pengusaha berhasil dengan suatu produk, contoh ini akan segera diikuti oleh banyak pengusaha lain karena adanya kebiasaan meniru.

Penyuluhan teknis dapat efektif dalam usaha pengembangan metode-metode produksi bagi industri-industri yang ada: hal ini telah terbukti dengan peningkatan industri penyamakan kulit beskala kecil di Garut Jawa Barat, setelah teknik-teknik penyamakan modern diperkenalkan oleh unit penyuluhan Departemen Perindustrian. Akan tetapi dalam hal ini harus tersedia pasar yang siap menerima produk tersebut agar campur tangan pemerintah seperti itu dapat membuahkan hasil: berbagai temuan lapangan yang kami peroleh menunjukkan bahwa para elite pengusaha pedesaan hanya bersedia menginvestasikan uang apabila ada kepastian akan mendapat untung.

Kendala utama bagi industri pedesaan adalah manajemen. Seperti telah banyak ditulis dalam berbagai laporan, banyak industrialis kecil tidak mempunyai gambaran tentang arus uang dan barang pada kegiatan usaha mereka. Dalam banyak kasus, seorang pengusaha bahkan tidak mengetahui sama sekali apakah ia untung atau rugi. Karena

sampai sekarang persoalan ini belum mendapat perhatian semestinya, mungkin unit-unit penyuluhan Departemen Perindustrian dapat menggarap hal ini melalui kegiatan penyuluhan teknis yang mereka lakukan.

Keuntungan utama dari sistem sub-kontrak --seperti yang dinyatakan oleh ILO dan berbagai lembaga lainnya (lihat Watanabe 1983)-- adalah bahwa sistem ini menyediakan semua unsur-unsur yang disebut di atas dalam satu paket, dan tanpa subsidi: perusahaan besar memberi bantuan teknis dan kadang-kadang juga bantuan keuangan, membantu pengaturan awal manajemen kepada anak perusahaannya dan sebagai tambahan menyediakan pasar bagi penjualan produk. Hubungan sub-kontrak akan bermanfaat bagi perusahaan besar dan kecil apabila didasarkan atas prinsip keuntungan bagi kedua belah pihak. Tetapi di Jawa orang menjumpai pabrik baja berhubungan dengan industri rakyat yang memproduksi emping, pabrik semen membantu kegiatan usaha anyam-anyaman, dan banyak kombinasi lain yang secara ekonomis tidak masuk akal. Lebih jauh lagi, perusahaan-perusahaan besar dalam banyak kasus tidak menularkan keterampilan manajemen mereka pada para pengusaha kecil, tetapi memberikan order pesanan --yang akan ditolak apabila tidak memenuhi standar tertentu-- dan hanya itu. Banyak kemajuan yang dapat diperoleh dalam bidang ini apabila para pembuat kebijaksanaan mulai memecahkan masalah dari segi bisnis bukan hanya dari segi politik sebagaimana yang dilakukan selama ini.

Perlindungan terhadap industri kecil adalah pilihan lain yang dapat diambil. Larangan ekspor rotan adalah suatu contoh keberhasilan dari penciptaan berbagai hubungan ke arah hilir berkat suatu campur tangan, tetapi kebijaksanaan langsung seperti itu tidak selalu terbuka untuk industri-industri lain. Karena sejauh ini, berbagai kebijaksanaan yang dimaksudkan untuk memberi perlindungan bagi industri kecil lebih sering membuahkan hasil yang berlawanan dari yang diharapkan, tampaknya peluang keberhasilan bagi campur tangan seperti ini terbatas.

Beberapa strategi lain untuk membantu pengembangan industri pedesaan yang bersifat tidak langsung dan berjangka waktu lebih panjang mungkin harus dikonsentrasikan pada bidang pendidikan dan meneruskan pembangunan infra-struktur pedesaan. Peningkatan mutu pendidikan tampaknya akan mendorong pengalihan strategi investasi ke arah industri produksi. Berbagai penelitian empiris telah menemukan korelasi kuat antara tingkat pendidikan dan strategi investasi dari para pengusaha pedesaan. Pengamatan dalam Proyek Penelitian Sektor Non Pertanian Pedesaan Jawa Barat ini menunjukkan bahwa elite pedesaan mempunyai pendidikan dasar atau bahkan sebagian besar pendidikan menengah umum. Memang tingkat pendidikan tidak mempunyai relevansi dengan kegiatan bisnis mereka. Namun, dapat diperkirakan bahwa tidak hanya kesarjanaan dalam bidang administrasi niaga, ekonomi atau teknik, tetapi juga pelatihan kejuruan akan mempunyai pengaruh cukup besar dalam berbagai keputusan yang menyangkut investasi.

Hasil penelitian lapangan kami menunjukkan bahwa para industrialis pedesaan generasi mendatang, akan mempunyai pendidikan yang jauh lebih baik ketimbang yang sekarang, karena sekarang dari pedesaan banyak orang kaya mengirim anak-anak mereka ke kota untuk mengenyam pendidikan yang lebih tinggi. Akan tetapi pertanyaan yang menggoda adalah apakah anak mereka akan kembali ke desa setelah merekla menggondol ijazah. Ini menunjukkan pentingnya kelanjutan pembangunan prasarana pedesaan. Suatu kebijaksanaan yang diarahkan untuk mencegah adanya "brain drain" dari desa ke kota, dapat memberikan sumbangan penting bagi penyebaran berbagai kegiatan ekonomi.

FOREWORD

The West Java Rural Nonfarm Sector Research Project [id/86/957] is a collaborative policy-oriented research project between the Institute of Social Studies (ISS, The Hague) and two Indonesian counterpart research institute: the Development Studies Centre, Bogor Agricultural University (PSP-IPB) and the Centre for Environmental Studies, Bandung Technological Institute (PPLH-ITB). The project was initiated in April 1987 and formally concluded at the end of September 1991; some project activities, however (particularly the finalizing, publication and dissemination of research result such as the present report) have continued after that date.

Taking the Province of West Java as its research area, the project has focused on the following general research and policy problems: (a) what factors contribute to the stimulation of patterns of growth in rural industries and other nonfarm activities in a developing agrarian region?, (b) how can this growth be structured in ways which maximise employment generation and income distribution in a densely-populated rural environment?, and (c) what are the constraints faced by policy-making, planning and implementing agencies at various levels (both governmental and non-governmental) in achieving the above objectives?

The project's research activities were organised into seven "sectoral" and eight "thematic" research teams. Each team, besides undertaking the necessary general background work at national or regional level, carried out a number of local case-studies which are the basic building-blocks of the project's. The **seven "sectoral" teams** each focused on a particular sector or branch of non-farm activity, and carry out a branch-level study whose main components are case-studies. The **eight "thematic" teams** focused on a specific problem- or policy-area which cuts across sectoral lines. These thematic studies are also based mainly on local-level case-studies, often linked to research at regional and national level. The seven sectoral and eight thematic study teams in the project are shown om the following page.

As may be seen in the table below, most of these teams involve collaboration between at least two of the institutes, and in many cases all three. Of the eight thematic studies, only five (numbers 1, 2, 4, 5 and 6) involve the establishment of teams to carry out systematic primary (field) research; studies numbers 3, 7 and 8 involve mainly the compilation, analysis and synthesis by the team of data already generated in the context of other (sectoral and thematic) teams' work, in the final stages of the project.

	Research team	Participating researchers from:
A.	SECTORAL STUDIES	
1.	The rural building materials industries	PPLH-ITB
2.	The textile, footwear and garment industries	ISS, PSP-IPB, PPLH-ITB
3.	Agro-industries	
	a. General study on agro-industrial development	ISS, PSP-IPB, PPLH-ITB
	b. Special study on contract farming schemes	ISS, PSP-IPB, PPLH-ITB
4.	Small-scale rural food industries	ISS, PSP-IPB
5.	Rural handicraft industries	ISS, PSP-IPB
6.	Growth and employment in West Java's rattan furniture industry	ISS, PSP-IPB
7.	Strategies for informal sector employment generation in tourism development	PSP-IPB, PPLH-ITB
B.	THEMATIC STUDIES	
1.	Impact of large-industry agglomerations on the surrounding rural economy	PPLH-ITB
2.	NGOs and rural nonfarm sector development	ISS, PSP-IPB, PPLH-ITB
3.	Women and rural nonfarm sector development	ISS, PSP-IPB, PPLH-ITB
4.	The employment of rural children and youth in nonfarm activities	ISS
5.	Rural capital formation, credit systems and cooperatives in nonfarm sector development	
	a. main study:	ISS, PSP-IPB
	b. small-scale group-based credit study:	ISS, PPLH-ITB
6.	Policy processes in rural nonfarm sector development	ISS, PSP-IPB
7.	Dynamics of sub-contracting in rural industries	ISS, PSP-IPB, PPLH-ITB
8.	Rural farm and nonfarm labour markets	ISS, PSP-IPB

Each research team has exposed its ongoing work in small seminars/workshops to a mixed forum of policy makers and academic before finalisation of the research results. The results of the research are then published in various forms. Case-studies appear first in the project's **Working Papers** series. The result of the 15 sectoral and thematic teams' work are then published in the **Research Reports** series, and at the end of the project the results will be integrated in a single volume in mid 1992. A list of available project publications will be found at the end of this report.

The Research Report *Rural Investment Patterns and Rural Nonfarm Employment in West Java* is the main output of the team working on thematic study number 5 "Rural Capital Formation, Credit Systems and Cooperatives in Nonfarm Sector Development". This team, consisting mainly of PSP-IPB researchers with smaller inputs from ISS researchers, has been coordinated by Prof. Dr. Willem G. Wolters (Catholic University of Nijmegen) and Ir. Gunawan Wiradi M.Soc.Sc. (PSP-IPB) with the assistance of Drs. Okke Braadbaart, a Ph.D. candidate at the Catholic University of Nijmegen. Besides the team working on this report, another sub-team under the Coordination of Ir. Artien Utrecht (ISS) undertook a special study on small-scale, group-based credit schemes whose results have been published as Project Research Report no. RB-4.

In conclusion, on behalf of ISS, I wish to thank the Akatiga Foundation in Bandung, and in particular its coordinator Drs. Agrar Sudrajat, for kindly undertaking to continue the publication and distribution of this and other project reports since formal conclusion of the project in September 1991.

Benjamin White
Project Coordinator

The Hague, March 1992

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RURAL INVESTMENT PATTERNS AND RURAL NONFARM EMPLOYMENT IN WEST JAVA

PART ONE

INTRODUCTION

Chapter 1
PURPOSE AND DESIGN OF THE STUDY

1.1. Introduction

This report presents a picture of main shifts in private-sector investment patterns in the countryside of West Java from 1970 onward. We refer to this process of change over time in patterns of economic asset allocation as "capital formation".
Because the shape of these investment patterns to an important extent determines the capacity of the rural economy to absorb rural labor, insight in capital formation processes highlights a major issue: how can the rural economy of West Java accomodate its large and still growing population as the agricultural sector is fast losing its dominant role in rural employment. Rural Java has been densely populated for over half a century. Population growth, labor displacement in agriculture and a no more than modest growth of rural industrial activities have resulted in an economic structure where tertiary sector activities play an important role. For instance, a 1981 economic survey of nine villages in Java's main rice-producing regions showed that only 8.5% of all village households - those controlling over 1 ha. of *sawah* - on average derived a larger share of income from agricultural than from non-farm sources. For non-landowning households (half of the survey population) non-farm work provided about three-quarters of total income, with tertiary occupations being dominant[1].
In response to employment scarcity rural households have taken recourse to occupational multiplicity. In most households, one or more members engage in various seasonal or part-time occupations in order to make ends meet. Hence, the incomes of rural households tend to be fragmented in terms of time and also space. Various household members may be engaged in various seasonal or part-time jobs in different locations.
Yet all this cannot structurally change a situation of too many people and too few jobs. Outmigration - to urban areas or to other rural areas - has been advanced as one

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1. See Soentoro (1984), Table 7.3. p. 212, and White and Wiradi (1989), Table 13.11, p. 292. The official 1985 all West Java survey of sectoral employment mentions the following shares: agriculture (46.8%), manufacturing (10.7%), tertiary sector (41.8) (in: LTA-47 Volume C (1988), p. 102). In our opinion this survey is less reliable since it does not account for household occupational multiplicity. It is a common experience to find that household heads who state to be farmers in fact derive only part of their income from agriculture. This suggests a bias toward agriculture in "main occupation" -questioning.

solution to the problem but has proven to be too costly as well as causing a host of new problems. Nor does a short-term solution seem to lie in the growth of factory employment. As Hill comments on the results of the 1986 Economic Census:

> "... the 'factory' workforce is still remarkably small, in spite of the rapid growth since the late 1960s. ... Even *if* high employment growth is maintained and *if* there are no 'backwash' effects on cottage industry employment as industrial modernisation proceeds, the factory sector can only make a modest - though rising - contribution to incremental employment absorption" (1990a:85).

Reasons enough, therefore, to take a serious look at the growth prospects of "indigenous" rural non-farm employment. This report attempts to do so by focusing on investment strategies of rural entrepreneurs and the way these contribute to the growth of such rural non-farm jobs in West Java province, and specifically their impact on rural industrial employment. Stated in other words, we have tried to determine in how far the private investment decisions of West Java's rural entrepreneurs - led by considerations of private benefit - have run parallel to the urgent social need of rural non-farm employment growth during the past two decades.

1.2. The context of capital formation in rural West Java

Contemporary capital formation processes in the countryside of West Java to a very large extent are shaped by external forces. One important external factor are exchanges between the countryside and the metropolitan areas, and, mostly via these areas, exports of rural commodities to international markets. A second important factor are government intervention programs, both macro-policies that have indirect effects on the rural economy and infrastructural projects specifically aiming at the countryside.

Proximity to two of Indonesia's largest metropolitan areas, the capital Jakarta and the city of Bandung has been one important factor: these centers of consumption and production exert a tremendous demand pull upon the surrounding countryside, while at the same time there is a substantial backward flow of urban capital and commodities into the rural areas.
Urban-rural exchanges are made up of labor, commodities and financial assets. Flows from the countryside to the city consist of "rural exports" of agricultural commodities, industrial products and labor. In the reverse direction go flows of consumer goods, investments and money incomes earned in the city.
Alongside these exchanges, in the past years exports of rurally produced manufactures to foreign markets have become more and more prominent.

Macro-level government policy has manifested itself in various indirect ways. Apart from the general "stabilising" role that the New Order government has played both politically (the post-1965 period has seen none of the armed insurrections that racked West-Java's rural economy from 1949 onward) and economically (monetary stabilisation), the recent slackening of its grip on banking has also contributed to the present economic growth surge. The banking deregulation that was set in motion in 1983 has significantly widened the access to bank credit in the rural areas.

More dramatic, because directly observable, have been effects of infrastructural projects, largely funded by bilateral aid programs and in the '70s and early '80s by oil profits. Large scale water management projects, such as the construction of the Jatiluhur dam, complemented by credit programs and supply of inputs (fertilizer, seeds) created the basis for large increases in rice production and the production of secondary crops mainly in the northern part of the province (Hardjono et al. 1989:264).

An enormous increase in rural mobility has been another important effect of government intervention. The impact of goverment investments in road building and upgrading have had farreaching effects on the rural economy. Together with the imports of automobiles and motorcycles, which have come under ever tightening local assembly regulations, these changes set off a veritable Transport Revolution in the early '70s which has drastically cut transport costs and time (Anderson 1980; Dick 1989).

The effect of these external forces on **sectoral patterns of rural capital formation** can be summed up as follows.
A main base of indigenous rural capital formation has been created in agriculture by increasing production of rice and high-value secondary crops (vegetables, potatoes, shrimps, freshwater fish). As these commodities are exported primarily to the metropolitan areas, communications improvemements have been crucial in this growth process. Increased concentration of land has brought the bulk of agricultural surpluses under control of a stratum of large rural landowners.

Second, rural entrepreneurs running small and medium-size industries have profited from developments of the past 25 years and entered the profitable urban and foreign markets for luxury commodities like souvenirs, garments, and leather products.

Third, investments of urban industrialists in rurally-based large-scale manufacturing enterprises have had significant employment effects in the countryside especially since the recent surge in the export of manufactures.

Lastly, increased mobility may have caused some rural employment losses, e.g. where trading chains were shortened, but on the whole public investment in communications infrastructure has had dispersed but far-ranging positive effects on the rural services, trade and transport sector.

1.3. Design of the study

The capital formation study has concentrated on four topics:

The rural impact of capital planted in the countryside by urban-based entrepreneurs in the form of large-scale manufacturing activities.

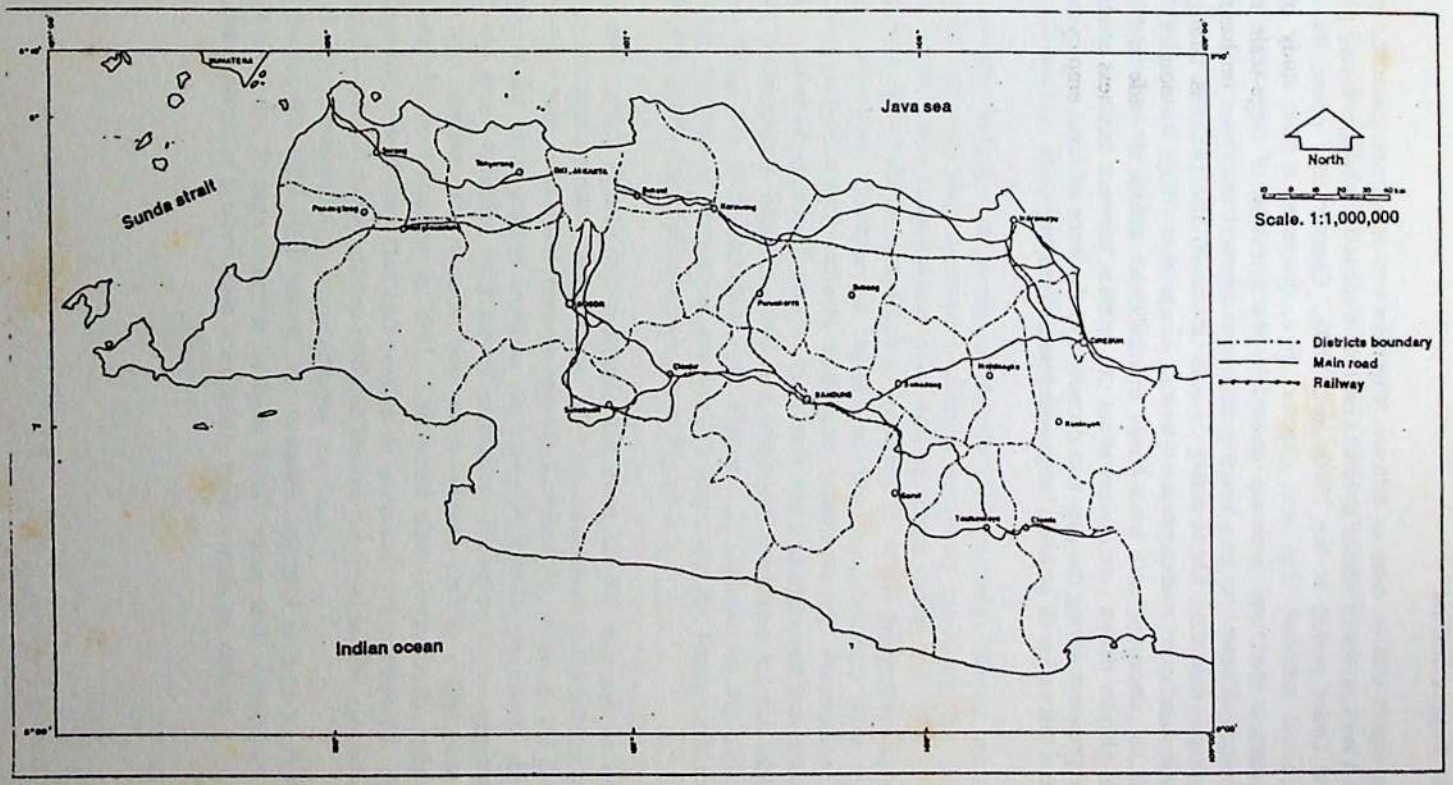
The role of capital controlled by rural entrepreneurs in the growth of rural small and medium-size industry.

