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## Rural sector reform and internet adoption in NGOs: The case of Indonesia

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# Working Paper Series

## Rural Sector Reform and Internet Adoption in NGOs: The Case of Indonesia

Yanuar Nugroho

Manchester Business School Working Paper No 536

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## Keywords

Internet adoption, Indonesia, Non-Governmental Organisations, rural sector reform, rural sector development

## Abstract

Today rural sector reform is a paramount issue in Indonesian development. Yet, different social actors have different perspectives and stances towards it. Non-Government Organisations (NGOs) in Indonesia have established themselves in pivotal positions in the social, economic and political landscape across the country, and a large number of their works has often been connected with development in rural sector. But, little has been studied to understand how NGOs in Indonesia, particularly rural NGOs, engage with the issue of rural development itself. With the rural development being one of the oldest issues widely discussed among activists since the early days of the Indonesian NGOs, it is interesting to see how they understand the rural sector reform issue today. An empirical study was conducted recently to see how some Indonesian NGOs, in their endeavour to respond and broaden the discourse, utilise Internet technology. The study employs combination of quantitative and qualitative approach to build a detailed story about how different organisations working in the rural sector reform issue deploy strategies to deal with the issue. By so doing, it aspires to contribute to the advancement of theory relating to the efficacy of Internet as a tool for social reform and development. Two related issues are at stakes. First, amidst everything else, for most NGOs working in rural sector reform, technology is not seen as a compelling issue. Second, the study finds that there is a real need for a further thinking and reflection focusing on what can actually be done with the strategic implementation of the Internet within organisations working in rural issues generally.

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# Rural sector reform and Internet adoption in NGOs: The case of Indonesia

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**Abstract**—Today rural sector reform is of paramount importance in Indonesian development. Yet, different social actors have different perspectives on it. Non-Government Organisations (NGOs) in Indonesia have established themselves in pivotal positions in the social, economic and political landscape across the country, and a large amount of their work has been connected with development in the rural sector. But, there has been little attempt to understand how NGOs in Indonesia, particularly rural NGOs, engage with the issue of rural development itself. Since rural development is one of the oldest issues to be discussed among activists, since the early days of Indonesian NGOs, it is interesting to see how they understand the rural sector reform issue today. An empirical study was conducted recently to see how some Indonesian NGOs, in their endeavour to respond to and broaden the discourse, utilise Internet technology. The study employs a combination of quantitative and qualitative approaches to build a detailed story about how different organisations working in rural sector reform deploy strategies to deal with the issue. By doing so, it aspires to contribute to the advancement of theory relating to the efficacy of Internet as a tool for social reform and development.

**Index Terms**—Internet adoption, Indonesia, non-governmental organisations (NGOs), rural sector reform, rural sector development

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## 1. INTRODUCTION

Any paper on development in Indonesia must take into account the fact that nearly 50% of the labour force works in (or more than 65% of the total population is engaged in) rural activities<sup>1</sup>. Stories from the rural sector are not always pleasant however; in fact many are bitter. In Indonesia the sector has been characterised by farm labour with low productivity and, as a consequence, rural inhabitants' standard of living is very low<sup>2</sup>. Rural land has also deteriorated as a result of the 'green revolution' carried out desperately by the Indonesian government since the late 1960s to the end of the 1980s. Following the oil-boom, with national development policy in favour of industrial-oriented over agrarian-based development, not only did more farmers convert to factory work, but significant areas of farming land have also been continuously converted into industrial estates. These are among the severe problems hampering Indonesian rural development today, which attracts not only the attention of the government and private sector, but also that of non-governmental organisation (NGO).

<sup>1</sup> See National Statistics Bureau, "Population 15 Years of Age and Over Who Worked by Main Industry 2004, 2005, 2006 and 2007", online at <http://www.bps.go.id/sector/employ/table2.shtml>, viewed 20 June 2007.

<sup>2</sup> This problem is one of the most classical problems in rural development in the East. See, for example, Boeke (1952).

The important role of Indonesian NGOs' in the country has been widely recognised, not only in promoting wider democracy and adherence to human rights (Ganie-Rochman, 2002), but also in development, empowerment and improving of livelihoods (Eldridge, 1995; Hadiwinata, 2003). For NGOs working on rural issues, reforms in the rural sector have become the main agenda in responding to multifaceted problems hindering rural development. However, 'reform' in this sector is complex and affects rural NGOs' activism. To help them deal with such complexity, many rural NGOs have been adopting and using Information and Communication Technologies (ICTs), particularly the Internet. They have an emerging opportunity to use the Internet to support their quests for rural sector reform. Rural NGOs have to learn how to appropriate the technology more strategically and politically to achieve this mission.

