Some Spatial Dimensions of Rural Diversification in Yogyakarta Special Province (DIY), Indonesia: Does History Matter?

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Abstract

Rural diversification has been regarded as possible productive way to escape from household economic problems in a small farming region. The study aims at understanding the spatial patterns of rural diversification and the relevance of historical factors in the growth of the non-farm sector in DIY. The research utilizes a set of secondary data from the village potential documents as published by the Central Bureau of Statistics of Indonesia. Factor analysis and mapping techniques were made to find the types and spatial patterns of rural diversification. Interpretation of the maps is made on the basis of the research frame works, from which the spatial patterns can be understood and the role of historical factors in shaping rural diversification can be assessed.

The study reveals that two distinct types of rural diversification can be observed in DIY, namely rural diversification related to the service sector (RDS) and rural diversification related to small-scale industries (RDI). RDS is located in the middle part of the province, stretching from Sleman Town in the north and Bantul Town in the south, and the surroundings of regency capitals, whereas RDI is rather scattered over the province. A substantial agglomeration of RDI shares the same location as RDS in the central parts of DIY. But many smaller clusters of RDI are located beyond the crux of the economic hub of DIY, following the availability of natural resources. Rural diversification in DIY has been benefited by the many events in the past that lead to better quality of human resources in rural areas, higher aspiration and more diversified economic landscape of the present day rural areas.

I. Introduction

High population pressure on agricultural lands and aspiration for better living conditions has led to rural diversification in DIY. The continued land fragmentation and higher educational attainment in combination with the improvement in the availability and access to rural infrastructure have stimulated the process of rural diversification. In the context of DIY it is well demonstrated by the fact that educational attainment of the population is among the highest in the country and the road density is also far above the national average. This condition is partly obtained through the windfall gain from oil boom revenues in the 1970s from which the most basic infrastructure (roads, bridges) and social services (schools and health service centres) have been constructed and operated since then (Manning, 1988). As an outcome of this process, the production structure of the rural areas has been transformed toward the greater importance of non-farm pursuits located either within or outside the province. This further leads to a stronger integration between DIY with the rest of the world economic system.

The province is among the most diversified in Indonesia, as is shown by the high incidence of non-farm employment, even in the more isolated villages. In many villages of Bantul Regency in DIY, agricultural employment has been regarded as a secondary occupation by the great majority of rural labourers (Huisman, 1994; Huisman and Kragten, 1994). Rotge et al. (2000) in an extensive study covering five types of villages in the province conclude that non-farm activities have been the main source of employment and incomes. A marked difference in the contribution of non-farm activities among village types was reported. Villages with strong agricultural resource base and closer proximity to the urban areas of DIY tend to reveal higher occurrence of non-farm activities, indicating higher dependency of

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the rural economy of the province on the urban area of Yogyakarta. More recently, the work of Gibson and Wizni- eski (2004) reported the importance of the cultural economy in DIY. Excepting Jakarta Capital, DIY is the only province in Indonesia with a highly significant degree of presence of firms related to the production of cultural goods. The number of firms producing cultural goods in DIY is about 0.63 per 10,000 inhabitants, which is much less than 5.67 per 10,000 inhabitants in Jakarta Province. But the figure is substantially higher than 0.34 per 10,000 inhabitants at the national level (calculated from table 2 of Gibson and Wiznieski, 2004). This indicates that the cultural economic activities in DIY make an important contribution to the diversification of the provincial economy in general. The position of DIY as an art and tourism centre in Indonesia has significantly contributed to the diversification of the whole economy, even beyond the city itself. Small-scale industries producing art and cultural goods have been increasingly more important sources of employment and incomes for the rural population in the province. Moreover, from an observation in various tourist destination areas in Indonesia one can see that the contribution of DIY in producing cultural goods at national level is quite significant.