The role of agricultural surplus in rural non-farm employment generation.

The role of town-based entrepreneurs in rural capital formation.

A combination of macro-level statistical data and data collected in micro-level field research provide the basis for the discussion of each of these themes. Ten field studies were carried out, in which 250 business profiles of rural entrepreneurs were collected.
One study focused on the impact of urban capital, being an inquiry of the local-level economic impact of large manufacturing enterprises on the rural economy.
Field studies were conducted in six villages to gain insight in investment patterns of entrepreneurs in small and medium-scale industry and of large farmers. The industry study has also relied on other field research data compiled in the course of the West Java Non-Farm Sector Project.
Finally, short surveys of investment patterns of large entrepreneurs were conducted in three district towns.
The presentation of fieldwork results in part two is preceded by a general overview of sectoral and regional trends in Indonesia in general and West-Java in particular. This overview is based on secondary data (official statistics, scientific literature, newspaper clippings) as well as on material compiled in interviews with knowledgeable persons in the field of capital and banking.

Figure 1.1. Map of West Java



1.4. Report outline

The report outline runs as follows. Chapters two and three place the countryside of West Java province within a wider context of economic changes taking place under the New Order period in the 1970s and 1980s. Chapter four opens the discussion of empirical material. The next chapter, five, discusses a case study of micro-level changes in the rural economy caused by the intrusion of large-scale manufacturing activities. Chapter six is a lengthy discussion of rural industries on basis of extensive empirical material. The ensuing chapter discusses the business strategies of large farmers and other entrepreneurs operating in agrarian village economies, while chapter eight is concerned with town-based entrepreneurs active in trade and services. The final chapter draws conclusions about the relation between business strategies of rural entrepreneurs during the past two decades and the issue of rural employment, and ends with a discussion of possible intervention measures.

Chapter 2
WEST JAVA: MACRO-ECONOMIC SETTING

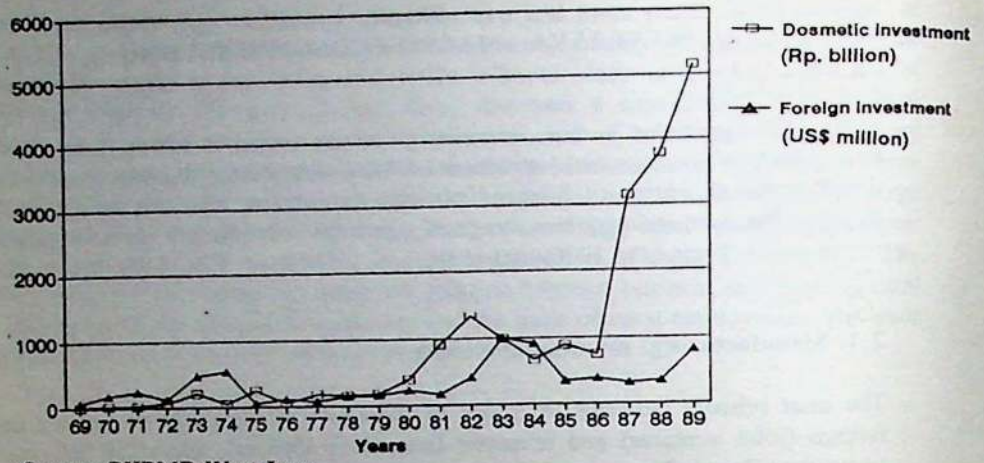
This chapter provides a short overview of macro-economic trends in Indonesia and their effect on the economic structure of West-Java during the past two decades. It discusses the expansion of financial markets, investment trends in the manufacturing sector, changes in industry size structure, agricultural production, communications and power supply during the 1970s and 1980s.

2.1. Manufacturing: investment climate

The most reliable indicator of trends in West-Java's investment climate are data on foreign (joint ventures) and domestic investment approvals issued by the provincial Investment Board. These mainly relate to the manufacturing sector.
The Investment Board divides investment proposals in seven categories: agriculture plus mining, transport, construction, textile manufacturing, (other) light industry, chemical plus pharmaceutical industry and basic manufacturing. Fluctuations in the total yearly number of approved projects (nominal) value of approved investments and the number of proposals between 1969 and 1989 are presented for the latter four categories - being the most important - in Figure 2.2. Changes in the total yearly nominal value of approved investment proposals falling under the foreign and domestic investment laws in this time period are shown in Figure 2.1.

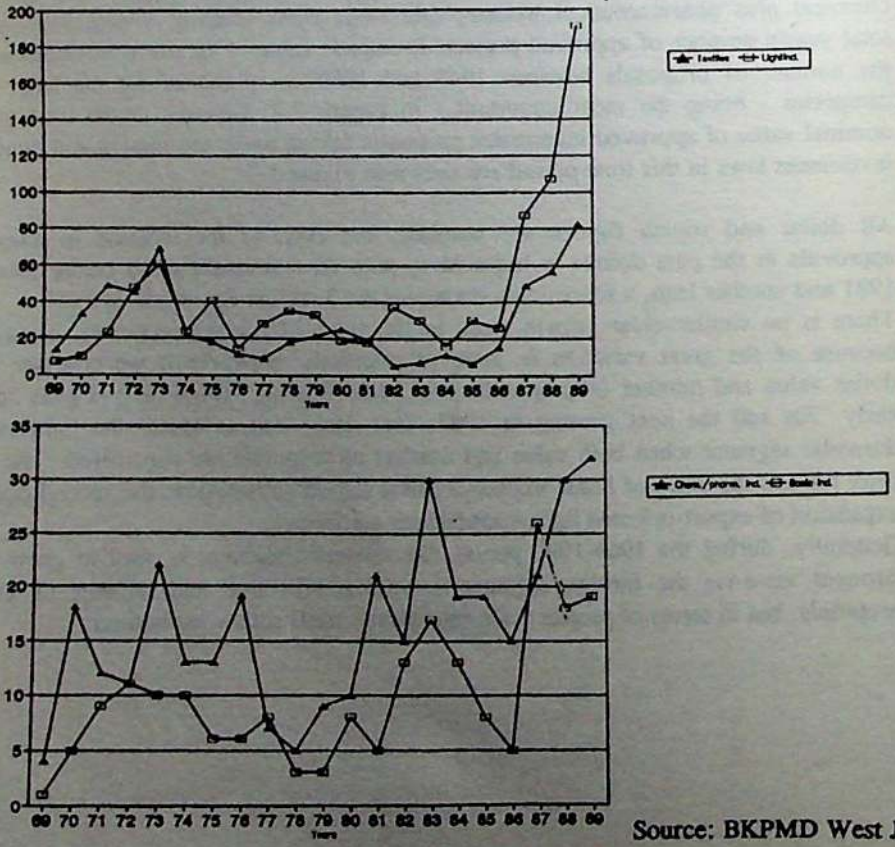
All dollar and rupiah figures are nominal, but even so the increase in domestic approvals in the past decade is impressive, with an investment jump taking place in 1981 and another leap, a fourfold increase past the 3 trillion Rp. mark, in 1987.
There is no similar clear growth trend in the value of foreign proposals, seemingly because of the great variation in scale of proposals. However if we consider both dollar value and number of proposals, two peaks become visible: a first peak in the early '70s and the next starting in 1987. This trend also comes to the light in the domestic segment when both value and number of proposals are considered. The first peak reflects the wave of home market-oriented import substitution, the second one the expansion of export-oriented light manufacturing activities.
Generally, during the 1969-1990 period, the domestic segment is seen to grow ever stronger vis-a-vis the foreign segment in total (real) value and number of yearly proposals, but in terms of project scale consistently trails somewhat behind.

Figure 2.1. Changes in total yearly value of investment approvals, West Java, 1969 - 1989



Source: BKPMD West Java

Figure 2.2. Number of approved foreign and domestic projects, manufacturing, West Java, 1969 - 1989



Source: BKPMD West Java

In sum, the conclusion may be drawn that the past 20 years have seen two major investment booms, the first in the period 1970 to 1975 and the second starting in 1987, i.e. as the export of manufactures accelerated.
In domestic proposals, which assume a more and more dominant role over the years, a fairly continuous growth in value and number is visible, with two leaps during the early 70s' and 1987 booms and a smaller hump in between around 1982. The foreign investment sector follows this trend only in terms of project numbers.
Finally, it may be remarked that the 1987 boom is unprecedented both in terms of the number of proposals and in regard to the value of domestic proposals.

2.2. Manufacturing: growth

While the Investment Board data should not be taken for actual growth figures - they concern investment plans and do not say anything about the realisation thereof - the trend of fairly continuous strong growth they bespeak is confirmed by a recent analysis of the 1964, 1975 and 1986 Economic Censuses (Hill 1990a, 1990b). The author finds persistent and strong growth in Indonesia's manufacturing during this period.
Geographically, this expansion has been very uneven. Today, the bulk of large manufacturing activities is concentrated around the capital and seat of the government, Jakarta. Furthermore large and medium-scale manufacturing is disproportionately concentrated on Java, and within this area around four metropolitan centers: Jakarta, Surabaya, Gresik and Bandung. As elsewhere, rapid urbanisation has led to severe problems: an overburdened urban infrastructure, heavy pollution, and growing regional inequality.
In the field of manufacturing West Java province (i.e. West Java minus Jakarta) has come to play an ever more important role: its share in national manufacturing output increases from 19.2% in 1974 to 26% in 1985, and in employment from 18.7% to 21.2% (Hill 1990a: Table 10, p. 104). This above-average growth of manufacturing is due to the spill-over of large-scale manufacturing, heavily concentrated around the capital Jakarta, into surrounding West Java (ibid. p.106). A second, but much smaller, growth core is the city of Bandung, the traditional textile industry center.

2.3. Change in industry size structure

The outstanding feature of contemporary industry size structure in Indonesia is that employment is heavily concentrated in the small establishment - cottage industry - and large establishment - factories - extremes, whereas the middle range of small and medium-size firms is relatively unimportant.

> "Medium-sized firms (author's note: employment 50-199) play a surprisingly unimportant role in Indonesian manufacturing, both in output and employment. They occupy a prominent position (greater than 40% of output) in just four industries, all except one (plastics) of minor importance" (Hill 1990a:90).

In Hill's breakdown of census data, with small industries defined as employing 5 to 49 workers, small industries have a main share in employment in the following industries: food products, garments, leather products, furniture, cement, structural clay products, and professional equipment (1990a:89). However, only in the case of furniture and structural clay products do they provide a major share of value added.

What if household industries are added to the picture and change over time is considered? Table 2.3 shows employment and output shares of household industries (1-4 workers), small industries (5-19), medium-scale (20-99) and large-scale (100+) manufacturing establishments as recorded by the 1974/1975 and 1985/1986 Economic Censuses.

Table 2.3. Employment structure Indonesian industry 1974/1975 and 1985/1986

	1974/1975	1985/1986
household industry (1-4 w.)	3899856 (79.5%)	2714264 (48.9%)
small industry (5-19 w.)	343240 (6.9%)	770114 (13.9%)
medium and large ind. (20+ w.)	661704 (13.5%)	2064689 (37.2%)

Source: BPS

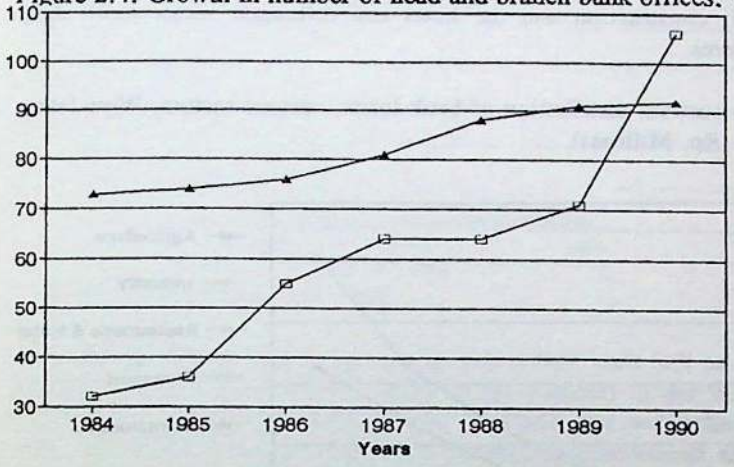
The figure shows that the during this time period the gap between the "large" and "small" segments of the manufacturing sector has not closed to a substantial degree. Strong growth took place in the large segment, while the small segment languished. Household industry employment declined not only in terms of share in total industry employment but also in absolute terms. As will be shown below, small and household industries in West Java are dominant in the countryside while large establishments are concentrated around the metropolitan centers. The serious implication of these figures would be that rural assets have been shifted out of secondary activities during the period 1975 to 1986.

Does this decline mirror reality, or does it reflect a higher rate of underreporting in the later census? As we encountered a highly dynamic rural industry during our field investigation, we are enclined to believe the latter.

2.4. Banking

Deregulation in the finance sector has had a clear impact on banking in West Java. Figure 2.4 shows the strong growth in number of bank head and branch offices in the province during the period december 1984 to november 1990, with growth especially marked in the private sector where the number of offices increased from 32 to 106.

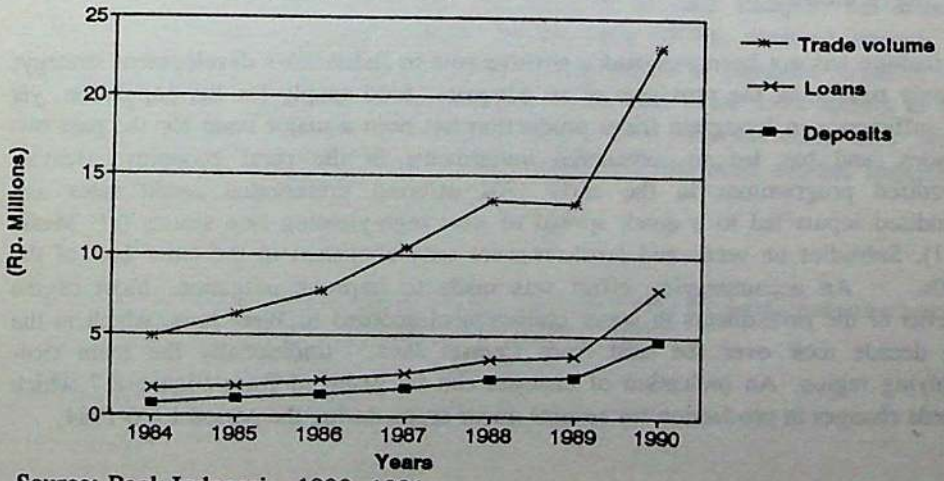
Figure 2.4. Growth in number of head and branch bank offices, West Java, 1984-1990



Source: Bank Indonesia, 1990, 1991

A similar steep upward curve is visible in time series data on bank trade volume, loans and deposits in Figure 2.5. Here also the share of private banks in total trade volume, loan volume and deposits has increased strongly between 1984 and 1990, from 6 to 15.7%, from 10.4 to 29.5%, and from 23.4 to 38.6% respectively.

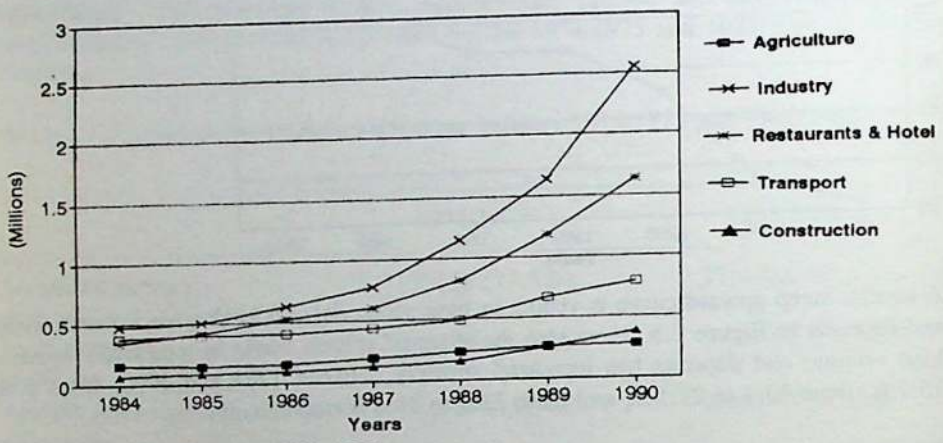
Figure 2.5. Nominal growth in bank trade volume, loans and deposits, West Java, 1984-1990 (in Rp. millions)



Source: Bank Indonesia, 1990, 1991

Thus the overall trend is one of strong growth, where especially the private banks have taken advantage of new opportunities offered by the deregulation packages.
Changes over time in the sectoral distribution of bank loans are charted in Figure 2.6, which covers agricultural, industrial, restaurant and hotel trade, transport and construction loans. All sectors show a nominal increase in loan flows between 1984 and 1990, but in real terms the volume of loans to the agricultural sector shrinks considerately, while a slight decrease takes place in transport loans. On the other hand loan flows to industry, construction and the hotel and restaurant sector more than double in size in real terms.