Although there have been some studies on the subject of the Internet and socio-political dynamics in Indonesia (Hill, 2003; Hill and Sen, 2000; 2005; Lim, 2002; 2003a; 2003b), there has been little research targeted systematically at how Indonesian NGOs working on rural sector use the Internet to achieve their mission and goals. This paper aims to fill this gap. Exploring the case of NGOs working in the rural sector in Indonesia, this study aspires to contribute to the advancement of theory relating to the efficacy of Internet-mediated communication as a tool for social reform and development. This section has outlined the focus and concern of the paper. The next section explores the NGO agenda in rural sector reform, followed by looking at the pattern of how NGOs adopt and use the Internet to achieve that purpose and the impacts of this. A case study is then presented to give a detailed account of Internet adoption in a rural NGO. A discussion and reflection on the implications is then offered before the paper concludes.

## 2. FROM DEVELOPMENT TO EMPOWERMENT: NGOS AGENDA IN RURAL SECTOR REFORM

### 2.1. *Problematics in rural development*

Rural development is an area in which the Indonesian government has played a major role, especially during Suharto's New Order regime, since the late 1960s. Due to food scarcity, as a result of poor political economy and population explosion, rural development was seen as a way of remedying the problem, with much intervention from the government<sup>3</sup>. Aiming to enforce agriculture intensification through high-yielding seeds, subsidised fertilisers and irrigation systems as part of green revolution, the government established programmes such as *Bimas* (*bimbingan massa*/mass guidance) and *Inmas* (*intensifikasi massa*/mass intensification) (Booth, 1992). By the early 1980s through various programmes under *Inpres* (presidential instruction), the government changed the face of most villages by providing them with roads, village-halls, schools, health-centres, markets and so on (Liddle, 1985). In addition there were also interventions aimed at creating state-sponsored grassroots organisations such as LKMD (*lembaga ketahanan masyarakat desa*/village people's defence council), PKK (*pembinaan kesejahteraan keluarga*/family welfare guidance), *Dasawisma* (neighbourhood association), *Karang Taruna* (village youth association), and the like (Hadiwinata, 2003).

Many argue that such intervention has in fact been more detrimental than beneficial, in the long term. First, agricultural produces became highly politicised (Sangkoyo, 1999)<sup>4</sup>, placing peasants in a vulnerable position, politically. Second, although the implementation of a green revolution, for a short period, was successful, this did not last long as the country turned out to be the major rice importer in the world (Daorueng, 2002)<sup>5</sup>. Third, yielding more rice has proven to be problematic because vast areas of agricultural land have lost their fertility due to the poor chemical treatment and high-yielding seeds of farming intensification schemes. Fourth, there were no genuine, independent grassroots groups or organisations in rural areas which are important to build a healthy fabric of social life. Instead, rural society was torn apart (Hart, 1986)<sup>6</sup>.

This has all contributed to the deteriorating quality of life of rural people, as farmers are kept trapped in poverty and thus become increasingly powerless. But, this is not the only problem. As a result of industrialisation policy, massive areas of agricultural land were converted into industrial estates or urban housing because farmers had very weak bargaining power to defend their land against demand from industry or the rich 'people from the city'. Young villagers went to the cities to look for 'better jobs', mostly as factory labourers or casual workers in informal sectors, leaving the villages with little hope for the future. Since the 1998 reform, despite the government's claim to have been trying to 'revitalise' the rural sector, the situation has not improved. Farmers are still poor, or have become even poorer; agricultural land has not reclaimed its fertility; agricultural produces are still politicised; conversion of rural land into

<sup>3</sup> Usually, interventionist state attempts to control rural sector by establishing powerful agencies to monopolise rural community development activities (Arce et al., 1994).

<sup>4</sup> In many instances government and the ruling party (i.e. Golkar) used rice issue as political commodity (Sangkoyo, 1999)

<sup>5</sup> Indonesia became a major rice importer in 1996, after the failure of various programmes to boost production. Government statistics show that rice imports hit a peak of six million tonnes during the crisis period of 1998. The figure fell to four million tonnes in 1999 and 1.5 million tonnes in 2001. This is a set back because Indonesia won a FAO medal for the achievement of 'self-sufficiency' in rice in 1985 (Daorueng, 2002)

<sup>6</sup> The New Order's intervention also transformed the nature of rural society, marked by the emergence of rural elites as a class of favoured clients of the state (whose activities were under guidance 'from above' and increasingly became implementers of government's programmes) and rural lower society who were commonly poor (Hart, 1986)

non-agricultural purposes continues; rural civil society remains weak and farmers are politically neglected despite villages being seen as sources of voter support.