Rural diversification in DIY has been an important contributor to the economy of the province. The existing studies on the field mainly focus on population pressure and non-farm activities (McDonald and Sontosudarmo, 1976), the past role of non-farm economy (Segers, 1987, Padmo, 2002; Penny and Singarimbut, 1973; Sunan Paku Bbuwana, 2005), the relative contribution of the non-farm sector in employment generation (Singarimbut, 1993; Rotge et al., 1995, 2000; Rotge, 1992, 1993; Rijanta, 1997), the relative roles of non-farm and farm activities and incomes (Huisman, 1994; Huisman and Kragten, 1994), the role of non-farm activities in the boom and crisis periods (Rijanta and Suhardjo, 2003), and the importance of cultural economy (Gibson and Wiznieski, 2004). The focus of these researches has shifted substantially from simple assessment on the traditional role of non-farm economy at households level to the more complex role of the importance of the non-farm economy in the wider environment. But, none of them addresses the issues of spatial patterns and their historical roots as occurring in the province. Historical issues seem to be an important impetus for rural diversification in DIY as shown by past policies and events that lead to present day rural diversification (Poerwokoesoemo, 1984). Moreover, DIY has been well known as a cultural centre and the second most important tourist destination in the country. Given the small size but with a highly complex physical environment, substantial parts of which are disaster prone or environmentally fragile areas, there is a strong need for a rather conservative spatial development policy to regulate the locations of various economic activities even in the most rural parts of the province. Information on the type of rural diversification occurring is an important body of knowledge in the formulation of such sustainable spatial development strategies.

II. Objectives

The research is aimed at understanding the types and spatial patterns of rural diversification in the DIY prior to the crisis and assessing the historical milestones affecting the present patterns of rural diversification. The spatial patterns of rural diversification in the province can be an input in the formulation of environmentally sound spatial development policy. Subsequently, the effects of various historical milestones on the current patterns of rural diversification would be assessed.

III. Review of Literature

Rural diversification as a process of growing significance of non-agricultural employment and incomes for rural households in DIY has been perceived as a further consequence of the relative increase of commercial and/or industrial activities either related or not to the agricultural sector, and both located in the rural as well as in the nearby urban areas (Rijanta and Suhardjo, 2003). The spatial patterns of rural diversification in that country tend to be strongly following the coastal marine and related to tourism activities and manufacturing industries rather than the inner agricultural regions. The continental parts of the country tend to be predominantly agricultural in nature and thus less diversified, historically inherited from the colonization of Bohemia, Germany and Hungary. The process of socio-
economic transformation in this agricultural region is very slow in comparison to those in their coastal marine counterparts.

Rural diversification in Croatia has been influenced by six factors. This comprises (1) unfavorable agricultural structure with small properties fragmented into small plots, (2) relatively low farm incomes, (3) low socio-political status of peasantry, (4) rapid growth of non-farm employment after the second world war, (5) higher educational attainment of the young people for non-agricultural pursuits and (6) strong attraction from urban industrial civilization (Puljiz, 1983 quoted in Njegac and Toskic, 1999). They further assert that the first three factors were relevant in the mid nineteenth century and the other three have intensified the process during and since the 1960s. During the early development of the region, supply pushed type of rural diversification was very dominant, but more recent development gives an impression of demand pulled type of rural diversification involving some temporary absence from the rural environment. Thus, the historical view indicates that the relevant factors explaining rural diversification have been changing over time.

High level of urbanization on the coast marine areas fuelled by tourism is also one of the factors stimulating rural diversification and socioeconomic transformation. The growth of rural non-agricultural employment related to tourism on the coast marine area is among the highest in the country. An important role of rural tourism in rural diversification is also reported from the study of Sharpley (2002) in Cyprus. The development of rural tourism activities in this country is concentrated on the coastal resorts and dominated by major overseas tour operators. Conversely, inland rural areas in the country have gained relatively little benefit from tourism, as is the case in Croatia.

A considerable variation across regions in non-farm incomes is reported from the surrounding areas of Dar el Salaam, Tanzania (Lanjouw and Lanjouw, 2001). Among significant and positive determining factors of the presence of non-farm employment at village level in their study are the regional variables of peri-urban or non-peri urban areas, number and quality of social groups, land holdings and access to asphalt roads, whereas access to electricity, population pressure, percentage of agricultural households and the degree of village cohesion are negatively or unclearly related to the presence of non-farm employment. It is also suggested that some forms of social connections and trust are important social capital, which are important to stimulate non-farm employment at the individual level.