Figure 2.6. Changes in sectoral distribution of bank loans, various sectors, West Java, 1984-1990 (Rp. Millions)

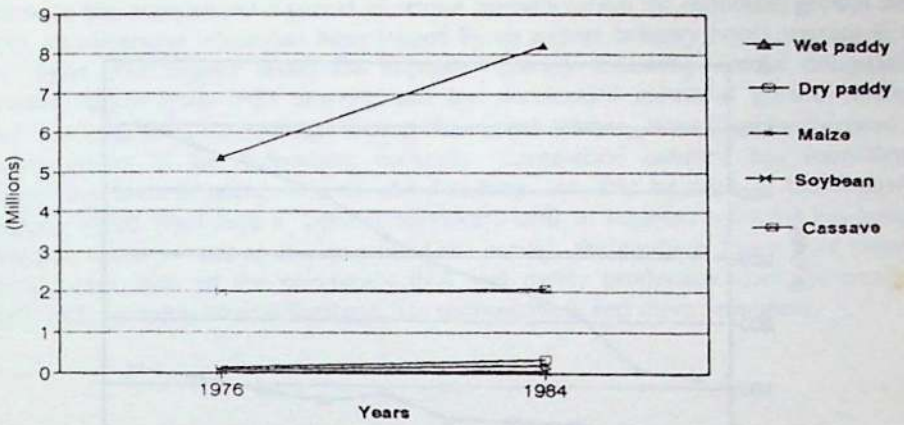


Source: Bank Indonesia, 1990, 1991

2.5. Agriculture

Agriculture has not been assigned a positive role in Indonesia's development strategy, its only task being the provision of an adequate food supply for the population, yet self-sufficiency in foodgrain (rice) production has been a major issue for the past two decades, and has led to substantial investments in the rural economy. Heavily subsidised programmes in the early '70s offering preferential credit rates and subsidised inputs led to a quick spread of new high-yielding rice strains (cf. Mears 1981). Subsidies on seeds and fertiliser were only abolished in the latter half of the 1980s. An accompanying effort was made to improve irrigation. Most of the benefits of the investments in water management accrued to West Java, which in the past decade took over the lead from Central Java, traditionally the main rice-supplying region. An indication of changes can be gathered from Figure 2.7 which records changes in production for several major crops during the period 1976-1984.

Figure 2.7. Production of five important crops, West Java, 1976 and 1984 (tonnes)



Source: LTA-47, Vol. C, 1988

By contrast, the estate and secondary crop sector were left to develop on their own accord. While the estate sector, formerly the mainstay of the West Javanese economy, continued its languishing post-colonial existence, the production of fruit, vegetables, dairy products and other high-value commodities increased sharply in response to demand from the mass consumer markets Jakarta and Bandung[1].

2.6. Communications, power supply

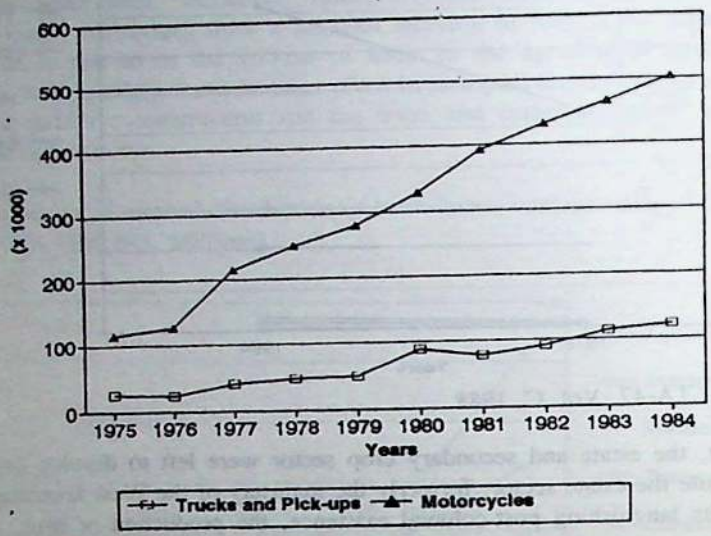
Maybe due to the military background of the present powerholders, the past two decades have seen a strong penchant for investment in roads and support for the build-up of a domestic automotive industry. The attention to road transport has been a crucial factor in rural economic growth. In the early 1970s, renewed imports of motorised vehicles - which had been stopped by the balance of payment crisis of the early '60s - plus road repair and improvement led to what came to be known as the "Transport Revolution" in rural Java (Dick 1989). Low transport costs have made labor highly mobile[2]. Electrification of the countryside has been another important factor in the economic development of Java.

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1. See for developments in the poultry industry Hardjono (1990); for potato production Bottema et al.(1989); for general information LTA-47 Volume C (1988).

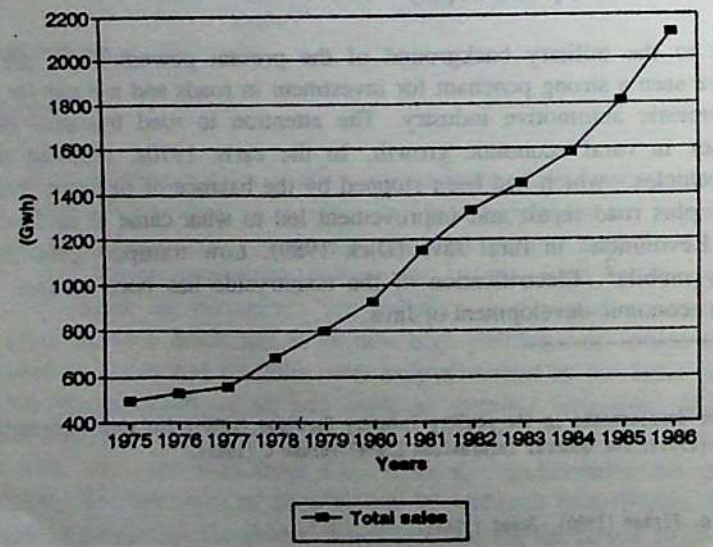
2. See e.g. Firman (1990), Jones (1984).

Figure 2.8. Growth in number of registered trucks, pick-ups and motorcycles, West-Java, 1975-1984



Source: Hardjono et al. 1989, Table 10.12, p.276

Figure 2.9. Energy sales West Java (except Jakarta and Tangerang), 1974-1986



Source: LTA-47 Volume C, Table 9.4, p.318

2.7. Conclusion

Indonesia has experienced a period of strong manufacturing-led economic growth since 1970, an expansion which has been topped by an export industry boom starting in the mid-1980s. The finance sector has expanded quickly following various deregulation measures taken from 1983 onward, and has accelerated industrial growth. Because most new industries have settled around the capital Jakarta, West Java has become the gravity center of the Indonesian economy. Large-scale industry has concentrated around two growth poles, Jakarta and Bandung. As will be seen in the following chapter, within West Java a general northward drift of business activities has been in evidence: factories tend to cluster around the capital, the northern plains have come to provide over 50% of the province's total wet paddy production, and the east-west traffic axis Sumatra-Jakarta-Surabaya has become more and more prominent.

Chapter 3
RURAL WEST JAVA: STRUCTURE OF THE REGION

Rural Java has been carried along in the fast-paced urban Java-centered industrialisation process of the past two decades. While trailing behind the urban growth poles, the rural economy has profited from the generally stable economic climate, infrastructural improvements and the demand pull of Java's metropolitan markets. The countryside of West Java has been especially well set in regard to these developments due to its proximity to that enormous clustering of financial, political and economic power, Jakarta. How has the internal economic structure of the West Javanese countryside changed in reponse to these macro-developments?

3.1. Regional distribution of rural economic activities

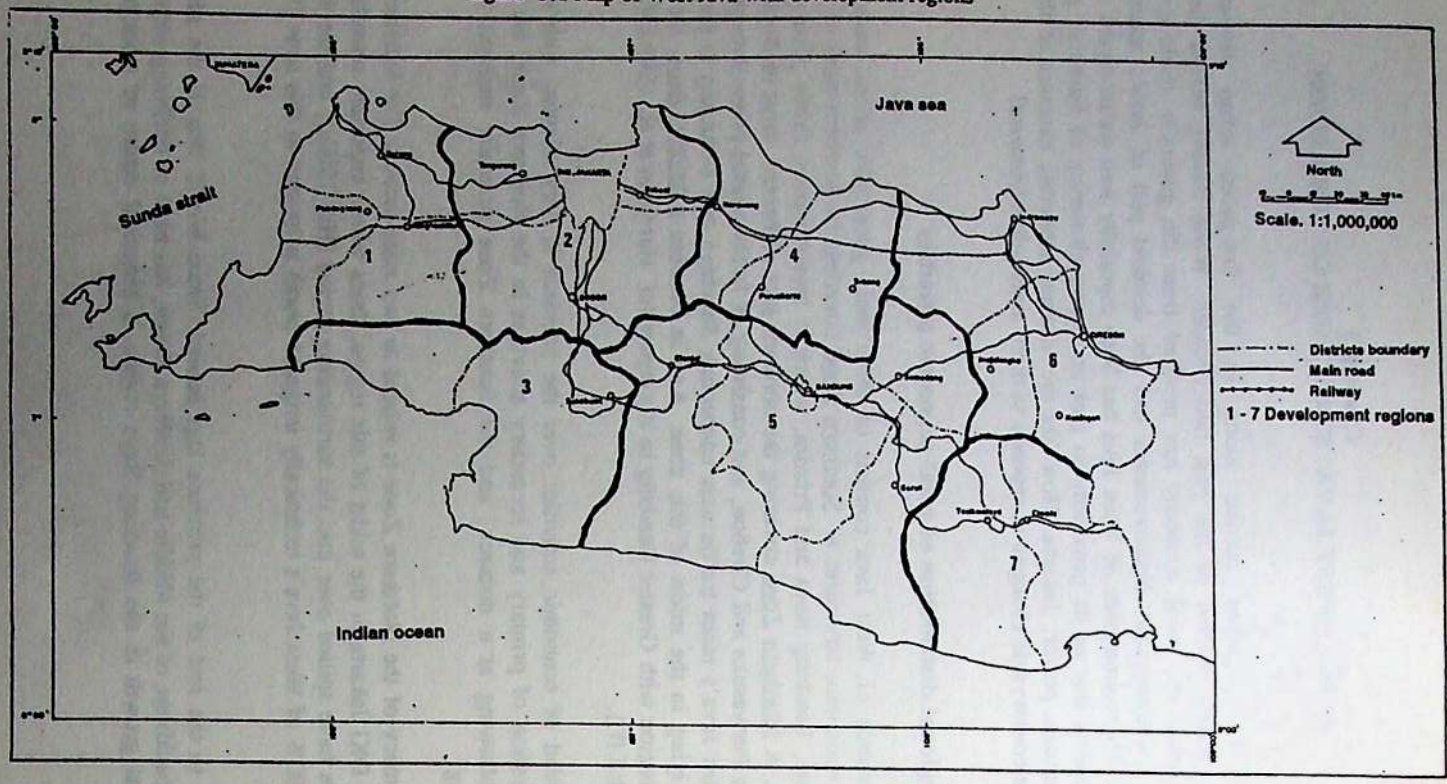
The province of West Java consists of three main geographic zones, each with a distinct economic structure: a Southern Zone covering the southern parts of Banten, Sukabumi, Bandung Raya and Priatim, which is mountaineous, thinly populated and isolated. A Northern Zone covering the northern part of Banten, most of Botabek and northern Purwasuka and Cirebon, and consisting of fertile coastal plains through which runs West Java's main traffic axis connecting Surabaya and Semarang to the capital Jakarta lying in the midst of this zone. And in between a Middle Zone, the central upland region with Greater Bandung in it's center (cf. Hardjono et al. 1989:256; LTA-47 1988:8 ff.).

The spread of economic activities over the province is very uneven, with a heavy concentration of primary and secondary activities in the Northern Zone, the Middle Zone following at a distance, and the Southern Zone generally stagnant or even declining.

The primacy of the Northern Zone is related to two main factors: The location of the enclave DKI Jakarta in the midst of this region, from where important manufacturing activities have spilled over into the surrounding region (Hill 1990a); and the fact that almost 80% of West Java's technically irrigated sawah is located in this zone (LTA-47 1988:8).

Growth in the rest of the province lags behind. Since World War II the plantation sector, backbone of the Middle and Southern Zones, has been of declining importance. Industrial growth in the Bandung Raya region, a historical centre of manufacturing

figure 3.1 Map of West Java with development regions



concentration, has not been able to keep up with developments around Jakarta. The Southern Zone is very poorly endowed, lacking infrastructure, natural harbours along the Southern coast, or land suited to intensive rice cultivation.

3.2. Rural capital formation in primary activities

Five main bases for primary sector capital formation can be identified:
a) rice intensification areas
b) vegetable-producing uplands
c) coastal fishery/fishbreeding/shrimp-ponds
d) estates
e) livestock breeding (cattle and poultry)

Table 3.2 shows that most irrigated *sawah* is found on the Northern coastal plains (Botabek, Purwakarta, Cirebon), with another core in the Middle Zone (Bandung Raya). Together these areas produced 77.7% of West Java's wet paddy in 1984. The coastal plains have been a main target for large-scale irrigation projects undertaken by the government in order to gain self-sufficiency in rice production: the coastal plains extend their lead in the 1976-1984 period in terms of the share of total paddy production (from 54.2 to 59.3%), and they also come to hold first place in terms of area productivity. Also note how Bandung Raya's share shrinks from 22.8 to 18.4% because of decreasing areage due to urban land encroachment.

Table 3.2. Wet paddy cultivation West Java, 1976 and 1984

	1976			1984		
	area harvested (ha. x 1000)	total production (tonnes x 1000)	share (%)	area harvested (ha. x 1000)	total production (tonnes x 1000)	share (%)
Banten	146.8	416.2		173.2	689.7	
Botabek	253.6	736.6	13.8	281.1	1,194.7	14.6
Purwasuka	351.9	1,103.5	20.6	367.2	1,738.2	21.2
Sukabumi	72.1	244.5		88.1	363.1	
Bandung Raya	346.3	1,219.3	22.8	341.6	1,508.2	18.4
Cirebon	352.6	1,061.0	19.8	409.9	1,925.6	23.5
Priatim	176.9	572.4		188.9	776.8	
West Java	1,700.3	5,353.6		1,850.2	8,190.3	

Source: LTA-47, Volume C, 1988.

Main centers of upland vegetable production are Pangalengan, Lembang-Cisarua, Cipanas, Sukabumi, Ciwidey and Garut, all in the Middle Zone, where high altitudes provide the proper climatic conditions and large consumer markets are within reach. These centers have developed very fast since the late '60-s, profiting from improved communications facilities and rising urban demand (see Bottema et al. 1989).

Coastal fishery is not very prominent, mainly because West-Java lacks suitable harbours and mechanisation has not proceeded far yet. However, this sector has witnessed significant growth during the past two decades (Hardjono et al. 1989:267). Fresh-water fish breeding is very much a dispersed and also a seasonal activity. Shrimp-ponds are found mostly on the brackish northern coastal area.

The plantation sector has declined in importance ever since Indonesia gained independence, a main reason being that many estates were neglected during the independence struggle and subsequent protracted period of guerilla warfare during the DI insurrection. Smallholder production has increased in importance, but increases have not been sufficient to offset productivity losses in the large-scale sector (Hardjono et al. 1989:267).

Cattle husbandry is most important in the Middle Zone, especially in Bandung district which produced over half of West Java's milk output in 1984/85 (Hardjono et al. op. cit.). This concentration is a result of a combination of historical, climatic, and locational factors.
Poultry industry shows a concentration of activities in Bogor and Tangerang in the Botabek region, close to Jakarta, and to a lesser extent is also found to be important in Cianjur and Bandung in the Middle Zone (Hardjono et al. 1990a: 7-8).

3.3. Capital formation in manufacturing

Rural industry in West Java, i.e. industry located outside of the metropolitan zones, consists of two segments: on the one hand rural industry proper, i.e. small-scale or medium-size industrial enterprises operated by rural-based owners and engaged in activities that are often closely linked to agriculture. And on the other large-scale activities controlled by city-based industrialists. The latter category settles in the countryside surrounding the large urban centers (Jakarta and Bandung) in increasing numbers, because of rising urban land prices, water supply problems and increased harassment by municipal authorities. In fact, Economic Census data as well as data on foreign and domestic investment indicate that for several years now there has been more large industry outside than within the borders of the municipal areas. While several of these rural industrial zones have become conurbations, there are also many large industry zones which classify as rural areas.

Table 3.3. Location and size distribution of industry by employment, West Java, 1985/1986

Workforce:	Large 200+	Medium 20-199	Small 1-19
* Jakarta spillover area (Bogor, Tangerang, Bekasi)	140867	26789	95938
* Bandung municipality and district	110220	37389	86119
* All other areas	47080	30190	471327
* All municipalities	31600	17023	37668
* All districts	266567	77345	615716
* All West Java	298167	94368	653384

Source: Biro Statistik Jabar, 1986

In terms of employment, the size structure of the manufacturing sector in West Java conforms to the pattern noted before in showing a concentration at the large- and small-scale extremes and a hollow middle. Fifty percent of industry workers are employed in tiny household firms with up to 4 workers, and 29% of the workforce is employed in establishments of 200 and more workers. The remaining workers are divided among medium-size establishments of between 20 and 199 workers (9%) and small industry (13%) (5-19 workers).

3.4. Indigenous rural industry

"Authentic" rural industries, i.e. the class of industrial firms often referred to as cottage or household industries (although this denomination befits only part of the category), are predominantly found in the rural areas (see table above), and mainly produce the following commodities: food products and beverages, garments, leather products, wood products (furniture, handicrafts), clay products (bricks, tiles, ceramics), and metalware (hand tools, braziers, pans).
Rural industries tend to concentrate in rural industry centers, of which around 400 have been listed in West Java, each center specialising in a limited range of commodities. Every center houses a cluster of enterprises, from a few score for the smaller to over a thousand firms for the largest centers. The size of firms varies from miniscule one-man or family enterprises to vast workshops employing hundreds of workers.

Table 3.4. Distribution of small and household industry establishments over main product groups, rural West Java (*), 1986

ISIC category	employing 5-19 workers		employing 1-4 workers	
	no. of firms	employment	no. of firms	employment
31 Food, beverages, tobacco	6102	43573	73413	189365
32 Textile, wearing app., leather	2737	21729	12164	19501
33 Wood and wood products	2013	14193	87522	189452
34 Paper,printing,publishing	173	1370	1361	2323
35 Chemicals, Rubber	379	3297	2148	3770
36 Non-metallic minerals	3031	22943	19557	57516
37 Basic metals	0	0	0	0
38 Metal products, machinery	582	4359	6540	17986
39 Other manufacturing	282	2087	13374	22252
total	15299	113163	216079	502165

* All West Java excluding Bogor, Sukabumi, Bandung and Cirebon municipalities
Source: Biro Statistik Jabar, 1986.