Somewhat different picture of rural diversification is shown by the case of Kerala in India where a region-based type of rural diversification is proceeding. Rural diversification as reflected in the growth of non-farm employment was dispersed following the presence of urban centers and their rural surroundings, thus minimizing the need for rural-urban migration. Intra-spatial linkages induce the process. A more progressive growth of non-farm employment is continuously growing in the more recently transformed rural centers (Eapen, 1999). Eapen further asserts that among crucial factors affecting rural diversification in Kerala are the cultivated areas per agricultural workers, irrigated land as percentage of agricultural lands and distance to urban centers.

He concludes that the study supports the hypothesis of McGee (1991) that emerging urbanization in parts of Asia is region based rather than city based. Besides drawing people from rural areas to the city, this process largely utilizes the population of the rural area itself. This high population density is favorable to the growth of rural non-farm employment through the establishment of rural non-farm enterprises to cater to local demand for various goods and services. The process was fuelled by remittance from some Gulf countries where migrant laborers from Kerala made their livings (cf. Slater, 1991: 88). Another study from India (Grabowsky, 1995:46) shows that agricultural development is one of the important factors explaining the non-farm income levels in which an increase of 100 Rupees of agricultural incomes will result in an increase of 64 Rupees of non-farm income. This breaks down to 25 Rupees in small towns and 39 Rupees in the rural town, indicating the importance of the smaller centers in rural non-farm development.

In the context of Chinese reform it is reported that rapid industrial growth in the rural areas is attributable to the spectacular growth of rural enterprises, due to the decision of the government to reduce the centralized planning procedure and introduce market principles. Although the growth rate in general has been very high, there is a considerable regional variation (Bhalla, 1995). Rural non-farm development in China has dramatically altered its countryside (Ho, 1995: 365) and the coastal development strategy has become an additional stimulus to rural industrialization.
Rural enterprises have grown faster in the provinces with rapid agricultural development, which in turn induced the development of rural industries. A similar finding is also reported by Grabowsky (1995: 58) in which Chinese agricultural growth is translated to income gains for peasant farmers and stimulated rapid growth in rural industries as shown by annual growth for non-agricultural income of 19.25 percent per annum for the entire period of 1978–1990. Thus, agricultural growth stimulated rural-based industrialization. This is also in line with the suggestion of Mellor (1976) and White (1986) that surpluses from agricultural sector in rural areas are further generating demand for better food and non-food goods, which are partly produced in the rural non-farm sector.

The spatial patterns of rural diversification in present day Java as reported by Jones (1984: 126) shows that the percentage of agricultural employment in the rural areas of the various regencies tend to be lowest in those closest to large cities (especially Jakarta, Surabaya, Bandung, Yogyakarta, and Surakarta) and highest in those which are more isolated from large cities. Although there are exceptions, by and large the areas adjoining big cities had the lowest proportion of employment in agriculture. There may be a number of reasons. First, some cities had spilled over their boundaries, so that some of the people recorded as rural population were actually suburban. Second, factories and service sector establishments built in rural areas were more likely to be located in areas close to the large cities than in areas further away. Third, rural dwellers in areas close to large cities could avail themselves of the opportunities to commute for urban jobs.

IV. Research Method

This research is based on the analysis of secondary materials available from the Central Bureau of Statistics of Indonesia and other relevant documents related to rural diversification. The data are retrieved from an electronic data file of village potentials (Potensi Desa) of DIY, collected following the economic census of 1996. Data on the rural economic situation are readily available for analysis at the village level of observation. From the available data, one can draw the situation of rural diversification in DIY prior to the crisis. A detailed list of the variables employed is given in the following table.

Factor analysis is executed to produce the clustering of the selected variables. The set of variables listed in table 1 are entered into the analysis.

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable names</th>
<th>Description of variables</th>
<th>Intended indicator to measure</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>Education</td>
<td>Percentage of households sending members to universities</td>
<td>A proxy variable to the increasing aspiration for better living conditions as a stimulus to rural diversification; a higher educational level is associated with the stronger drive toward economic diversification.</td>
</tr>
<tr>
<td>2.</td>
<td>Services</td>
<td>Percentage of households depending on service sectors as main occupation</td>
<td>A proxy variable to measure the main outcome of the process of rural diversification as reflected by the percentage of households (rather than individual labour) depending on the service sector</td>
</tr>
<tr>
<td>3.</td>
<td>Processing</td>
<td>Percentage of households depending on handicraft and processing sectors as main occupation</td>
<td>A proxy variable to measure the main outcome of the process of rural diversification as reflected by the percentage of households (rather than individual labour) depending on the handicraft and processing sector</td>
</tr>
<tr>
<td>4.</td>
<td>Industry</td>
<td>Number of small-scale industry establishments per 100 households</td>
<td>A proxy variable to measure the level of industrialization as reflected by level of participation of households (rather than individuals) in the locally available non-farm activities</td>
</tr>
<tr>
<td>5.</td>
<td>Transport</td>
<td>The number of motorised seats available per 100 population, a composite variable derived from weighted scoring to the number of motor cycles (score 2) and the number of four wheel vehicles (score 6)</td>
<td>A proxy indicator to measure the access to economic opportunities beyond the villages, mainly in the nearby urban areas.</td>
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in order to find the grouping of variables showing various types and degrees of rural diversification. This technique allows one to detect factors as a grouping of variables forming a certain concept as well as total composite scores for every individual concept by a set of loaded variables called a factor. The final factor scores obtained from the analysis are further mapped to identify the spatial pattern of rural diversification. This gives the advantage to obtaining the most contrasting picture of rural diversification at provincial level as it becomes possible to see all possible spatial distribution of factor scores over the space. The number of optimum classes of rural diversification can also be obtained through a visual simulation using various data classification methods. Interpretation of the maps is made according to the theoretical framework as established in the previous section.

Various documents and literature on rural diversification in DIY are reviewed as both theoretical background and empirical evidence of the more recent situation of rural diversification in the province. The importance of various historical milestones affecting rural diversification in DIY is drawn by an extensive review of relevant materials. Materials related to the economic history of DIY since the 17th century are compiled in the work of Segers (1992), de Vries and Cohen (1937), White (1991), and Padmo (2002). Other information on various historical milestones affecting rural diversification in DIY are derived from the work of Soemardjan (1962), McDonald and Sontosudarmo (1976), Penny and Singarimbun (1973), Poerwokoesoemo (1984), Singarimbun (1993) and Mulders (1994).

V. Spatial Patterns of Rural Diversification in DIY

Based on a factor analysis of the five variables mentioned above, it can be shown that this group of variables is clustering into two different factors. The two factors explain some 70 percent of the variant. The rest are explained by the variables that are not covered in the analysis. The first factor consists of three variables mainly associated with rural diversification oriented toward service sectors and the second factor comprises two variables related to handicraft processing and small-scale industries. The first factor is called rural diversification associated with service sector (RDS) that explains about 40 percent of the variants, whereas the second, named rural diversification associated with rural industries (RDI), explains some 30 percent of variants (Table 2). The spatial pattern of rural diversification is shown in the following maps. Both maps share the same pattern in that the middle parts of the province are among the most diversified parts either from the RDS or the RDI scores. The most diversified area is stretching along the main corridors connecting Yogyakarta Town to the neighboring regional centers such as Wates, Bantul, Sleman, Magelang and Klaten. Yogyakarta Town and its adjacent regencies form the main core of this economic heart.

It is clear from the maps that the most diversified parts of the rural area in the province are the central area spreading from Sleman Regency in the north and Bantul Regency in the south, adjoining Yogyakarta Town. The area occupies the most favorable parts for economic development, with easy access and relatively flat terrain, fertile agricultural lands and plenty of ground water as