3.5. Rural industry as a source of rural income

Scattered evidence suggests that, one, the share of rural industry in total rural employment is small, and two, that wage levels in rural industry are among the lowest non-farm incomes.

The official 1985 census found that industry contributed only 10.7% to employment in West Java province[1]. An all-Java survey of 11 rice villages conducted in 1981 found that, rated in hourly returns to labor, unskilled industry workers (in small rural industries or large factories) earned the lowest average hourly incomes of all male non-farm workers. The average hourly returns of skilled rural industry workers (smiths, *kerupuk* makers, and the like) was just above the average of the second-lowest non-farm income group, transport workers, but far below that of traders. Also, this dataset shows that many more people are employed in tertiary sector occupations (trade,

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1. LTA-47 Volume C (1988), p.102.

construction, transport, etc.) and as civil servants than in industry[1]. Table 3.5 gives the results for the four West Javanese villages covered in the survey.

Table 3.5. Income per hour male workers, various occupations, 4 villages, West Java, 1981

village	occupational categories					
	agro-industry worker	other industry worker	transport worker	skilled industrial worker	trader	civil servant
1	138	109	238	166	267	258
2	123	150	203	232	360	446
3	-	130	181	234	249	249
4	202	119	123	257	251	268
mean	154.3	127	186.3	222.3	281.8	305.3

Source: Soentoro 1984: Table 7.7, p.226.

Additional evidence is furnished by a recent survey conducted by one of the authors in an unirrigated West Javanese village (see Chapter 5), where the only rural non-farm job category scoring lower than rural industry in terms of hourly returns is work in rural large factories. Yet the latter is vastly more popular because incomes are secure, there is a varying measure of insurance, and no risk-taking (entrepreneurship) involved. Also, tertiary occupations are vastly more important than secondary sector employment[2].

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1. See White et al. (1989), Table 13.12, p.295, and Soentoro (1984), Table 7.5, p.220.

2. Braadbaart 1992.

3.6. Income stratification: rural elites

Who has profited from economic growth? There is a more or less general consensus that overall standards of living in Indonesia have increased as a result of the economic expansion of the 1970s and 1980s. Many of the poorest households have crossed the poverty line (cf. Asra 1989) and signs of increased affluence can be observed everywhere.

On the other hand observers of rural West Java from the 1920s onward have pointed to a long-term trend of asset concentration. Early observers mentioned an increasing concentration in landholding patterns (summarised in van Dijk 1981, see also van Dam 1961, Svensson 1983), a trend which more recent studies have confirmed to be still in evidence (Hardjono 1990d, Horikoshi 1976, White et al. 1989). Evidence on non-agrarian sectors (trade, transport, industry) is less substantial (e.g. Muhaimin 1983), but seems to confirm this finding.

This top economic stratum of "rural business elites", controlling a major share of rural resources - real estate, transport means, trading channels, access to financial markets and the like - is the focus of the present study.

3.7. Conclusions

To recapitulate, Java in general, but its western part in particular, has gone through a phase of rapid economic growth during the past decades. In rural West Java agricultural production has increased sharply, and many infrastructural improvements have been carried through, most significantly in the areas of road transport and power supply, which has facilitated access to the huge consumer markets of Jakarta and Bandung. In the latter part of the '80s financial markets have penetrated the rural economy, and the impact of the export drive has made itself felt in the an expansion of large-scale manufacturing activities in the rural periphery of urban centers. This picture of buoyant growth is complemented by a rise in income levels in all strata of the rural population.

The shadowside of this picture is a growing regional concentration of economic activities: on the one hand a general northward drift of business activity, and on the other hand an increasing concentration around urban growth poles. While these centers grow so fast that they seem to be heading for a state of total congestion in the near future, the other regions stay behind (cf. LTA-47 1988 and Hardjono et al. 1989). Furthermore, macro-level statistics indicate that indigenous rural industry seems not to have caught up with overall growth, and there are some indicators that wages in rural industry are very low. These are serious problems given the urgency of the non-farm employment issue.

RURAL INVESTMENT PATTERNS AND RURAL NONFARM EMPLOYMENT IN WEST JAVA

PART TWO

RESEARCH RESULTS

KPA Konsorsium Pembaruan Agraria

Chapter 4
INTRODUCTION

This part of the report summarises the results of field research conducted in 1990 on patterns of capital formation and investment allocation and their impact on non-farm employment generation in rural West-Java.

4.1. Research topics

Within the framework of the capital formation study 10 field surveys were executed. These field studies concentrated on four topics:

The rapid expansion of large-scale manufacturing in the West-Javanese countryside. One micro-level case study, conducted in the industrialising eastern periphery of Bandung, focused on the impact of large-scale manufacturing on the rural economy and the rural labor market in particular.

- **Capital allocation in rural small and medium-scale industry**.

Three micro-level cases were investigated, two of which concern export-oriented handicrafts industries with much growth potential, and the third a resource-based industry oriented to local markets. The aim of the research was to bring to light changes in industry size structure accompanying present developments and their effects on rural employment conditions.

1. Curug/brick-making industry: a village with a narrow agricultural base, with unirrigated sawah land part of which is under sugarcane. Curug's economy rests on a local brick-making industry and on circular labor migration to metropolitan areas.
2. Rajapolah/handicrafts: a center of small industry, foremostly bamboo and pandanus handicrafts.
3. Tegalwangi/rattan furniture: a village with a booming export-oriented rattan furniture industry.

Agricultural capital and non-farm employment growth
Three village case studies were conducted on intersectoral growth linkages from agriculture, two concerning rice intensification areas with a developed agriculture-based economy and the last a stagnant resource-poor economy.

1. Blanakan: a coastal village in the northern plains. Economic bases are intensive rice cultivation on technically irrigated sawah and coastal fishery.
2. Sidajaya: Sidajaya is a poor lowland village lacking irrigated sawah and non-farm employment opportunities.
3. Parigimulya: Parigimulya's sawah is partly irrigated and road connections are much better.

Investment strategies of town-based entrepreneurs

Short surveys were conducted in three towns focusing on the investment strategies of local business elites: large traders, restaurant and hotel owners, and the like. The three towns were Pelabuhan Ratu, a seaside resort on the south coast, and Sukabumi and Subang, both district capitals in the middle zone of West Java.
Detailed reports on the findings of the capital formation survey in seven of the above locations have appeared as project working papers. These are:

* Agus Sadelie et al., Pembentukan modal, sistem perkreditan dan koperasi: Kasus di Desa Sukaraja, Kecamatan Rajapolah, Kabupaten Tasikmalaya (A-5, 1991);
* Margaharta Iskandar et al., Pembentukan modal, sistem perkreditan dan koperasi: Kasus Desa Tegalwangi, Kecamatan Weru, Kabupaten Cirebon (A-6, 1991);
* Nanik Ernaini, Pembentukan modal, sistem perkreditan dan koperasi: Kasus Desa Curug, Kecamatan Karang Sembung, Kabupaten Cirebon (A-8, 1991);
* Arya Hadi Dharmawan et al., Pembentukan modal, sistem perkreditan dan koperasi: Kasus Desa Sidajaya, Kecamatan Cipunagara, Kabupaten Subang (A-9, 1991);
* Dwi Sadono, Pembentukan modal, sistem perkreditan dan koperasi: Kasus Pelabuhanratu, Kecamatan Pelabuhanratu, Kabupaten Sukabumi (A-10, 1991);
* Murdianto et al., Pembentukan modal, sistem perkreditan dan koperasi: Kasus Desa Blanakan, Kecamatan Blanakan, Kabupaten Subang (A-11, 1991);
* Gunawan Wiradi et al., Pembentukan modal di pedesaan, Kasus Kabupaten Cirebon (A-24, 1991);
* Okke Braadbaart, Rural employment effects of export industry growth: A case study in the Greater Bandung region (B-22, 1992).

4.2. Methodology

All case studies employed extensive data-gathering in a circumscribed area (village, small town, micro-region) as main research technique. The six agriculture and small industry field studies minimally covered a village an maximally an area the size of a sub-district. They were carried out during the period March to July 1990. Research concentrated on investment strategies of village elites. In each case a sample of local

leading entrepreneurs was interviewed; according to the size of the elite population a random, sectoral or commodity-based approach was used to select respondents. In two cases the total population was covered, but in another case the sample covered less than 10% of the total elite population. Information was gathered on business histories, origins of capital, and investment patterns and strategies. The entrepreneurial profiles were complemented by data on local employment opportunities (a comparison of wages, quality of work, job security, etc.) and secondary data.
The field study of the rural impact of large-scale manufacturing took a somewhat different approach in that it focused primarily on the rural impact of the industry rather than on entrepreneurial decisionmaking within the industry itself.
The surveys of the three district towns were naturally less comprehensive than the village studies, but were thought necessary because of the concentration of rural assets in evidence in these rural centers.

In the ten selected locations a total of 250 business histories of rural entrepreneurs were compiled. While the data do not lend themselves very well to statistical analysis because various data-sets do not match and also due to varying degrees of representativeness of different sets, they show clear trends in investment strategies. These trends will be the main ingredient of the discussion following below.

Table 4.1. Mean yearly incomes and income range upper-level entrepreneurs in four villages, rural West Java.

	Business stratum	Average income (Rp. Million)	Income Range (Rp. Million)	N
Agriculture-based:				
Irrigated rice	- top nine	41.6	25.8 - 55.4	9
village	- mid-level	16.1	11.4 - 18.2	15
Unirrigated	- top nine	7.7	4.8 - 11.8	9
isolated village	- mid-level	2.9	2.6 - 3.4	8
Industry-based:				
Export-oriented	- top nine	184.0	84.0 - 576.0	9
rattan industry	- mid-level	30.0	12.0 - 58.8	13
Unmechanised	- top nine	11.7	8.7 - 19.8	9
brick industry	- mid-level	6.9	6.2 - 7.7	7

Source: primary data

The difference between conditions in various research locations is put into perspective in Table 4.1, which gives an indication of the variation in capital accumulation levels in different types of rural economic activities in the survey villages. The table shows how agrarian elite incomes in a prosperous rice-producing village are about six times larger than elite incomes in a poor isolated village. Capital formation levels in a booming rattan industry village in turn are distinctly higher than in the agrarian villages, but the more normal brick industry shows a level of capital accumulation comparable to that in the poor agrarian village-case. Fragmented evidence on income patterns of large traders in district towns shows these to be roughly on a par with profits made by the rattan industrialists, in the order of 15 to 20 million Rp. per month.

Chapter 5
LARGE INDUSTRY: RURAL EMPLOYMENT EFFECTS OF EXPORT INDUSTRY GROWTH

The recent rapid growth of export-oriented light industry has resulted in sprawling industrial areas stretching out from West-Java's main urban centers into the countryside. Although in **absolute** terms this development cannot be said to have transformed the rural labor market (cf. Hill 1990), its **local** impact has been dramatic. This local impact was the focus of a field study conducted in the periphery of Bandung, the second-largest industrial zone in West-Java[1]. Two questions were addressed:

1) What direct impact do large export factories located in the countryside have on the local labor market?

2) And in how far does the presence of the factories generate a process of local rural capital formation? I.e. what is their impact on rural business ?

These questions were operationalised by grouping potential effects under three headings:

a) **direct employment effects**, i.e. the number of new factory jobs filled by rural people minus the employment disappearing as a result of the coming of the factories; and the quality of these jobs compared to other rural work.

b) **production linkages**: employment created in new business activities generated by the presence of the factories (cf. Hirschman 1958).

c) **consumption linkages**: the creation of new local rural jobs as a consequence of rural spending of factory wages (cf. Hirschman 1981).

The study site lies on the eastern periphery of the Bandung industrial zone. With regard to representativeness of the case in the West Javanese context, it should be remarked that the area is a densely populated labor surplus region, with limited local work opportunities, much migrant labor and outmigration on the increase.
Hence there is an abundant supply of local rural labor available, this in contrast to less

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1. For a detailed report of this field study refer to Okke Braadbaart, 1992.

densely populated parts of the Jabotabek area (Jakarta surrounds) where factories settle in larger numbers and attract most of their labor from distant labor-surplus regions, primarily Central Java. In these areas large-scale inmigration takes place: the 1990 population census recorded very large population increases during the past decade. The case study therefore can be taken to represent a 'labor surplus case' of rural export-led industrialisation.

5.1. Study results

During the past decade lack of space and rising land prices have tended to push Bandung's expanding industry to the city's outskirts, creating a process of rural relocation of large industry. One rural area where many factories have been and still are being built is along the road leading eastward out of the city and on to Tasikmalaya and Yogyakarta in Middle Java. Along this road lie rows of factories producing import-substituting commodities (powder milk, soft drinks, and the like) and primarily export-oriented products like textiles, leather products, chopsticks, etc.

The industrialised roadside area is steadily advancing in an eastward direction as Bandung-based industrialists continue their search for cheap land with good access. In some areas where factories stand closely together, demand for factory labor has outstripped supply from the densely populated roadside area. Here labor supply is supplemented by factory hands brought in from a wider area, most of whom commute between their home and work by making use of busing services provided by the factories.

Along this roadside area two study sites were selected:

Site A: a roadside village just beyond the furthest point of industrial expansion. Here, a household survey was conducted just before and after a large spinning factory was built on village rice land.

Site B: a stretch of road bordering to site A and forming the outermost edge of roadside industrialisation. Here a survey was conducted among factory workers, and also a study was made of various linkages.

These investigations yielded the following results:

5.2. Direct employment effects

The household survey in site A clearly brings out the fact that the rural "pre-industry" economy is severely overburdened. The local tertiary sector is crowded - 45 % of surveyed households depend on informal trade and services for their primary income -,

open youth unemployment high, and circular and outmigration significant and on the rise. When these facts are related to the findings of the factory worker survey in site B, which shows that 74% of lower-echelon workers are of local rural origin, the impact of the factories may be said to be highly positive in terms of labor absorption. Labor displacement - caused by the transition of land from agricultural to industrial use - is small, whereas many of the young unemployed find a job in the factory.
As to the quality of factory employment, factory jobs score lower than informal tertiary occupations in terms of hourly wages, but score much higher in terms of income security and fringe benefits.

5.3. Production and consumption linkages

Land transfers from local landholders to industrialists cause the injection of large doses of capital into the local rural economy. The table below shows how land transfer sums were allocated by a sample of local landowners in site A.

Table 5.1. Allocation of land transfer gains by local landowners

investment target	main	secondary	minor
* land	6	1	
* housing	3	3	
* divide among children	2		
* living expenses	1	1	
* buying children means of income		2	
* gold			2
* paying off debts			1
* ceremonial expenditures			1

(N=12)

Source: household survey 1990

Employment-generating effects of these profit allocations are limited: new rice fields acquired are generally rented out, but create no new agricultural jobs. Parents buy a means of income for their children (horse-carriages, minibuses). Investments in housing create temporary construction work and provide some stimulus to the local brick and tile industry.

Data collected in a survey of local business in the industrialised rural area show that hardly any linkages exist between the factories and local rural enterprises: the two exceptions are a construction materials-cum-contracting business engaged in factory construction on a small scale, and a wooden chopsticks factory which buys part of its supplies from a local entrepreneur - mainly for political reasons because this person happens to be the ex-village headman - and sells its wood rests to a small local entrepreneur who has the wood chopped up and sent to a paper pulp factory (see case below). In other words the presence of the factories hardly provides any stimulus to rural business. The weakness of this impact is caused by a lack of fit between factory demand and the scale, know-how and technology supplied by the surrounding rural econconomy.

Case: wood processing

Of the various industries in the survey area, only the wooden chopsticks factory exhibits forward production linkages in the classic inter-industry sense of the term. The bits and pieces of wood that are discarded in the production of wooden chopsticks are sold to a local entrepreneur, S. S. buys the wood rests by the pick-up load, on average 12 car loads two to three times a week. S. managed to secure the right to buy the wood via a factory supervisor related to his wife. Five of the car loads are delivered at S.'s house, the rest he resells to R., who is also a relative of his wife, and who processes the wood at his own place.

In the backyard of S.'s house the wood is cut into tiny 1 inch pieces by about 15 female workers, equipped with a cutting block and a large knife, who work at a piece rate of 7 Rp. to the kilogram. The women live close by, and chop their quota in between of their household chores. The chopped wood is sent to a paper factory near Jakarta by the truckload.

S. earns about 50,000 Rp. per week on the resale of wood to R. (4000 Rp. profit on a carload) and, according to my estimate, somewhat over a 100,000 Rp. per week on the wood processing. He may, however, have to turn over a substantial share of his profits to his connection in the factory.

The circumstances at R.'s workshop are similar, except for the fact that he pays his workers (over 20 women) 7.5 Rp. per kilo. R. only earns 50,000 Rp. on a truckload of chopped wood, and sends three to four truckloads a month to the paper factory.

The piece rate wages, as in all local industry, are astonishingly low by any standard. According to the workers one can chop up about 300 kilograms of wood in a full day's work, thereby earning just over 2000 Rp. ! On an eight hour basis this means an average hourly returns of about 275 Rp. However the work manages to attract labor because it can be done alongside one's normal daily activities. The arrangements for the chopping work are very loose in that the wood should be processed before a certain date, but the worker is free to decide when to do the chopping.

Case: the landlord-building contractor

Another linkage case is the success story of B. and I. B. and I., both born in the local landowning establishment, marry in the early '70s. Initially they concentrate on agriculture, engaging in the production and processing of rice.

In 1985 B.'s wife I. opens a new avenue when she visits a number of factories and manages to secure orders for daily deliveries of bread. She sets up a small workshop at home and strikes out in the catering business, putting three women to work who do the baking and packing.

In 1987 her husband follows suit: he is asked by a friend to become a supplier of construction materials for a factory construction project. He consents and is drawn into the swelling tide of factory construction projects: soon afterwards he becomes a small contractor when he is asked to build a factory mess. He then takes a civil engineer for a partner and launches a small contracting business, which employs some administrative workers on a permanent basis. Construction workers are hired on a project basis.

In 1988 B. and I. allegedly sell three hectares of farmland to an industrialist for the sum of 600 million Rp. Part of the profits are sunk in a store that sells construction materials. The store, employing 13 hands, is manages by I. Fourty percent of its turnover flows to B.'s construction company, the rest is sold to customers. Furthermore two trucks are acquired which are used to resupply the store and to deliver orders.

Taken together, B. and I. employ about 25 persons on a full-time basis in factory-related activities, to which are added many daylaborers at times B. carries out a building contract. Meanwhile they have their house rebuilt and extended, standing on the roadside as a visible sign of their prosperity. They still retain tracts of farmland, and the rice mill, which is managed by a foreman.