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
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<tr>
<td></td>
<td>Total</td>
<td>Percent of Variance</td>
<td>Cumulative Percent</td>
</tr>
<tr>
<td>1</td>
<td>2.141</td>
<td>42.814</td>
<td>42.814</td>
</tr>
<tr>
<td>2</td>
<td>1.423</td>
<td>28.456</td>
<td>71.269</td>
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<tr>
<td>3</td>
<td>.715</td>
<td>14.297</td>
<td>85.566</td>
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<tr>
<td>4</td>
<td>.458</td>
<td>9.157</td>
<td>94.723</td>
</tr>
<tr>
<td>5</td>
<td>.264</td>
<td>5.277</td>
<td>100.000</td>
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Table 2. Total Variance Explained for Rural Diversification of DIY, 1996
basis for living. However, some smaller spots of diversified rural areas can be observed in the rest of DIY, especially in the nearby area of regency capitals of Wonosari in Gunung Kidul and Wates
The significant role of lower order centers in rural diversification can be observed in various regency towns over the province. There is also a rather clear-cut pattern showing that in Sleman Regency the orientation of rural diversification is associated with services, whereas in Bantul and Gunung Kidul it is associated with handicraft processing. The proximity to the urban areas seems the best explanation for the inter-regional differences in rural diversification in the province.

As a core of the economic hub of the province, the area benefited from the intra-regional interaction with Yogyakarta Town. The most diversified parts of the province are mostly within commuting distance to Yogyakarta Town, making possible daily movement of the rural population to urban jobs. This area benefited from an inter-regional interaction with Central Java and the rest of Indonesia through the provision of various services. Yogyakarta Town and its vicinity is a host for high ordered rank of health and education services for the province and the neighboring parts of Central Java. The service coverage of the so-called Greater Yogyakarta is not only DIY Province but also its neighboring regencies in Central Java Province such as Cilacap, Kebumen, Purworejo, Klaten, Magelang, Boyolali, Sokoendarjo and Karanganyar. This is very relevant especially for various types of services related to medical laboratory and health care. The area has a host of hospitals equipped with modern technology that are not readily available on the southern coast to the middle region of Central Java Province.

Moreover, the area is well connected with the national economy through the provision of high educational services. Campuses of some 95 percent of 104 state and private universities and academies are presently located in the area (BAPPEDA DIY and PADCO, 2003). This number is far above the local need for such services. High education services as the main core of activities for the growing agglomeration of population surrounding Yogyakarta Town has led to the growth of allied services. The area forms a relatively large urban settlement with some 1.3 million inhabitants or close to 50 percent of the overall population of the province. This gives an ample market for various services and goods that are locally produced through non-farm economy in situ or in the surrounding rural areas (Rijanta and Suhardjo, 2003). But, at the same time the on-going development of urban settlement of Yogyakarta has led to growing problems of traffic congestion, ground water resource depletion and degradation of environmental quality. Dependency on urban employment of most people living in the urban region of Yogyakarta has made traffic jams more severely along the way to and in various parts of the towns. Water resources in the most diversified parts of the province have been in great danger of over-exploitation, due to growing inhabitants with a much higher demand for water for their modern life style. At the same time, a strong land use conversion toward more intensive use of lands at the upper parts of the Sleman Regency has worsened the ground water supply for the whole area of Greater Yogyakarta where the rural diversification process is taking place. Thus, in general there is a growing threat to the sustainability of the most diversified parts of the province where the heart of economic activities is located.

The flow of money from various parts of Indonesia into the area in forms of educational fees to the universities and schools as well as living expenses of students has fuelled the growth of non-farm activities related to educational services. A strong backward linkage from the educational sector in the province can be observed in related production, distribution and services located both in rural and urban areas. The long established role of DIY to host students from various parts of the country has generated a unique economic structure, in which economic transformation goes from agricultural to services rather than to manufacturing which is also confirmed by this study. A research by Rachmawati (2000) shows that many services growing in the surrounding areas of university campuses in DIY are strongly linked to the rural economy through both backward and forward linkages with both agricultural and non-agricultural sectors in the province as well as the rest of Indonesia. This strong connection between the development of modern economic sectors in the urban region of DIY and its rural hinterlands made the economic characteristics of the province different from the others. The traditional rural economic sectors in the province have developed strong linkages with the urban economy through the provision of various agricultural commodities, processed foodstuffs, handicrafts and complementary non-farm employment opportunities and some spots of tourist attraction. Other provinces in Java have different experiences where foot loose manufacturing industries are developed predominantly in the urban areas with limited or no linkages with its rural hinterlands.
A substantial contribution to the existing patterns of rural diversification is given by the tourism sector. The construction of hotels and other tourism facilities in the last 10 years has been mostly located out side the Yogyakarta Town because of the increasing land price, traffic congestion, higher taxes on property and unfavorable environmental quality in the town. The tourism sector still offers substantial backward linkages to rural areas through the demand for foodstuffs, handicrafts, and employment. The process of interaction between Yogyakarta urban region and the rest of the world seems to be the decisive factor guiding the existing patterns of rural diversification in both spatial and structural senses. Thus, it is not surprising that a relatively resource-poor province like DIY could maintain a relatively high living quality through its strong tie with the wider economic environment. The service economy seems to be an important contributor to the low growing rate but relatively stable economic conditions. Moreover, the service economy as developed in the province has strong multiplier effects on the production and employment creation in agriculture, manufacturing and service sectors within the vicinity of the Yogyakarta urban region and beyond. Under the existing degree of urban agglomeration, the greater Yogyakarta urban region hosts some 1.7 million population of DIY or close to 60 percent of the population of the province (Rijanta, 2003).

This is a sizeable population agglomeration that gives plenty of opportunity to its rural counterparts to supply various commodities derived from the primary production in rural areas. The level of urbanization in the province was some 59.5 percent in 2003 (BAPPEDA DIY and PADCO, 2003).

VI. Historical Factors in Rural Diversification in DIY

From the maps of RDS and RDI scores it is very clear that the most diversified parts of rural areas in the province are mainly the central core spreading from Sleman Regency in the north and Bantul Regency in the south bordering with Yogyakarta Town. Yogyakarta Town is the main center for this process. But this pattern is in fact showing a substantial discontinuity when a comparison between the existing map of rural diversification and the past pattern of the distribution of population working in manufacturing industries is made. A map published by the Royal Tropical Institute of Amsterdam shows that according to the population census of 1930, the most diversified parts of the province were the middle and northern part of the present day Kulon Progo Regency (Segers, 1987: 223). The area coincides with the middle slope to upland areas of present day Kulon Progo Regency or the area of the past Kulon Progo Regency. (cf. Rotge et al. 2000). Thus, there have been discontinuities of rural diversification in the last 70 years. First, rural diversification has shifted from processing to service orientation. The past rural diversification was mainly related to rural small-scale industries producing clothes and yarn for local markets using traditional and labor intensive technology. Weaving industries in the upland parts of Kulon Progo Regency have been discontinued due to their inability to compete with the modern and capital-intensive industries. Moreover, the main products from these plants are parts of traditional Javanese clothes, which are now less demanded due to changes in life style of Javanese women, the main consumers of such products. Such clothes are presently only used in traditional ceremonies. At the same time, the skills of producing traditional clothes have disappeared, as the younger generation is not willing to take such employment. Second, the spatial pattern of rural diversification in the 1930s is then discontinued and replaced by a new pattern showing the importance of lowland areas in the middle part of the province as the heart of rural diversification. The area is stretching from the city of Sleman in the north to the coastal region of Bantul in the south.

Manufacturing industries have been the main core of the rural diversification, prior to the great depression during the first half of the 1930s. Another fact shows that the location of sugar factories in 1937 was more widely spread on the lowlands of the province (Segers, 1987: 224). The middle part of DIY province as the most fertile agricultural land is the center of concentration of sugar processing plants. The spatial distribution of sugar processing plants is most probably the main factor stimulating the present day rural diversification through various linkages. The introduction of sugar processing plants in the rural areas has brought about a more diversified rural economic structure as shown by the employment and income composition.

Present patterns of rural diversification are consistent with those of 1996 in which Yogyakarta urban region plays an important role as economic core. Given the unavailability of em-
ployment data with the same detail as those in 1996, a comparison to the present conditions cannot be made rigorously. But, there is strong evidence from the distribution of non-farm households in 2000 and 2003 that no substantial shift can be observed during the period of 1996–2003. Thus, there is a continuity of patterns since 1996. Some spots of more diversified areas can be observed away from the Yogyakarta urban region. The surrounding parts of the capital of Gunung Kidul Regency and Kulon Progo Regency are consistently more diversified than other parts of the corresponding regencies. Rural diversification at regional level is associated with the role of regency towns as the administrative, cultural, market, economic and political centers.