Lastly, what about consumption linkages? The factories indirectly provide a stimulus to rural business through consumption expenditures made by factory workers. This has an impact on the local housing market: the well-to-do start renting out apartments to inmigrating factory laborers; an impact on local trade, most visibly in the many new food stalls that pop up in front of a new factory's gates; an impact on the transport sector; and indirectly an impact on local resource-based industries - brick- and tile-making - as rural savings tend to be directed primarily to housing. One should not overestimate the strength of these consumption linkages, however, because their effect is much dampened by the low level of factory wages.

5.4. Conclusions

Overlooking the total range of economic interaction between the factory and its rural surroundings, the conclusion may be drawn that such exchanges are largely limited to the market for unskilled and low-skilled labor. Hence the extent to which the factories exert a positive influence on the rural economy is determined mainly by factory wage levels and work conditions.

The enormous gap between the products, skills and scale of activities supplied by local rural businesses and those required by the export factories inhibíts the occurrence of spread effects. There are few signs of a process of rural capital formation taking place as a consequence of the presence of the factories. Strong linkages do exist, however, between the factories and urban-based firms supplying inputs, capital goods and performing various services. As the factories are also owned by urban-based industrialists, their rural presence is of a very enclave-like character.

Chapter 6
RURAL SMALL INDUSTRY

This chapter is concerned with the role of capital in rural small and medium-scale industry in West Java, to a large extent controlled by "indigenous" rural entrepreneurs. Two topics are discussed: **general characteristics of rural small industry** and **investment patterns in rural small industry** .
The introductory section on rural industry characteristics is based on fieldwork data collected during the capital formation study, and partly on other small industry studies carried out under the umbrella of the West Java Non-farm Project[1]. The second section discusses findings of the three capital formation case studies.

6.1. Indigenous rural industry: general characteristics

Most rural household, small and medium-size industries in West Java (henceforth referred to as "small industry") share two common features:

a) **technology employed is relatively simple**: investments in fixed capital are general small, in many instances much less important than resources tied in working capital. Many industries are unmechanised, e.g. in the foodprocessing and handicrafts sectors, and even in industries where machine power has been introduced manual labor is still dominant. Examples of rural industries that have caught up with industrial developments, and moved from low-productive "proto-industrial" (Mendels 1972), "cottage" or "artisan" production to small- and medium-scale factory-based manufacturing with higher levels of productivity are very few. Our crude guess is that at most a dozen rural industry centers - including metalworking, leather tanning, garment making, and footwear industries - shows signs of moving in this direction.
In cases where technology has advanced even further, as in Majalaya's well-known textile industry or in cassave processing (Hardjono 1990; Hardjono et al. 1990b), urban industrialists have taken over or are taking over the industry.

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1. Besides the results of the capital formation survey, other project studies used as a basis for the present analysis are: Hardjono 1990; Hardjono etal. 1990a, 1990b; van Velzen 1990a, 1990b, 1990c, 1990d; van Velzen etal. 1990.

b) **there is an (often close) relationship to agriculture**: many rural industries use agricultural products as inputs: rice, tapioca, potato, and the like in the foodprocessing industry, hides in leathertanning, rice bran for the firing of brick kilns, charcoal in smithies, etc.. The development of small rural industry that uses agricultural products as inputs is a natural one not only for reasons of proximity, but also as a logical step in the investment strategies of rural entrepreneurs, many of whom originate in agriculture.

6.2. Seed capital

Initial capital for starting up a rural small industry is in nearly every case funded out of personal savings or provided by informal loans from friends or relatives, suppliers or traders, or, less often, by moneylenders. Formal financial institutions, be they government-owned or private, play almost no role in the growth of infant industries.
As concerns larger and successful enterprises the situation is different. The recent banking deregulation has led to the adoption of active, even aggressive, customer-searching tactics by government and private banks, and heavy competition between banks scrambling for urban but also rural customers. Overhead costs dictate that banks limit their marketing activities to areas where rural capital is concentrated. This is why bank loans have come to play an important role in rural small industry growth poles, but less so among geographically dispersed agricultural elites.

6.3. Size structure and profits: the position of small producers

Three factors appear to be crucial in determining profit rates in an industry, its size structure, inter-firm relationships and eventually income distribution within the industry. These are **supply and demand factors, capital,** and **market access**. Of this trio, supply and demand is most important, followed by market access. Capital turns out to be the least important variable of the three.

a) Supply and demand

Many, if not most, rural industry markets suffer under **chronic oversupply** due to the prevailing supply and demand situation: on the one hand entry barriers are low for many product markets, because technology is simple and fixed capital requirements low; furthermore the range of industrial products is limited. On the other hand the overburdened rural economy is teeming with jobseekers and flocks of eager would-be entrepreneurs. Examples are the foodprocessing industry (van Velzen 1990a:50), cassave starch processing (Hardjono etal. 1990b:100), and the 'poultry industry' (Hardjono 1990a:III).
This combination often leads to a quick succession of boom-and-bust cycles through a

mechanism that has been called **'imitative competition'** in the context of a study on Chinese rural industry (Byrd et al. 1990). An entrepreneur in some village discovers a new market, by producing a new commodity, e.g. a snack slightly different from those already produced, or by penetrating an hitherto inaccessable market. Seeing his success, other local entrepreneurs start imitating his example en masse, and before short everybody seems to produce the same item. Soon, profits dwindle as competition pushes prices down. Then enterprises start going bankrupt or pull out, while the remaining firms rationalise production by cutting wages or using cheaper inputs, or stay alive by securing a captive market. Finally, production of the commodity may stop alltogether, or the industry may survive on a small scale.
These hefty ups and downs in industrial markets tend to make employment and working conditions very insecure for workers, and may have a negative effect on product quality in addition.

A number of rural industries provide exceptions to this situation. In principle a sellers' market would only exist in rural industries with high entry barriers, or in industries facing a demand potential strong enough to offset even the effects of mass entry by new firms. The first case concerns capital-intensive industries or industries where technical know-how is very important, or where regulations and/or necessary connections limit entry. In terms of employment generation these are much less important than are fast-growing industries, which are quite numerous in rural West-Java like textile industry, rattan and bamboo handicrafts, and leather. **In almost all these "growth industry" cases a shift to export markets, which has taken place somewhere in the 1980s, is the motor behind expansion.**

It should be noted that whereas the supply and demand mechanisms described here are very important in respect to the size of entrepreneurial incomes, their impact on industry wages is dampened by labor oversupply. In the rural industrial labor market employees are almost always in a weak bargaining position versus employers, due to a combination of high rural under- and unemployment and high labor mobility. Generally, when imitative competition depresses profits in an industry, entrepreneurs start cutting wages, labor costs often being the main flexible input. On the other hand when an industry expands strongly, profits are not transmitted to employees because mass labor inmigration maintains the state of labor oversupply.

b) Capital

Whereas **fixed capital** requirements are generally low, **variable or working capital** often is a bottleneck for small and medium-size producers.
Capital scarcity and unequal access to capital are often said to be crucial in keeping the odds against producers vis-a-vis traders, and against small producers vis-a-vis larger producers. With the exception of cases where high initial capital requirements form an entry barrier for smaller new firms, field research data do not lend support to this

hypothesis. All industry studies make mention of complicated credit relationships between input suppliers, producers and downstream traders along a product chain. These credit relationships exist irrespective of the negotiating power of producers, i.e. "strong" as well as "weak" producers are tied up in credit-cum-trade relationships. Therefore we conclude that: **since credit relationships are such a ubiquitous feature while the market power of producers varies markedly from case to case, differential access to capital in itself does not explain income distribution patterns.** Access to capital has to be seen in conjunction with the demand and supply situation and with market access factors.

c) **Market access**

A factor that emerges in many cases as a main determinant of bargaining power is market access. Market access is restricted in commodity markets where (input and/or output) marketing channels are narrow: i.e. only a restricted number of enterprises have the resources, contacts, etc. necessary for supplying inputs, or marketing outputs. Often this occurs where input or output markets themselves are distant.
The rattan industry of Tegalwangi, discussed below, provides a case in point: entry to the export market is controlled by a small number of large exporter firms, to which smaller local firms are tied via sub-contracting relationships.
Unrestricted market access occurs where market channels are broad and/or markets nearby. This is the case in brick manufacturing in many areas, and also in the cotton ball industry of Majalaya (Braadbaart 1992; Hardjono 1990:24), where firms operate as producers and at the same time sell their produce through self-peddling.

The diagram below shows, in a very simplified manner, the relationship between the factors capital and market access. Capital requirements may be a bigger or smaller problem for producers, as may be market access. Free market access is possible when a marketing channel is wide, which often happens when the market itself is within reach of producers. Producers have restricted access to a market when marketing channels are narrow, i.e. controlled by a limited number of firms, in which case the market is often distant.

Figure 6.1. Relationship between size structure of industry, market acces and capital

	Market access	
	free	restricted
low	homogenous size structure	
Capital requirements high		stratified size structure: integration, sub-contracting, putting-out

Of four possible combinations, only a combination of low capital requirements and free market access will result in a fairly homogenous industry size structure, as in the case of cotton ball industry.
The three other combinations mostly result in industries with a more pyramidical size structure. Restricted access does not automatically lead to market integration. In most cases strategically positioned entrepreneurs expand their own firm to a certain extent but also rely heavily on sub-contracting relations. In other cases the entrepreneurs in control of a marketing chain refrain from entering production alltogether and put out all orders to small producers.

6.4. Business strategies of leading industrial entrepreneurs: three case studies

The three field studies of capital formation patterns in rural industry concern rattan industry in Tegalwangi, Cirebon; handicrafts in Rajapolah, Tasikmalaya; and brick industry in Curug, Cirebon. Curug's brick industry is the least 'developed' of the three rural industry cases: employment in the industry is very much seasonal, wages are low, the product is uniform and production a very simple process, no stages in the production process require high skills, and local entrepreneurs' incomes with two exceptions are below the 1 million Rp. per month mark.
Sukaraja, the second case, exhibits a more developed structure. Bamboo and pandanus handicrafts are manufactured in various changing designs, and several phases in the production process demand special skills. The product cycle of marketing and manufacturing is divided into a number of phases, each phase of production mostly carried out by a different production unit (household), and various phases interconnected by sub-contracting arrangements. A 'handicrafts elite' controls down-stream marketing channels for handicrafts. Monthly incomes in the elite sample vary between 2 and 6 million Rp.

The industry of Tegalwangi, the third case, exhibits the most complex structure. Since the early '80s Tegalwangi's rattan furniture industry is going through a phase of explosive growth. Local entrepreneurs have managed to build up large enterprises around market channels linking them to to the international market, and sub-contract part of their orders to smaller businesses who in their turn put out part of their contract to still smaller production units. The enterprises standing at the apex of the sub-contracting pyramid employ between a 100 and up to 600 persons in large workshops, making the designation 'small industry' hardly applicable. Their scale notwithstanding, these enterprises still classify as 'handicrafts industries' and not as factories proper: investments in fixed capital fall far behind amounts of circulating capital, nearly all operations in the production process being performed manually with assistence of simple machinery at most. This makes skills important. Capital accumulation levels have proceeded apace with the increase in scale of rattan manufacturing: the largest local enterprises make profits averaging between 1 and 48 million Rp. a month.
Table 6.2 shows the educational background of leading entrepreneurs in the three surveyed industries. Apparently there is no relation whatsoever between educational attainment and business success.

Table 6.2. Educational background rural industrial elites

	Primary school	Junior high school	Senior high school	Technical high school	Tertiary education
* Curug brick industry	10	0	4	2	0
* Rajapolah handicrafts	4	2	10	0	2
* Tegalwangi furniture	19	9	7	0	6
total	33	11	21	2	8

Source: primary data

6.5. Curug's brick industry

Desa Curug (actually consisting of two villages) lies in the southern unirrigated part of the coastal region constituting Cirebon district. Curug's agricultural base is very narrow. Not only is most of the sawah that covers almost 90% of village territory rain-fed, but a large part of this area is under sugarcane under a compulsory rotation scheme, in order to provide inputs to nearby sugar refineries on the one hand and also

to stimulate local agriculture. However, in this last respect the program is a failure: farmers rent out their land to 'sugarcane entrepreneurs' (*cukong*) as soon as it falls under the scheme, and look for employment elsewhere, an important target being brick manufacturing.

Neither do the many households controlling little or no land make a living in the sugarcane industry: people tend to find employment in brick manufacturing, household heads work on temporary contracts in construction projects mainly in the Jabotabek region, whereas work in the rice fields provides an alternative during the rainy season. These conditions explain why much local capital revolves outside of the agricultural sector. A substantial amount is tied up in brick manufacturing, attracted by a combination of suitable soil conditions, cheap local labour and adequate demand, especially from the nearby Cirebon municipality.

6.5.1. Brick industry: investment strategies

Bricks are produced by very simple means. They are hand-molded, sun-dried and then fired with rice-bran stacked under a shed. The larger entrepreneurs engage brick-making family teams who are paid on a piece basis and live on the land the topsoil of which is used as raw material. Top-level entrepreneurs add "teams" up to a certain level: the largest local entrepreneur employs 40 family teams, but only five other industrialists employ more than 10 teams whereas most leading industrialists stated to hire less than five. Furthermore there is no strong rank correlation between number of kilns and income, because many industrialists buy bricks from kilns owned by other producers. The larger industrialists, then, dominate the industry in an indirect manner via putting-out relationships: they provide all the necessary inputs and put family teams to work at piece-rate wages. And they acquire part of their trade from independent producers. Profiles of the top eight brick manufacturers are shown in the table below.

Of these eight entrepreneurs six stated to be self-made men, while only two started out on an inheritance. This attests of high vertical mobility in the industry. All but one stated their main transfer of surpluses to be from brick-making to transport: profits were invested in trucks and pick-ups. The one exception, S. (no. 7 in Table 6.3), had shifted to rice trading. The general pattern is that surpluses are reinvested in the acquisition of land (top-soil) up to a certain level and thereafter redirected to the build-up of a trade outlet: profits are invested in transport means and added to working capital, many large brick producers supplying construction materials firms with bricks on credit.

Table 6.3. Profits of the top eight brick manufactures

	age	in business (years)	size of business: no. of kilns initial	no. of kilns now	landholdings initial (m^3)	landholdings now (m^3)	teams employed initial	teams employed now	yearly income (Rp. million)
1. S.	32	12	1	15	500	5000	2	40	19.8
2. M.	35	10	1	9	1000	10000	1	30	16.6
3. T.	39	17	1	4	500	3000	1	11	11.3
4. A.	35	17	1	3	400	2000	1	9	10.1
5. T.	65	35	1	2	4200	4200	2	4	11.5
6. K.	35	15	1	2	1000	1900	8	13	8.8
7. S.	37	15	3	1	1000	700	22	2	9.7
8. W.	64	35	1	2	500	4200	2	4	8.7

Source: primary data

Case: a brick supplier

A., born in 1955, started his career as a horse-carriage coachman. This occupation enabled him to get to know many people in the brick trade: buyers visiting Curug and local brick-makers. Acting as broker in the brick market, he managed to save enough to buy a plot of land in 1975. He started farming but failed for three years in a row. Eventually he built a kiln and started a brick-making business, which prospered. While his own business expanded, eventually employing nine brick-making family teams, he continued his brokerage activities on the side. Some years ago he acquired a second-hand truck on credit from a car dealer, which is used to transport finished bricks. Profits from his brick-making and brokerage activities - which bring in almost a million Rp. per month - are invested in bricks, which he buys at other kilns and resells, and in land. In 1989 he borrowed 1.5 million Rp. from a bank and acquired 1000 m^2 of land on which 5 family teams are at work.

6.5.2. Size structure

Ease of entry (a uniform product marketed through a broad array of marketing channels, low capital and skill requirements) plus the fact that brickmaking is by nature a localised undertaking (high transport costs), much competition and a limited market for the product, seem to explain why levels of capital accumulation are rather low compared to the other industry cases. Up to about 1988, according to many

respondents, entry barriers in brickmaking were very low. Many newcomers got started on a small amount of capital. A small savings from earlier construction jobs or profits from trading, plus additional small loans from friends, relatives, business associates or moneylenders, would suffice as advance payment for a certain amount of top-soil. Commonly the beginning entrepreneur would start producing without any hired labour, then reinvest his first profits and expand his operations by farming out the brickmaking. Diversification by bigger entrepreneurs would be limited to the acquisition of tranportation means.

Table 6.4 Seed capital brick-making businesses, sample Curug

	income category (yearly income in Rp. million)			total sample
source:	> 10	> 5 < 10	< 5	
1.legacy	1	2	-	3
2.loan from relative or friend	-	-	1	1
3.savings	4	9	16	29
	(N=5)	(N=11)	(N=17)	(N=33)

Source: primary data

Lately, however, this situation has changed: after more than a century of brickmaking in Curug, suitable land has become scarce. Because the market for land (or better, soil) has tightened, land has to be paid up full in advance. This change in contractual arrangement places smaller or beginning brick manufacturers at a clear disadvantage, and consolidates the position of larger entrepreneurs.
In response to the growing scarcity of raw materials brick manufacturers from Curug have started moving to surrounding villages in search of new supplies. Paradoxically, on the downstream end of the market prospects appear better than ever, as demand for bricks was continually on the rise during summer 1990, causing steeply rising prices.
The move of brick manufacturing out of Curug spells a bleak future for local employment opportunities. The business histories of Curug's brick manufacturers show no indications of surplus transfers to other local undertakings with employment effects comparable to that of brickmaking.

6.6. Handicrafts in Sukaraja/Rajapolah

Research in the Rajapolah sub-district initially concentrated on its wellknown local bamboo and pandanus handicrafts industry. A first round of field work was carried out in one village, Sukaraja, which produces plaited pandanus hats. It then turned out that

the hat industry was controlled by larger handicrafts entrepreneurs generally operating beyond the village level. This 'handicrafts elite', whose operations span Java, Bali and Sumatra, tend to reside in the sub-district town Rajapolah, and put out production of pandanus hats, as one product in their stock, to Sukaraja's handicrafts producers. Because of the central role of this elite, a second fieldwork period was used to study their business histories. The data on this sub-district level elite show a great diversity in investment patterns, with enterprises ranging from the field of agriculture and agro-processing to small industry, trade and services.

6.6.1. Pandanus hats

The technique of hat-making was introduced in the 1930s by a Dutch entrepreneur attracted to Rajapolah by the local availability of pandanus and cheap labour. After introducing the production process and setting up production he started buying up and exporting hats to Europe.
This marketing channel was disrupted with the advent of WWII. Thereupon production was redirected to the domestic market, with the hats now being sold as articles for daily use. Production probably shrank during this period, and was carried on in a small-scale fashion employing labour available during troughs in the agricultural cycle. Sukaraja was one of the villages that specialised in hat-making. Other villages in the region produced raw materials or intermediates (like pandanus strands) or produced other articles.