The people of DIY shared an exercise of democratization toward village autonomy in 1946. In this process, a fundamental change in village life was introduced by the late Sri Sultan Hamengkubuwono IX. Among important contents of this change were village merger and reorganization, village democratization through the election of Village Representative Board, election of village head for the newly reorganized villages and establishment of Village People Assembly. The democratization and decentralization exercises were considered to be successful (Poerwokoesoemo, 1984: 261).

Nevertheless, there are still a great many villages in the rugged areas of Gunung Kidul and Kulon Progo Regencies and also in the remote parts of Bantul and Sleman Regencies where the village officers (pamong desa) and the people are not yet prepared for and intellectually do not fit into the system of unguided full-scale autonomy (Selosomardjan, 1962). This means that the less diversified parts of DIY also spatially coincide with the less preparedness for a change in the past.

However, this democratization established a real basis of political life to most people of DIY earlier than elsewhere in Indonesia. From these processes the experiences of local leaders in managing conflicts of interest among many parties in rural areas has been practiced. Common people also exercised the process of democratization and autonomy and accepted all their consequences. This shared historical experience of the people of DIY is the most crucial factor underlying the present economic structure in the province. The spirit of autonomy, democratization, and willingness to pursue changes and to accept diversity seem to be important preconditions of rural diversification in this traditionally agricultural community.

Apart from a reaction to changing times and colonial experiences (Mulder, 1994), the establishment of Taman Siswa¹ and Muhammadiyah² in Yogyakarta Town in the early 1900s pioneered the national movement for education and Islamic modernization respectively. These movements established an important ground for the growth of national spirit and identity even before independence. This in turn brought about a wide spread social mobility among the community members in which a shift in decision-making process from ascribed oriented to achievement oriented was the very core of change (Padmo, 2002). From this point, one can see that DIY has been a focal point for the nurturing of the early idea of modernization in Indonesia. Moreover, Sultan Hamengkubuwono IX, the prominent cultural and formal leader of the province was able to establish the fundamentals for village modernity and democratization earlier than elsewhere in Indonesia since 1946.

The establishment of Gadjah Mada University in 1949 strengthened the role of DIY as the center of excellence for higher education in the country. This has been followed by the growth of many private universities. Many present day professional and political leaders have been educated in various universities in the province. Upon their successful life and career, their emotional ties with DIY are manifested in intense contact through various mechanisms. In most cases, this leads to the placement of their children or staff to DIY for higher education. This mechanism is believed to be an important strength for the continued popularity of DIY for higher educational services that attract many students and economic revenue from all over the country. The growth of state universities in the outer islands does not seem to affect the popularity of DIY as a center for higher education. Moreover, the presence of this national state university in DIY gave an ample stimuli for the growth of private universities in the province in general. At present, DIY is a host of more than 100 private universities with a student body of close to 300 thousand. The image of DIY as a safer city with lower living cost and excellent state and private universities gives many advantages to the province as a whole. Linkages emanating from the educational services have been able to generate a very typical economic landscape. Rural economic transformation has taken place from agricultural to service rather
than manufacturing sectors.

The development of the tourism sector as another part of the economy of DIY can be discovered to date back to the growing awareness of the provincial government to initiate tourist attraction to other than natural and historical objects. As early as 1961, the Ramayana Dancing was performed for the first time in an open-air theatre in the front yard of the Prambanan Temple, especially played to foreign tourists. This was followed by the construction of Ambarukmo Palace Hotel in 1966 utilizing post-war compensation from the Japanese government. From this time forward, the development of the tourism industry in DIY has been part of the top rank priority. Exploration, creation and promotion of new tourist destinations and attractions have been the major concern of provincial and national governments since then.

The service economy of DIY has been developed on a dual sector of higher educational and tourism services. Both sectors have strong linkages with the rural economy, especially through backward and consumption linkages. The non-agricultural economy in rural areas of DIY is strongly linked with the urban consumers in Yogyakarta, including domestic and international tourists. A very typical linkage has been well developed between the rural small-scale industries producing handicrafts and the tourism sector or furniture and food processing industries and the education service sector in the town. In addition, the consumption linkages are emanating from the foodstuffs (meat, chicken, eggs, vegetables, cereals, milk and fruits) supplied by the rural agricultural sector to the urban market that comprises students and tourists. In the process of production in the urban service sector, one can see that there is a great demand for various types of labor that are partly generated from its rural hinterlands. This is obvious from the high intensity of commuting from rural areas to the Yogyakarta urban region. The great majority if not all of the most diversified parts of the province are located within commuting distance of the city center.

Irrigation networks and sugar cane plantation have been another important historical factor determining the existing patterns of rural diversification oriented with services, but not the manufacturing sector. The RDS areas are developed on the most favorable terrain of the province, i.e. the middle parts stretching from Sleman Town in the north and Bantul Town in the south. The area coincides with the hub of economic activities and the most densely populated parts in the province. This area is also well equipped with infrastructure, partly inherited from the colonial government. This includes irrigation systems that were initially used for sugar cane plantation such as irrigation networks, railway for sugarcane transport and the abandoned sugar cane factories. According to Selosoemardjan (1962), health clinics and three-year primary schools were also set up by the sugar company primarily for the factory workers but open also to other groups in the population.

A work by Padmo (2002) offered an interesting explanation concerning the role of the plantation economy in the rural economy during the 19th century of Java. The rural economy of Java was mutually related to the plantation economy as initiated by the colonial government. Rural economy was developed partly supported by the plantation economy as well as the other way round. Thus, through backward and forward linkage mechanisms with the plantation sector the rural economy of Java had been initially diversified. Selosoemardjan (1962) noted that it is undeniable that the sugar industries contribute considerably to the distribution of money among the rural population and changed the closed and barter-based economy in many rural communities near the factories into a cash economy. Sugar industries created occupational differentiation among the villagers. Everywhere in the surroundings of the sugar factories, carpenters, blacksmiths, bricklayers, basket weavers, and small-scale traders have emerged from the peasant communities. Rural people who sought work in sugar industries and those who joined the new occupational groups were those who had no lands.

For the laborers, salaries that they earned from the plantation once in two weeks has stimulated trading that is mainly done by the local small-scale traders. These traders are pioneers for the growth and development of rural economic centers such as village market place, agro-processing centers, and trading of agricultural commodities. DIY and Klaten are among areas with a significant growth of such economic activities. Other economic activities developed following the plantation economy are transportation of inputs and commodities, maintenance of buildings and warehouses, tobacco drying, food stalls, horse and ox cart production and maintenance. The presence of a modern economic sector in the rural traditional economy of Java did not lead to the decrease of the later. On the contrary, many enter-
VII. Conclusion

The spatial pattern of rural diversification in DIY is conditioned by some historical events related to social and political movements in the early 1900s. Among important historical milestones relevant in explaining the present rural diversification in DIY Province can also partly be traced back to the establishment of Muhammadiyah in 1912 and establishment of Taman Siswa in 1922. These organizations prepared the ground for human resource development through education and modernization. Combined with the charismatic and progressive leadership of Sultan Hamengkubuwono IX, human resource development in DIY had been relatively advance even in the late 1950s. The establishment of many secondary schools beyond the city boundary, partly private schools, was regarded as important evidence of the strong commitment of the provincial government in advancing human resource quality. Consequently, the rural people of DIY have been able to attain higher education and seek for alternatives of employment beyond the agricultural sector.

At contextual level, one can see that the establishment of Gadjah Mada University in 1949 was also followed by the growth of many private enterprises remained active and many more establishments flourished up to present.
universities that attracted students from the whole country. Coupled with the growing awareness of its potential as an international tourism destination, the tourism sector of DIY has been another important contributor to the rural diversification in DIY. The presence of a large number of students and tourists have stimulated the growth of all economic sectors, agricultural, manufacturing and services, both in the urban and rural areas of the province.

Note

1 Taman Siswa is a social organization established to improve the welfare of the indigenous Indonesian through education. At present Taman Siswa is a non-government organization with a strong commitment and nation-wide coverage in advancing education from elementary school to university.

2 Muhammadiyah is a Moslem social organization with strong concern in modernization of Islam. The organization also provides modern Islamic education from basic schools to universities, and provides health care services in complement to those provided by the government.

References