A next major change occurred in the '70s when pandanus hat production began to suffer from competition from factory-made cloth hats, which were cheaper and more durable. This loss of market was partly compensated by the fact that at the same time Rajapolah handicrafts production was linked up to the expanding 'souvenir' trade. This is where the Rajapolah elite came to play a crucial role in the industry.

6.6.2. The Rajapolah elite and the expansion of the souvenir market

Already in the '60s Rajapolah entrepreneurs began exploring the possibilities of the developing domestic market for luxury products. This 'luxury market' consisted of two components: domestic urban high-income demand for dinners sets, plaited ornaments and the like. And the export market: the tourist market for souvenirs and the international market for 'oriental handicrafts'. During the past twenty years the luxury market has become an important outlet for Rajapolah-made handicrafts. The scale of this business is clearly visible along Rajapolah's main street, where rows of shops (the bases from which the handicrafts elite operate) buy and sell, both wholesale and retail, handicrafts products from all over Indonesia.

Case: a handicrafts trader

R. was born in 1945. In the late '60s he was active in the textile weaving industry, but by 1970 his business failed. A turning point was a visit to Jakarta in 1973 when by chance he happened to walk into the large Sarinah department store, and to his surprise recognised many of the souvenirs offered for sale as made in the place where he lived. He returned home, made a few musters - like plaited handbags and dinner sets - showed these in Jakarta and booked a first small order. The supplying business expanded on a modest scale during the first ten years, while working capital was added from the profits of two enterprises: a beauty parlour run by R.'s wife, and a small trade in embroidery work. From the mid-80s R. had easier access to bank credit and his souvenir business grew rapidly. In 1985 he bought a car, and in 1987 he acquired a first, and in the following year a second showroom in Jakarta, which gave the enterprise an independent market channel.
In 1990, R. collects embroidery and handicrafts from about 40 regional handicrafts centers, and directly employs 27 workers in various activities: the putting-out of orders, the collection of products, product finishing, sorting, and packing, transport and final marketing in Jakarta. With average montly turnovers of 40 million Rp., R. states to make a clean profit of 4 million Rp, the non-consumed part of which is added to working capital, stored in a bank account or invested in land.

The shift to the 'souvenir market' demonstrates the positive and negative consequences of a reorientation from local to distant markets. On the one hand the industry has been able to expand as it became linked to new domestic and international markets, thereby creating new local employment. On the other hand a negative side-effect has been that the shift from low-value domestic markets for daily-use articles to these distant markets has caused a narrowing of marketing channels and increasingly restricted market access for local producers, who have come to depend on a small number of entrepreneurs, the Rajapolah handicrafts elite, who control the 'Jakarta-Bali connection'.
Sukaraja hat production provides a clear-cut case of the emergence of an oligopolistic market in this manner. Formerly the Sukaraja artisans employed a passive marketing strategy: wholesalers from all over Java came to Sukaraja to buy hats. However, when H., a large Rajapolah entrepreneur started supplying his customers with home-delivered orders, the producers were cut off from this link in the market chain. Buyers no longer visited the workshops but demanded delivery, which forced producers to market their products via the aforementioned H. In this manner, through the trading network of broker H. the product gained access to a far wider market than before, but producers paid for this gain with a loss of market power.

6.6.3. Business strategies of the handicrafts elite

The narrowing of market channels occasioned by the shift from 'daily use' to the 'luxury' and 'souvenir' segments of the handicrafts market has not led to a strong concentration of production in hands of the Rajapolah handicrafts elite, as one would expect. Whereas the size structure of the industry has been left more or less intact, the elite has extended its control over production by tying producers through putting-out arrangements. The Rajapolah entrepreneurs supply raw materials plus the requested design to producers and pay piece-rates. Production is decentralised, each producer working at home. If an unfamiliar design is introduced, the sub-contractor first organises training sessions in his own shop. The Rajapolah elite thus performs a number of crucial coordinating functions: they canvass prospective buyers, collect orders, arrange for inputs, provide designs and training, and collect, sort, pack, and move finished products to their destinations.

That the large entrepreneurs in control of market access have resorted to putting-out rather than directly taking control of production may be partly explained by the fact that many of them have not emerged from the ranks of handicrafts workers. An economic rationale for decentralised organisation appears to be that labour costs are lower when producers work at home, plaiting as a side-activity. Or the centralisation of production may simply entail no scale economies. Whatever the reasons, as in the brick industry case the leading entrepreneurs in the industry are "trader-industrialists" rather than producers. Their orientation is primarily toward marketing: they build up trade channels and try to expand by linking the industry in its "cottage industry"-form up to new markets.

6.6.4. A case of imitative competition: the paving block industry

Paving-block making is a very recent industry in Rajapolah. Its growth is can be traced to three factors: cheap inputs became available after the 1982 eruption of the nearby Galunggung volcano which resulted in large deposits of sand; the know-how became available after a group of 15 jobless youths followed a 2 month training course in paving-block making in Bandung, and came home supplied with knowledge and the necessary equipment; and working capital and market access became available through a Rajapolah entrepreneur looking for a new undertaking.

This man managed to secure a first order in 1984 through his network of business contacts, and from there on the business flourished. How fast this innovation has spread is apparent from the fact that in 1990, only six years later, 28 paving-block enterprises were registered in Rajapolah sub-district alone.

Research data show that start-up capital in the paving-block industry consists of surplus transfers from the handicrafts, trade, and agro-processing sectors. Access to paving-block manufacture is restricted, the main barrier being the large amount of working capital necessary, most of which is continuously tied up in consignments

already delivered but not yet paid for. Respondents all complained that profit rates had decreased sharply lately, and attributed this to increasing competition between mushrooming paving-block enterprises and to rising input prices (cement). Imitative competition had already led to decreasing wage levels in the industry.

6.7. Tegalwangi: rattan furniture

In 1987 the Indonesian government imposed a ban on the export of unprocessed rattan. This triggered a quick expansion in domestic rattan processing, both in the large and in the small industry sector. Tegalwangi, one of the successes stories in the small-scale segment of the rattan industry, has since become the focus of much attention (cf. e.g. Smyth 1989).

Table 6.5. Growth of rattan industry Tegalwangi, 1973-1989

	1973	1982/1983	1988/1989
business units	60	363	399
employment	205	3,243	8,840

Source: Margaharta Iskandar et al. 1991, p.8.

Local handicraft industry has a long history, as Tegalwangi has been a centre of rattan handicraft making since the 1930s. After a period of decline in the 1970s, when many Tegalwangi-born rattan craftsmen migrated all over Java and Sumatera, the crafts center revived and in the late '80s was caught up in export-driven expansion. Production has been increasing at an incredibly fast rate since that time.

Table 6.6. Date of business set-up, sample Tegalwangi

Year	number of firms	percentage
<1980	15	37
1980-1983	8	19
1984-1989	18	44
	(N=41)	100

Source: primary data

The case is of interest as, local producers having penetrated the international market, the over-supply problems which plague so many rural industries are not in evidence here: demand outruns sharply increasing supply. On the other hand, even during the boom labor supply stays ahead of demand. Sharp competition among growing numbers of small firms set up by independent skilled workers and a continuous inflow of unskilled and semi-skilled laborers from other areas depress profits for the sub-contracted firms and wage levels for laborers.

The benefits of the boom do not spread evenly over the industry for another reason. A small number of entrepreneurs controls the crucial export market outlets, and thus commands a major share of orders. This rattan elite, less than two dozen industrialists in all, processes part of the orders in large workshops, and sub-contracts at least 25 % to smaller industrialists, who in turn sub-contract part of their orders to a bottom tier of small firms. The top-level entrepreneurs abide by sub-contracting because in that manner their own establishments may operate at full capacity while sub-contracted firms bear the brunt of market downturns.

Access to the export market is only possible through the intermediation of an established local exporter, who must be willing to introduce one to the representative of a foreign firm. This representative will then visit the aspiring entrepreneur, and inspect his production facilities. If these are of a certain minimum size and product quality is satisfying, he will engage in a direct trade relationship. It is not strange, therefore, that members of the local rattan elite are on intimate terms with one another, and are often related through blood ties or intermarriage. In this manner the top industrialists manage to retain their strong position in the industry: a sizeable share of industry profits is under control of the business elite. Monthly profits for the sample of top-level entrepreneurs (N=22) range from one and up to 48 million Rp., with an average of 7.75 million Rp[1].

Case: a rattan exporter

H. is a member of the local rattan elite. He lacks any formal education as he was born in 1940 and grew up under wartime circumstances. Like many other boys born and bred in the rattan center, he started travelling all over the archipelago at an early age, earning his living as a rattan craftsman. In 1972 he landed in Jakarta where he attempted to set up a first rattan workshop, with some success until his workshop was expropriated. He returned to settle in his place of birth, used his savings to build a house and started another workshop with a small showroom annex at age 35. The household industry - his children helped out in the production of rattan chairs - expanded, and in 1980 a small bank loan was invested in a showroom in Surabaya, so

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1. To put this in perspective, daily wages for rattan industry workers range from 1000 Rp. for unskilled light work to about 10.000 Rp. for highly skilled craftsmen.

creating a new market outlet for products which up to then had only been sold locally in the Cirebon area. As there was ample demand and supply of raw materials there, another rattan workshop was set up in Surabaya soon thereafter. This branch was managed by one of H.'s wives and his eldest son, later followed by the second-eldest, and during the '80s grew into a medium-size workshop employing 60 workers.
Meanwhile the original workshop moved into roomier premises, expanding gradually, and so H.'s enterprise was ready for the jump at the moment the unprocessed rattan export ban went into effect in '87. Not soon thereafter a local rattan industrialist introduced him to an agent of a Taiwanese rattan firm - in search of new rattan supply sources like many other foreign firms - , which he started sending semi-finished rattan chairs on a fixed basis, up to 10 containers per month at a value of about 5000 US$ monthly. On this basis, between 1988 and 1990 H. used over 400 million Rp. in bankloans to build a 6000 m^2 workshop in which a 100 workers found employment. Indirectly, H. employs another 40-odd workers as about 30% of his orders are sub-contracted.
Profits, in the order of 10 million Rp./month, are used in the upkeep of seven of his eight children and four (!) wives, are reinvested in the firm in the shape of new equipment or in land.

6.7.1. Investment strategies

The following investment patterns are discernable. The smaller entrepreneurs reinvest most surpluses as additional working capital. They complain about liquidity problems as they lack the easy access to the banking system enjoyed by the top-level entrepreneurs.
The largest industrialists are free from these worries. They are sought-after bank clients, and one clique even has special access to a particular state bank via a close relative who occupies a top position in its Jakarta headquarters. The top-level entrepreneurs tend to plow back profits in the rattan industry by expanding manufacturing operations. They buy land and build large steel truss structures and attract additional numbers of workers. As these enterprises grow in size their organisational set-up does not change. Although employing hundreds of workers, the establishments are huge workshops rather than factories. Division of labor is not fundamentally different from small firms. Hand labor dominates, and the only machinery in evidence are simple hand tools (hand drills, burners, paint spraying apparatus). Differential market access, not scale economies or technology-related quality differences, explains why these firms are so much larger than the rest.
As in the other industry cases, a sizeable share of capital is channeled into the build-up of a continuously expanding trade network: rattan industrialists have opened showrooms in Jakarta and other cities, and are continuously on the look-out for new markets.

6.8. Conclusions: industry structure

The case studies elucidate the role of the various factors identified earlier as shaping rural small industry:

1. In none of the cases discussed do complex skills and technical knowledge of production processes amount to a serious obstacle to entry.

2. All industries discussed, from brickmaking via plaitwork and paving-block manufacturing to rattan industry, use some or other - often locally available - natural resource as important input.

3. The shift from domestic/low-priced to domestic/high-priced and export markets visible in the handicrafts and rattan cases has on the one hand led to expanded production, but on the other hand has caused a restriction of market access which manifests itself not through concentration but mainly through increasing dependency of smaller firms on larger firms via putting-out and sub-contracting arrangements.

In this manner the move from local to distant downstream markets creates an equity vs. growth dilemma, on the one hand launching rural industry expansion by removing demand constraints imposed by local markets, but at the other hand giving rise to oligopolistic market structures evident in both the rattan and the souvenir industry.

6.9. Conclusions: business strategies of industrial elites

Leading entrepreneurs emerge from the case studies as "trader-industrialists" rather than as mere producers. The business elites are engrossed in trade as much as in production, and have not, with the partial exception of the Tegalwangi rattan industry, tried to assume direct control over the manufacturing process. Rather, they direct available time and resources to the build-up of market outlets to which they then hitch the industry as it is, minimising their interference with the production aspect.
This pattern is evident in the brick industry where the leading entrepreneurs literally set up household firms in production with the simplest of technologies. In the Rajapolah handicrafts case, the handicrafts elite have left a traditional decentralised production structure largely intact and have linked this structure to new markets via putting-out arrangements. In Tegalwangi the larger entrepreneurs have set up "workshops" of enormous dimensions but maintain production techniques also in use in the cottage industry segment. They also take care to avoid overcapacity, sub-contracting orders beyond a certain safe margin to smaller firms.

Risk-aversity in part explains the preference for expansion through putting-out and sub-contracting rather than through an expansion of one's own production facilities: in a decentralised industry risks associated with demand fluctuations are passed on to the sub-contracted firms. Another motive is the minimisation of labor costs, of investments in fixed capital and of employer responsibilities. Most probably Rajapolah's handicrafts elite has been averse to setting up own workshops because they are not handicrafts producers by origin like their Tegalwangi colleagues, and in the second place because they handle a much broader range of products.

Chapter 7
AGRICULTURAL GROWTH LINKAGES

One leading question in the capital formation study was: **How does capital accumulated in agriculture contribute to the generation of rural non-farm employment?**
It has been argued that in the course of the "Rice Revolution" in Java changes in production methods in the primary sector have boosted productivity but that accompanying mechanisation and rationalisation have reduced employment opportunities in agriculture. However, this view does not take into account employment effects of the Green Revolution **outside** of the field of agricultural production. Overall rural employment effects of this development may have well been positive when account is taken of:

a) **upstream or downstream linkages from agriculture**: rural employment generated in the production, transport, and trade in agricultural inputs, and the processing, trade and transport of agricultural produce.
b) **intersectoral linkages**: the employment-generating effects of the transfer of agricultural surpluses to unrelated sectors of the rural economy in the form of investments.
c) **consumption linkages**: rural employment created by increased rural consumption expenditures.

There are two ways of measuring these linkages. One might try to measure quantitatively changes in money flows within a certain area as agricultural innovations spread, and analyse the impact of agricultural intensification in a social accounting matrix. This is a time-consuming, costly and highly complex procedure. The much more simple qualitative alternative approach, which we adopt here, consists of an analysis of large farmer investment strategies. This approach is based on the assumption that a major share of agricultural surpluses is controlled by a small segment of the rural population, and hence that information on how this segment allocates surpluses gives a reasonably accurate insight in the nature and extent of rice revolution linkages.

7.1. Large farmer investment strategies: two rice intensification areas

"Induced innovation" through the introduction of high-yielding rice varieties has become, two decades after its onset, a test-case for agriculture-based development theories, as it is now possible to assess what sort of developments have been generated by productivity increases in agriculture.

Studies of this subject make a broad distinction between **production linkages**, where agricultural surpluses are reinvested, thereby generating rural income and/or employment, and **consumption linkages**, where the consumption of agricultural surpluses has income and/or employment effects. Evidence from various field studies (Hazell et al. 1983; ILO 1991) suggests that rice intensification yields restricted production linkages, with surplus transfers mostly taking the form of reinvestments in agriculture or agriculture-related activities.
One Malaysian study comes up with the finding that consumption linkages, in the form of consumption expenditures of especially higher-income rural households, have created many rural non-farm jobs: its authors go as far as to assert that **in general** increases in agricultural productivity have weak production linkages and strong consumption linkages (Hazell et al. 1982).
The present study tries to address this same question employing a restricted "village" focus rather than the regional focus taken in the above study.

7.2. Blanakan

As a result of the construction of the Jatiluhur dam, Blanakan, a coastal village lying in Subang district, experienced a doubling of its agricultural output from 1964 onwards. Not only the rice sector benefited from technical irrigation: communications were no longer hampered by prolonged floods in the rainy season, opening possibilities for the expansion of coastal fishery from Blanakan's harbour, which in the '70s became linked to the huge Jakarta consumer market (a three hours' drive) by all-weather road.
Alongside an important Jakarta-oriented trade in shrimps, caught in coastal tidal ponds rented from the Forestry Department, developed. The result of these changes is that Blanakan has become something of an exemplary village, not in the least place because of the strength of its village cooperatives which control the marketing of fish and shrimps.

Blanakan's socio-economic structure is characterised by sharp stratification. At one end of the spectrum stand a local elite, controlling large tracts of sawah, most of the tidal ponds, the more important trade channels connecting the village to the outside world, and the cooperatives. Internal cohesion is quite strong as many units are connected through family ties, adding a collusive element to patterns of economic control. At the other end stands a large number of landless labourers, fishers, and part-time traders, making up the bulk of the population.

7.2.1. Investment strategies

Over the past two decades large landowners have tended to reinvest profits from agriculture in land. Also they have invested in agriculture-related enterprises: they have acquired rice hullers or trucks and pick-ups and entered agro-processing and agro-trade. Upstream diversification in agricultural input markets has been much less prominent than downstream investments, because input markets have been under direct government control.
Several facts indicate that capital absorption in the agricultural sector in its present rice-dominated form is approaching its saturation point. During the past few years land prices have risen sharply, both in the market for sawah land and in the parallel market that has developed over the right to harvest the tidal ponds rented for a nominal fee from the Forestry Department. Rice-processing, which absorbed many investments in the early '80s, is, farmers state, only profitable now in combination with trade in rice. A number of hullers stand workless most of the time.

Case: a rice miller

Y., born in 1950, is the son of a small farmer. He moved up the social ladder when in 1968 he married the daughter of an influentual and rich local leader, and his in-laws, with whom the couple lived in, set Y. up in the family business of managing its considerable agricultural and trading assets. The marriage did not last long, however. In 1972 Y. divorced and went to live on his own, later remarrying. Y. then started out with two rice hullers and some gold - he and his first wife divided their possessions after splitting up - and concentrated on agro-processing. During the '70s the business established itself: Y. acquired land, built a house and a large shed for his hullers, and after 1980 he was on the lookout for new investment opportunities. The next year he bought 3 ha. of irrigated land, and in 1982 a pick-up truck which he sold a year later to reinvest in two additional rice hulling combinations. An attempt at rice trading was dropped after some adversary experiences.
The year 1986, when he acquired two new hullers plus a pair of expensive Thames stationary diesel engines and built a house for his elder brother alongside, was, in Y.'s words "the peak of my rise in business". From 1987 on, competition in the local rice hulling business intensified and profitability dropped sharply as many new entrants in the market tried to corner a share through price-cutting. Since then Y. has shelved all expansion plans and concentrates on maintaining his enterprise.

Table 7.1. Income sources business elites, Blanakan

		INCOME SOURCE (Rp. million/year)					
		FARM			NON-FARM		TOTAL
		paddy	shrimp pond	fishery	trade	other tertiary	
TOP STRATUM > 25 mi./year (N=9)	*sum:	113.8	34.9	12.6	135.7	77.3	374.3
	*share:	30	9	3	36	21	99
	*times mentioned:	9	4	1	6	3	23
MIDDLE STRATUM <25>10 mi./year (N=16)	*sum:	107.6	92.0	0	21.5	31.3	252.4
	*share:	43	36	0	8	12	99
	*times mentioned:	16	13	0	5	4	38
BOTTOM STRATUM <10>4 mi./year (N=6)	*sum:	15.7	4.1	5.5	9.4	5	39.7
	*share:	39	10	14	24	12	99
	*times mentioned:	4	2	1	2	1	10

Source: primary data

Table 7.1 charts income sources for the top, middle and bottom strata of the local business elite. It shows farm: non-farm income ratio's to be 42:47 for the top stratum, 79:20 for the middle stratum and 63:36 for the bottom stratum of entrepreneurs. That is, only among the top stratum does non-farm enterprise generate the major part of income. The top-level entrepreneurs have engaged in very lucrative tertiary activities, which bring in 20 to 25 million Rp./year on average, twice as much as stated incomes from rice production. By contrast, non-farm incomes are of minor importance only for the middle and bottom strata.

The data unambiguously spell out that the local economy still revolves around rice with shrimp ponds figuring as secondary field of agricultural investment. Local entrepreneurs are not attracted to fishery, even though this has been a growth sector

over the past decades, because fishing crews out at sea cannot be monitored and are said to underreport and embezzle catches.
Some of the new elites, often launched into business through family connections, try to find investment targets outside the agricultural sphere, in trade of consumer goods for example. But as said, these cross-sectoral transfers are very modest compared to total local capital flows.

Case: the landlord's son

M., born in 1954, is a son of D., the most powerful member of Blanakan's business elite. D. controls large tracts of land, and via his family has stakes in all sectors of the local economy, while the local fish auction/cooperative rests under his iron-fisted rule. M. is set up in business when he marries in 1977, receiving a house and 3 ha. of paddy land as bridal presents. In 1981 he invests his capital in trade, becoming a regional soft drinks-supplier. He branches out in another trade three years later, when he starts dealing in cars and motorcycles. He exits only two years later, in 1986, when he acquires five trucks and sets up a transport business. Finally, he resells four of the trucks in 1988, and invests the returns from these sales in shrimp ponds.

7.2.2. Conclusions

Our data from Blanakan confirm the hypothesis that production linkages from rice intensification are weak in terms of employment generation. On the one hand employment creation in local agriculture (fishing, tidal ponds, rice cultivation) has been modest at most: investments have been directed to labor extensive undertakings, and labor displacement through mechanisation and rationalisation in the rice sector has probably off-set the new employment generated by rising production figures. On the other hand surplus transfers to non-farm enterprise have been channeled to activities that are labor-extensive (rice milling, transport, trade).

The employment-generating effects of consumption linkages are more difficult to measure because a large share of the consumption expenditures of the elite leaks out of the village to the surrounding towns or cities further away. Local consumption linkages are limited to the growth of local trade in a broadened array of inexpensive everyday consumers goods and the rise of a building materials industry (wood, cement, brick, tiles). We find that the bulk of the increase in consumptive outlays finds its way to the urban economy in the form of education expenses and luxury consumer goods - transportation means, financial and other services, household appliances, and the like - but can only guess at the employment effects of these transfers.

7.3. Parigimulya

A comparable case is offered by a smaller study of elite expenditure patterns conducted in the central Subang village Parigimulya. As in Blanakan, improved irrigation and communications provided a strong growth stimulus. Improvements in local irrigation systems have led to a strong increase in productivity since the '70s, while an improved connection to a main north-south traffic artery was completed in the '80s.
Interviews held with a sample of 15 entrepreneurs, where members of the local elite with the most diversified investment patterns were selected, yield the following results. The basis for capital accumulation lies in rice production, i.e. in control over sawah land. As in Blanakan, agricultural surpluses have been reinvested or transferred to agro-processing and -trade. Many farmers have invested in transport means, which they use themselves or rent out. The market for rice processing is similarly saturated.

Case: farming to trade and transport

T., born in 1956, is the son of a local landlord. He marries in 1974 and two years later moves in with his in-laws and starts farming 2.5 ha. of unirrigated land the couple received as a wedding gift.
T., who has a dislike for farming, trades in rice as side-line. In 1977 T.'s in-laws buy a pick-up, which, driven by T., hauls rice, sand and the like for other people. Profits are divided on a share basis. Only two years later the car is sold because T.'s sister in law goes to Bandung for tertiary education. T. has rented out his land and now starts building a house in his in-laws' yard. In 1983, seeing T. has no work, his uncle asks him to act as village scribe. T. acquiesces, but meanwhile opens a small store along the main road which is run by his wife. In 1988, having laid down his function, T. once again enters the transport business. With help of a small bankloan he buys a second-hand pick-up and starts hauling freight. His latest move is made in 1990, when he acquires a second-hand motorcycle which he rents out daily for use as a local two-wheel taxi (*ojeg*).

Parigimulya differs from Blanakan in that it lacks an agricultural alternative to rice and *palawija*. This may have been a main reason behind the recent development of the *palawija* sector in the form of increased production of high-value lowland vegetables (tomatoes, chillies, etc.), which are transported to the urban markets of Jakarta, Subang and Bandung.

Non-agriculture related investments are of minor importance, being restricted to small-scale kiosk trade in everyday consumer articles (soap, cigarettes, kerosene and the like) and a budding trade in building materials. One entrepreneur has opened an open-air movie theater.

In respect to production linkages, on-farm investments in highly labor-intensive vegetable cultivation (cf. Kawagoe et al. 1990) are certain to have had significant employment effects. As to non-agricultural investments, as in the case of Blanakan their impact on local employment opportunities has been insignificant. Likewise, local consumption linkages are observable but a large share of consumption expenditures probably leaks away to nearby Pagaden, Subang town or Bandung.

Table 7.2 belows rounds off our analysis of the investment behavior of irrigated village-elites. Tracing seed capital sources and later investment steps for a sample of 22 entrepreneurs, the data show that in the past control over land has been the principal springboard for business success in the irrigated rice villages. Vertical mobility has been relatively limited, i.e. households owning large tracts of lands have supplied the bulk of the present generation of local elites. Furthermore the data substantiate the thesis that the established village elites of the '80s have concentrated their assets in land and agriculture-related trading or processing activities.

Table 7.2. Initial capital source and later specialisation, irrigated rice village elites

Primary capital source		Later specialisation		
		Field	Primary	Secondary
Inheritance (land, cattle, agric. equipment)	15	Agriculture	12	7
Wage labor - local	1	Agro-trade and/or	9	2
- non-local	3	agro-processing		
Civil service	1			
Trade	2	Other trade	1	2
	N=22		N=22	

Source: primary data

7.4. Surplus allocation in an unirrigated lowland village

Sidajaya is part of the same sub-district as Parigimulya, lying about 10 kms. further inland from the main road to Subang. While being a neighbouring village, Sidajaya provides a strong constrast to Parigimulya, being very poor and isolated. The present village was founded at the beginning of the century when a British-owned rubber estate was set up and labourers were moved in from Central Java. After independence estate labourers cleared tracts of estate land, which was turned into unirrigated rice

land. Up to now irrigation improvement programmes have bypassed Sidajaya. The rice land lies 15 to 20 m. above the level of the two rivers passing through the region; only 10% of total rice land area is irrigated by pump-sets. Both farm and non-farm employment opportunities are very limited, forcing many people to search temporary (seasonal) or permanent employment elsewhere.
Road connections to the Subang main road are very bad, consisting of dirt roads that are only passable to determined motorcyclists after rainfall. The only form of public transportation is the *ojeg* (rented motorcycle).

7.4.1. Sidajaya's business elite

Sidajaya's business elite population consists of 20 persons, all of whom were interviewed in the course of field research. Average monthly income in the elite group is just over 400,000 Rp., with a household income range of 166,000 to one million Rp. per month. To give an indication of the state of Sidajaya's economy, household cash income in a non-elite sample (a random sample of thirty persons) is 212,000 Rp. per year on average; and only 7 members of Sidajaya's elite would be defined as elite using the income criteria employed in the 'next-poorest' case study, the brick-making village Curug.

Table 7.3. Income sources business elite Sidajaya

		INCOME SOURCES (in Rp. million/year)			
		FARM	NON-FARM		TOTAL
			trade	other tertiary	
TOP STRATUM >4.5 mi./year (N = 9)	*sum:	29.7	19.5	20.8	70.0
	*share:	42	28	30	100
	*times mentioned:	8	7	8	23
MIDDLE STRATUM <4.5>2 mi./year (N = 11)	*sum:	14.3	8.0	7.2	29.5
	*share:	48	27	24	99
	*times mentioned:	10	9	6	25

Source: primary data

Unsurprisingly, the data on Sidajaya's elite show a correlation between control over land and income: with one excepion, the top 8 among the elite in terms of income are among the top 11 in terms of landholding size. Investment strategies accordingly revolve around agriculture, while trade, and to a lesser extent services, are the other dominant sources of income.
Aggregate income in the Sidajaya elite group shows a balance between income from farm (ricefields and other land) and non-farm (trade and services) enterprise. This provides an interesting contrast to the situation in the irrigated lowland villages Blanakan and Parigimulya, where incomes from agriculture are dominant. For example, in the case of Blanakan only the top 9 income group (N elite= 32) displays a balance between farm and non-farm income, whereas aggregated elite income shows a farm: non-farm income proportion of about 3:2.
Non-farm business in Sidajaya ranges from rice-processing, trade in rice and incoming consumer goods to the rental of tractors and pump-sets by the business elites.

Case: a trader-farmer

M. is a successful young member of the Sidajaya business elite, a locally-born son of a market trader. Born in 1957, he was assisting his parents even before his marriage in 1973. Setting out with a wedding gift of one ha. of land in Sidajaya, both M. and his wife went into trade: M. bought rice from farmers which he resold at the nearest-by market and traded in fertilizer besides, and his wife sold garments on credit to local farmers. They acquired more land as people who had bought on credit with land as security defaulted, and by 1985 owned about 5 ha. In that year also M.'s wife halted her trading activities.
In 1988 M. bought a hand tractor on credit for which he paid 3 million Rp. When not in use on his own land the tractor is rented out. This business proved such a success that M. has recently acquired a second tractor. Both tractors, operated by two-man teams, are regularly rented out as far away as Bekasi and Krawang.

7.4.2. Comparison of Sidajaya with Blanakan and Parigimulya

The Sidajaya sample illustrates the moves of rural business elites in an agrarian economy where outside intervention - in the shape of infrastructural improvements - has not changed local economic conditions as in Blanakan and Parigimulya. Sidajaya's entrepreneurs apparently have been slow to install pump-sets in order to enhance agricultural productivity. The number of pump-sets has only been increasing recently, after the village headman took the initiative and acquired two pumps through foreign aid. Instead, many entrepreneurs have built up a base around trading and other non-farm activities: twelve out of twenty foremost entrepreneurs depend mainly on tertairy activities, while only four are farmers *pur sang*. This investment pattern makes a notable contrast with Blanakan and Parigimulya, where surpluses have been reinvested

in farmland and agro-related activities to the point of overflowing before being redirected to tertiary activities.
A similar structural barrier, poor local road conditions, explains why the Sidajaya elite has not invested in transport means for business ends, and hence why agro-processing and -trade play a minor role in local elite income compared to the 'irrigated' cases.

7.5. Conclusions

Rice intensification cases:

Investment patterns

1) Elite investments appear to have been directed to agriculture, agro-processing and agro-trade up to and beyond the point of saturation. Elite surpluses create diversification in the local primary sector (shrimps and fish in Blanakan, vegetables in Parigimulya), and thereby on-farm employment effects of some significance.

2) While the local economy is still based on rice, an increasingly important target of elite investments is the in-moving trade in consumer goods. The elites have a large stake in both the trade channels along which commodities move in, and the channels along which agricultural produce moves out of the village. "Imports" of ever-broadening array of commodities have increased concomitant with rising levels of living and expectations of village population (cf. Dannhaeuser 1987).

3) We have found no evidence of surplus transfers to secondary sector activities whatsoever: there are no signs of agrarian elites moving into industrial activities with the exception of rice-milling.

Linkages

1) Production linkages are weak in all cases insofar as concerns investments in other than agricultural or agriculture-related activities.
Production linkages downstream or upstream of farming are generally labor-extensive, the amount of permanent jobs created being small. Production linkages through reinvestments in agriculture have generated and still generate new on-farm jobs where farmers have turned to high-value products.

2) Considered in a restricted village context, consumption linkages are weak. A somewhat wider scope will yield much stronger consumption linkages, so it appears. However, these wider linkages were not investigated.

Unirrigated village case

Investment patterns

1) Structural barriers (underdeveloped local infrastructure) deflect agricultural surpluses mainly to commerce. The almost total absence of private investments in infrastructure underlines the importance of the government's role in local economic growth in the irrigated cases. Only very recently have Sidajaya's elites begun to acquire pump-sets, for example, which, typical of Sidajaya, bring in profits by being rented out as much as by irrigating own land.

Linkages

1) Production linkages are weak in general, both in agriculture and in other sectors.

2) Consumption linkages: weak.

Chapter 8
BEYOND THE VILLAGE: TOWN-BASED ENTREPRENEURS

In the preceding two chapters we have presented evidence on the investment behavior of rural business elites from a village-level viewpoint. This chapter focuses on town-based entrepreneurs. In the foregoing discussion we commented on the important growth during the past two decades of tertiary activities related to increased consumptive expenditures of the rural population. Substantial amounts of "rural assets" are controlled by large traders, transporters, building contractors, restaurant owners, and the like operating from the smaller and larger towns dotting West Java province.

8.1. The survey towns

The capital formation survey concentrated on three towns: Subang, a former plantation town, now functioning as a regional trade center. Sukabumi, with a historical background similar to that of Subang, but now emerging as a spill-over area for the Jabotabek area. And Pelabuhan Ratu, a former transshipment port for estate crops, which since the 1960s has developed into a seaside resort. In every town one researcher surveyed local business for two weeks with the express intention of charting the largest non-farm enterprises, preferably industries, in existence. The resulting sample of firms is shown in Table 8.1.

Table 8.1 Classification of enterprise sample three towns

	Sukabumi	Subang	Pelabuhan Ratu	Total
PRIMARY SECTOR				2
*fishery	-	-	2	
SECONDARY SECTOR				4
*textile industry	1	-	-	
*automotive industry	2	-	-	
*metalworking	1	-	-	
TERTIARY SECTOR				20
*trade - general	1	2	4	
- automobile	2	-	-	
*hotel/restaurant	-	1	2	
*construction	-	3	-	
*transport	1	1	1	
*entertainment	-	1	1	
	(N=8)	(N=8)	(N=10)	(N=26)

Source: primary data

Although because of its wide scope and constraints of time and manpower the picture emerging from the survey is very sketchy, some facts emerge clearly. First, the local business elites thrive on a mixture of tertiary activities, with second place being occupied by agriculture. Second, there are hardly any signs of transfers of surpluses to industrial activities. Only Sukabumi shows signs of a developing industrial sector, which reportedly is developed by outside (Jakarta-based) entrepreneurs rather than by the indigenous business elite.

Subang town boasts only two factories, a large pineapple processing plant - struggling with start-up difficulties at the time of our survey - and a small chopstick factory. Both are owned by Jakarta-based entrepreneurs. On the other hand a local business elite is active in a variety of tertiary sector activities: construction, trade in consumer durables, banking, two busing companies, restaurants, inns and cinema's, and a radio station.

The same holds for Pelabuhan Ratu, where tertiary activities have developed in response to the expansion of its economic mainstay, fishery: the supply of ice, outboard motors and spare parts thereof, fishing equipment, transport services, and the like. To a lesser extent business elites have invested in restaurants, a cinema, inns and small hotels, and transport companies in reponse to the growth of a tourist sector. The high hopes harboured by the government planners who built the five-star Samudera Beach Hotel in the mid-60s have not come true. Pelabuhan Ratu has not grown into a center of tourism, but has developed into a weekend resort, the main reason being that foreign tourists have failed to turn up in substantial numbers while it takes only a three hours' drive from Jakarta to get there. For this reason the inns and restaurants stand vacant most of the time. With average occupancy rates low, the tourism business is not a very attractive investment arena.

Case: the cinema operator

D. states to have grown up in a family of traders. Born in 1944, he sets up his first business, a cinema, in his home town Cianjur in 1969. Seed capital he borrows from school friends, while another friend's father, in the motion picture import business, supplies the material for his movie shows. After moving about from one rented movie theater to another, D. eventually lands in Pelabuhanratu in 1979, where he rents a building in the middle of town. Here his business thrives.

Only in 1986 does D. move to Pelabuhanratu with his family. Two years later he invests the proceeds from his cinema in a Chinese food restaurant located in front of his living place, which has meanwhile become one of the largest in town. A year later he starts a car rental: at first he buys one car on credit, but seeing how profitable this enterprise is he adds two more. In 1990 he enters a new field by opening a small garage right next to his restaurant. He now employs 20 persons: 3 full-time employees run his cinema, 7 work in the restaurant, one driver is on stand-by for the car rental, and the auto repair shop employs 9 workers.

Case: the fishing boat owner

A. migrates from Sumatra to Java in the early 1960s. He arrives in Pelabuhan Ratu in 1963 as a construction worker in the Samudera Beach Hotel project. In 1967 he moves to Jakarta where he finds employment as a truck driver. Five years later he returns to P. Ratu, empty-handed but accompanied by a wife and four children. His first job is at the fish auction where he carries freshly caught fish from incoming boats to the auction floor. After half a year he becomes a catut at the auction, a broker bidding for the larger fish traders stationed in P. Ratu. He manages to amass some wealth by specialising in the trade of sharks. Before reselling the sharks he cuts away the fins - a Chinese delicacy - which he sells separately at a high price. Through the years he manages to keep this trade secret, which gives him the start-up capital for his next step.
In the bumper year 1977 A. buys a gill-net fishing boat. Through an advance payment he acquires the nets and an outboard motor, and the boat he borrows from his brother. Only three months later he sends out his second boat, for profiting from the large catches he has already managed to pay off his debt. In the following years he acquires a total of 9 gill-net boats. He also enters the transport business, buying three trucks which haul ice from Jakarta and Tangerang and carry bananas and coconuts from P. Ratu.
At the time of the interview A. has downscaled his business activities somewhat. He has sold off two of his trucks - due for replacement - and owns eight gill-net boats. The daily management of his business is in hands of four controllers, who work for a share of the profits.

8.2. Conclusions

The general impression from the survey data is that entrepreneurs operating from market towns tend to move their surpluses between tertiary activities rather than into agriculture or industry. Acquisition of land is common, but this is often a form of savings investment. The only regularly occurring instance of tertiary sector-fund transfer to industrial activities appears to be when car and motorcycle dealers, or traders in other machineries (hand tractors, outboard engines, etc.) open small repair shops.

RURAL INVESTMENT PATTERNS AND RURAL NONFARM EMPLOYMENT IN WEST JAVA

PART THREE

CONCLUSIONS

Chapter 9
NON-FARM EMPLOYMENT GROWTH AND BUSINESS STRATEGIES OF RURAL ENTREPRENEURS

Fieldwork results of this study confirm observations made from the 1920s onward on the existence of a long-term trend of asset concentration in rural West Java. Our crude estimate is that at present the bulk of rural assets (land, capital, fixed assets) is controlled by approximately 10% of the population living in the West Javanese countryside.

The existence of sharp stratification should not be taken to imply that vertical mobility has been absent. During the past two decades upward mobility has been strongly manifest. Many entrepreneurs, starting empty-handed, have managed to join the ranks of the rural business elites: roughly a third of the business histories compiled during the research are rags-to-riches stories. Because the capital formation sample was biased toward the successful entrepreneurs, our data on downward mobility are too meagre to allow any statements on the extent to which established members have dropped out of the ranks of the elites.

What has been the contribution to non-farm employment growth of business strategies followed by rural business elites from 1970 onward? In the Javanese context, where the tertiary sector has already expanded up to its limit and absorbs more labor than would be deemed possible, this issue may be narrowed down to the question to what extent rural business elites have diverted surpluses to rural industry. Below we try to relate the findings of the capital formation study to this issue.

9.1. Large-farmer strategies

One important investment trend emerging from three village-level studies of large landowner investment patterns is that agricultural surpluses are mainly plown back into agriculture or invested in related activities, predominantly downstream of agricultural production (in agro-processing or agro-trade).

Reinvestments in agriculture show the following patterns:

Two irrigated village case studies show that two decades after the onset of the "Rice Revolution", sectors connected with the production, processing and trade of high-yielding rice varieties have absorbed capital up to and partly beyond the point of saturation. In both cases capital has also been redirected from the rice sector to ventures in high-value agricultural commodities, in one case shrimps and in the other case vegetables. Various other studies undertaken in West-Java come up with similar

findings (e.g. Kawagoe et al. 1990), and point to the importance of the demand pull exerted by large urban markets (foremostly the capital Jakarta). Overall, agricultural production remains the main recipient of local investment flows.

Investment flows in the case of the "poor" unirrigated village case have not predominantly been directed to agriculture, this sector still offering many opportunities for productivity-raising investments. Only recently and hesitantly has private capital been directed to primary sector investments of an infrastructural nature (pump-sets).

In all three cases investments in upstream markets in the rice sector (equipment, seeds, fertiliser, pesticides) lag far behind capital flows to downstream markets (rice milling, trade and transport). Main barriers to investments in upstream markets by rural entrepreneurs are the high degree of state intervention in the case of some products, like fertiliser and seeds. And the large scale of production that most inputs require, with large upstream firms in control of distribution channels. By contrast rice processing and trade are very much deconcentrated, offering a natural downstream investment opportunity for large farmers.
A second main finding is that investments in non-agricultural trade and transport are small but can the rise.

In the irrigated villages aggregated incomes of the elite samples show that agricultural (farm) and non-agricultural incomes (including agricultural trade, transport and processing) are balanced. In the rain-fed village the proportion of agricultural against non-agricultural incomes is roughly 2:3. Hence in all cases non-farm income in the broad sense of the word is an important component of business elite income.
In all villages the local elites control a large share of the market channels connecting the village to the surrounding economy. On the one hand they have invested in the **outgoing channels** through which agricultural produce is funneled; and on the other hand they have a large stake in the **ingoing channels** via which capital and consumer goods and intermediates find their way into the village. An especially lucrative trade has developed around the ever-increasing stream of mass consumer goods - soap, matches, lottery tickets, kerosine, prepacked snacks, cooking oil, soft drinks, condiments, etc. - entering the village (a development pointedly described in Dannhaeuser 1987).
Another expanding trade has been in the housing sector, where a considerable trade in intermediates (cement, bricks) and final goods (furniture, appliances) has developed.

Thirdly, surplus transfers to secondary sector activities are negligable or non-existent. Elite investments in industry are limited to simple agro-processing (rice milling). Small-scale food processing activities other than rice milling attract no elite investments. In two cases, fish processing in one village and the preparation of cassave cakes in another village, production is only undertaken by non-elite households and on a minute scale.

9.1.1. Large farmer strategies and non-farm employment generation

The investment strategies of large farmers during the past two decades have engendered some on-farm employment growth, which may, however, have been offset by jobs lost through rationalisation. A continued focus on rice stands in the way of diversification and additional employment creation. Large farmer investment patterns have generated virtually no non-farm jobs.

9.2. Town-based entrepreneurs

Although our data-base is weaker in this field, a more or less similar investment pattern emerges when we focus on the business strategies of town-based entrepreneurs. Here we see capital circulating mainly between various tertiary activities, and to a lesser extent flowing to the primary sector. In almost all cases the - generally very hesitant - development of a town-based manufacturing sector is predicated on the intrusion of urban - Jakarta- or Bandung-based - entrepreneurs. Indigenous business elites appear to remain entrenched in trade, transport and other services.

9.2.1. Non-farm employment effects of town-based elite strategies

Expansion of tertiary activities has created some new jobs, but most undertakings are labor-extensive. The hotel and restaurant sector and service industries are to some extent exceptions to this rule.

9.3 Industrial business elites

The main finding of the small industry study is that leading entrepreneurs are almost always trader-industrialists rather than producers: the lifeblood of the larger industrial firm is its market outlet. The extent to which these trader-industrialists assume control over production differs from one case to another: in the extreme case all orders are put out to nominally independent small firms, and at most the leading entrepreneurs directly command production of about 75% of the total trade volume flowing through their trade channels. Available resources are divided between the enlargement of marketing networks and the expansion of production capacity, with the former in many cases occupying the more important place. Industrial business elites therefore appear to focus on trade rather than on production.
We do not know whether this is a matter of force, preference, or even whether this is a profit-maximising strategy under the given circumstances. But the consequence of this business strategy is that the production aspect holds a somewhat peripheral position in the activities of rural industrial elites. This is very obvious in the

handicrafts industry, for example, where 'proto-industrial' household firms are linked up with international markets: the organisation of distributive activities is completely transformed while the organisation of production and production methods appear to remain intact and unchanged in its proto-industrial form.

9.4. Conclusions: rural business elites and rural industry

The capital formation case studies show West Java's rural small industry sector to be an arena full of dynamism and strong competition. However, our investigation yielded no evidence of surplus transfers to this industry sector by entrepreneurs entrenched in agriculture, trade and services. Also, the empirical evidence shows how industrial elites have focused on market outlets rather than on production itself.

On the other hand we have seen how during the past decades of strong economic growth the product base of the rural industry sector has remained narrow. We cannot make a causal connection between the apparent lack of interest in manufacturing investments in elite business strategies and the present narrow base footage of rural industry, as we do not know whether in the past investments in manufacturing actually were an option for rural entrepreneurs. But the trade-oriented pattern does fit in with the picture of rural industry as being technology-constrained. A number of rural industries does thrive: footwear, concrete blocks, bricks and tiles, handicrafts, food-processing, ceramics, and others. Some export-oriented rural industries are even growing at a very fast pace, like the footwear, woodworking, and handicrafts industries. But most of these industries rely on the simplest of technologies, while a host of somewhat more technology-intensive industries remains undeveloped.

Does this mean that there is no scope for a broader-based rural industry? Numerous studies have documented how dispersed small-scale production may have an advantage over large-scale urban production in quite a wide range of industries[1]. Staley and Morse (1965:112 ff.) grouped these industries under three main headings:

a) Locational influences: factories which transform a dispersed and bulky, perishable, or otherwise unwieldy raw material into something much easier to transport (like logging, buttermaking, stonecutting operations); products serving local markets because of high transport costs (like soft drinks, matresses, concrete blocks, structural metal); and the service industries (job shops repairing agricultural or other machinery, metal coating enterprises, and the like).

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1. See for example Anderson (1982), Bhalla (1985), Child et al. (1975), Cortes et al. (1987), Ho (1979), Staley and Morse (1965).

b) Process influences: production with separable manufacturing operations, as in the metalworking industry (the making of foundry patterns, of jigs and fixtures, brass and copper castings, and many machinery parts); crafts or precision handwork (jewelry, fur goods); and simple assembly or finishing operations (like in the footwear industry). In many of these activities sub-contracting and putting-out relationships will prevail.

c) Market influences: differentiated products having low scale economies (like the garments industry); and industries serving small markets (rice milling, various handicrafts industries (dolls, candles, lampshades, buttons, etc.)).

Hence, there is a potential for dispersed rural industrial growth, particularly in the services industries, in industries where manufacturing operations are separable and sub-contracting relationships are important, and in the agro-processing industries.

With this background information compare Table 9.1 which shows how according to the latest Economic Census the two product groups 31 and 32, "wood and food", employed 71% of the small industry laborforce in rural West Java in 1986. If we add product group 36, dominated by the brick and tile industries, the share of predominantly "technology-extensive" industrial employment even stands at 84%. On the other hand a very insignificant role is played by product groups 38 - including agricultural equipment, hand tools, cutlery, machinery repair, electrical apparatus, and transport equipment - and 39 - including many products requiring craftsmanship like measuring equipment, jewellery, musical instruments, sporting goods, toys and stationaries-, which do have a significant potential for small-scale dispersed production.

Table 9.1. Employment share of main product groups in rural small and household industry (1-19 workers), West Java, 1986

ISIC category	employment	employment share
31 Food,beverages,tobacco	232,938	37.9
32 Textile,wearing app.,leather	41,230	6.7
33 Wood and wood products	203,645	33.1
34 Paper,printing,publishing	3,693	0.6
35 Chemicals, Rubber	7,067	1.1
36 Non-metallic minerals	80,459	13.1
37 Basic metals	0	0.0
38 Metal products, machinery	22,345	3.6
39 Other manufacturing	24,339	3.9
Total	615,328	

* All West Java excluding Bogor, Sukabumi, Bandung and Cirebon municipalities
Source: Kantor Statistik Jabar 1986

9.5. Employment and employment conditions in rural industry

A final issue broached here is that of employment and employment conditions in rural industry. In chapter two we noted the disturbing finding of the 1986 Census that employment in the home industry segment had decreased strongly compared to the census conducted ten years before. Does this signify a real decline or does it point at a weakening of the diligence of government census-takers or merely at different operationalisation procedures applied in the 1975 and 1986 censuses? We cannot know, even though it is our impression that the cottage industry segment is growing rather than declining.

Table 9.2 compares farm and rural industry wages in the various capital formation study locations. The figures on Tegalwangi are somewhat inflated because wages in the smaller firms are generally below those in the handicrafts factories. Furthermore the large majority of industrial workers tend to be occupied in the lowest-paying jobs, and the industrial labor market is segmented according to sex, age, kinship and other criteria. For a host of simple operations the rural industries depend on an omnipresent legion of young schoolleaving children, boys and girls, who also make up the laborforce of the large mechanised factories located in the urban periphery. While it is hard to generalise, the figures suggest that a large share of rural industry occupations are below the rural farm average in terms of remuneration, especially considering the fact that working hours are often long, tasks are tedious and repetitive, and must be performed in cramped, dirty and dark quarters.

Table 9.2. Wage rates, rural on-farm and rural industry

wage rates	piece-rate/ time-rate	average daily wage (Rp.)	male/ female	remarks
Wage rates agriculture				
1. resource-rich village				
* tractor driving	T	10,000	M	
* rice planting	T	2,500	F	
* landlabor	T	3,000	M	
* shrimp pond	T	3,000	M	
2. resource-poor village				
* landlabor	T	2,250	M	
		1,500	F	half day
* rice trader assistant	T	2,500	M	seasonal
Wage rates rural industry				
1. rattan factory				
* frame making	P	7,000 - 10,000	M	
* plaiting	T	4,000 - 6,000	M/F	
* tying, sanding, packing	T	1,000 - 2,500	F	
2. brick industry				
* brick-making	P	2,500		family teams
3. paving-block industry				
* molding	P	2,500	M	
4. handicrafts industry				
* general	P	1,000 - 1,500	M/F	

Source: primary data

9.6. Broadening the base of rural industry

Rural industry in general and industrial production processes in particular have been seen to occupy a rather marginal position in the investment strategies of rural business elites. The narrow product range of rural small industry limits its labor-absorptive capacity and causes recurrent cycles of imitative competition which tend to have a negative impact on wages and product quality. Our conclusion is that a broadening of this product range should be a first priority. What industries would be likeable candidates? We see possibilities for three groups of industries:

a. industries serving local markets. A prime candidate are services industries for the rural economy. Jobshops for the repair, overhauling and maintenance of machinery and transport equipment and durable consumer goods, and small construction workshops have a vast untapped potential. Also there is room for industries producing hand tools, simple agricultural equipment, household utensils and the like. Another possibility are various hitherto undeveloped agro-processing activities which can be carried out profitably on a small scale. The great advantage of this category of industries is that market access is easy.

b. export-oriented handicrafts industries. The rattan furniture and handicrafts cases indicate that there is a scope for further expansion of the array of exportable wood products like furniture, toys, souvenirs, household utensils.

c. sub-contracting linkages between large and small industry. This group of industries relates to the category "separable manufacturing operations" and aside from the garment and footwear industries remains largely undeveloped. This group would include the assembly of electrical equipment, simple casting or electro-plating operations, machinery parts making, precision handwork, etc.

A small number of rural industry success stories in Java gives the selection made here some support: well-known dynamic centers of rural industry are two large foundry centers (in Solo and Tegal), a woodworking center (Jepara) and a successful venture into sub-contracting by a hand tractor-producer in Central Java (Semarang), and various garments centers (Tangerang), a rural metalworking center (Sukabumi), a tanning industry (Garut) and a booming small-scale footwear industry (Bogor and Bandung) in West Java. Empirical evidence shows that in many of the industries listed here - footwear, garments, tanneries, household equipment, wood products, electrical equipment - developing economies have a comparative advantage in international trade, and hence as export industries they possess a real growth potential (cf. Weiss 1988:217).

How could the development of these industries be promoted? The introduction of novel industries seems to be a main problem for the first group of products. However, one may be sure that as soon as the first successful firm has established itself innovations will spread quickly through imitative competition.

Technical extension can be effective in upgrading production methods, bringing a broader range of products within reach of existing industries: this has been proven by

the rapid rise of a small-scale tanning industry in Garut, West Java, where modern tanning techniques were introduced by an extension unit of the Industry Department. However, there must be, as in this case, a ready market for the product if such an intervention is to bear fruit: the fieldwork findings discussed here bear out that rural entrepreneurs will only invest if profits are certain.

An important bottleneck for all rural industries is management. As has been noted time and again, many small entrepreneurs have no overview of the flows of money and materials passing through their enterprises. In many cases an entrepreneur simply does not know whether he or she is making a profit or not. Among other things this means the carrying capacity of a firm is unknown, which makes applications for external financing of expansion plans guesswork. As yet this matter does not get the attention it deserves, and perhaps the industry extension units could cover this field alongside technical extension. A current support project for small metalworking workshops in Bandung features experiments with bookkeeping courses, and might serve as test program.

Capital has often been considered the prime constraint to small industry expansion. The recent West Javanese experience does not lend support to this opinion, however, for in the late '80s private banks swarmed into the countryside in search of customers, but the effect on production of this increase in the supply of capital was hardly noticeable. Given the fact that rural financial markets are now reasonably well-developed and include small industry-oriented programs, new special credit schemes should need no high priority.

Joint acquisition of raw materials and joint product marketing by small producers could break the hold of business elites over a number of rural industries. However, in the past the realisation of such plans has proven to be difficult. Lining up small producers for joint action is a very trying task, and a take-over of marketing functions requires the build-up of trading networks and specialised knowledge which is hard to come by. If one adds to these formidable managerial and collective action problems the circumstance that cooperatives in Indonesia have long been promoted through an inflexible top-down and bureaucratic approach, then the small number of effective producer organisations in existence elicits no surprise.

The great advantage of sub-contracting - as understood by Watanabe (1983) - is that it provides all the ingredients mentioned above in one package, and without subsidies: the principal gives its ancillary firms technical and sometimes also financial assistance, helps in setting up management, and provides a market outlet to boot. Indonesian policy implementation in this field, however, seems to be standing in the way rather than facilitating the development of the beneficial side of these arrangements. The way the government up to now has made a political issue out of the sub-contracting issue, pressurising large firms to 'adopt' small industries as 'foster-parents' appears very

ineffective. Most large firms have acquiesced only to pay lipservice to the powerholders as policymakers seem to have political stability in mind instead of employment and growth. Subcontracting relationships can only work to the advantage of enterprises big and small if led by profit motives. But in Java one sees steel plants linking up with cottage industries producing fried snacks, cement factortories with plaitworking firms, and many other combinations that do not make economic sense. Furthermore, the principal firms in most cases do not invest their know-how in the small agents, but place some orders - which are rejected if not up to standard - and let the matter rest at that. Much headway could be made in this field if policymakers started attacking this matter from an economic angle instead of from the political angle which has dominated sofar.

Protection of small industry is another option. The rattan export ban is a successful example of the creation of forward linkages through intervention, but such a straightforward measure is not open to other industries. As protectionist measures for small industry have too often led to counterproductive results (cf. Little et al. (1987)), the scope for this kind of intervention seems very limited.

More roundabout and long-run strategies for fostering the growth of rural industry might be to concentrate on education and continued investment in rural infrastructure. Rising educational levels may help to redirect the investment strategies toward industrial production. Various empirical studies have found a strong correlation between educational levels and investment strategies of rural entrepreneurs. The West Java study shows that rural elites have enjoyed primary or at most secondary general education. Their educational background, then, has no relevance for business. It may be expected that degrees in business administration, economics, or engineering, but also vocational training have a considerable influence on investment decisions.

Our fieldwork data already indicate that the coming generation of rural industrialists will much better-educated than the present one, as many of the rural well-to-do presently send their children to the city for higher education. A moot question is, however, whether their offspring will return to the countryside after receiving their certificates. This points to the importance of a continuing build-up of rural infrastructure. By curbing a rural-urban "brain drain", such a policy can make an important contribution to the dispersion of economic activities.

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