## 2.2. The role of NGOs in rural development

Non-governmental organisations (NGOs) in Indonesia have long been concerned with rural development issues and problems. There are four important characteristics of NGO movements that need to be taken into account. *Firstly*, Indonesian rural NGO movements have a long history before their ‘boom’ in the 1990s. Starting in the early 1970s, a number of NGOs like *Bina Swadaya*, LP3ES, *Sekretariat Bina Desa*, *Dian Desa*, and many others were established and focused their activities on rural issues, community development and the promotion of self-management activities at village level (Hadad, 1983; cited in Hadiwinata, 2003:91)<sup>7</sup>. During the New Order regime, many of these organisations had to adopt ‘friendly’ strategies by not engaging in grassroots political activities, partly because of the repression of NGOs by the government.<sup>8</sup> But throughout the 1990s, many Indonesian NGOs, including those working in rural sectors, started adopting more forward strategies and openly expressed their opposition to government policies in rural development. The military often assumed rural NGO activities at village level (as well as labour NGOs at regional or factory level) were aimed at organising local grassroots movements and thus masked political agitation (Billah, 1995). Subsequently, for the last 10 or so years of its political power, Suharto’s New Order launched ‘black-propaganda’ against NGOs, often involving repressions and violence against activists<sup>9</sup>.

*Secondly*, the orientation of the activism goes beyond development and food security. For these NGOs, the aim of rural sector reform is primarily to improve rural livelihoods and to restore the economic, social, political and cultural rights of the rural communities. The aim is not just food security (as campaigned by the New Order) but food sovereignty, which requires the fulfilment of farmers’ rights and new orientation towards sustainable rural development.

*Thirdly*, in order to do achieve this, Indonesian rural NGOs, in general, have two approaches. One is the ‘*negative-logic*’ approach: criticising and standing against the negative aspects of rural development policies and practices. The other is ‘*positive-logic*’ approach: promoting alternative practices in rural development. In terms of building the movement (Crossley, 2002; Della-Porta and Diani, 2006; Diani, 2003), these approaches are what characterise the rural NGO movement in Indonesia the most. In their first approach, rural NGOs in Indonesia often risk being misunderstood as ‘anti-development’ for their consistent critical stance towards status-quo rural policies and development practices. These NGOs carry out advocacy towards farmers’ rights; support agrarian reform to reclaim farmers’ lands; oppose further agricultural land conversion; support farmers’ union activities and empower rural civil society through research, lobbies and advocacy endeavours (Eldridge, 1995; Ganie-Rochman, 2002; Hadiwinata, 2003) and thus are often categorised as *rural-advocacy NGOs*<sup>10</sup>. On the other hand, using the positive-logic approach, NGOs help with training farmers; provide support for rural home-industry or small-medium enterprises (SMEs,) and help with better access to marketplaces. They provide assistance to farmers to enable them to learn more about organic and sustainable farming processes and restore soil fertility; help with access to micro-credit schemes for women in rural areas; help to politically empower rural communities; and –to a limited extent—ensure agricultural produces are being fairly traded (Hadiwinata, 2003)<sup>11</sup>. Non-governmental groups and institutions which undertake such activities are generally known as *rural-development NGOs*<sup>12</sup>.

These different approaches enrich the NGO movement in the rural sector. The shared belief between these different NGOs is that for rural sector reform, development orientation is not enough. Instead, it is empowerment that becomes crucial in making sure that reform in the rural sector will benefit the farmers and the whole society, and thus becomes

<sup>7</sup> Most were initiated by concerned activists including religiously-inspired groups like Christian/Catholic churches and Islamic groups, aiming at developing a capacity for co-operation among community groups (Billah, 1995; Sinaga, 1994).

<sup>8</sup> This includes the decree no. 81/1967, enforced by state’s regulation on Overseas Technical Co-operation and Assistance issued by the Ministry of Home Affairs 7 September 1973 (Hadiwinata, 2003:91-92). Then, in 1985, the government issued *Inpres* No. 32/1985 to filter any overseas co-operation (Sinaga, 1994), followed by the Law on mass organisations, UU Ormas No 8/1985 which was viewed as controversial as it was seen as blatant effort by the state to ‘de-ideologise’ and ‘de-politicise’ NGOs by forcing them to adopt *Pancasila* as the sole ideology (Hadiwinata, 2003; Sinaga, 1994). This law was soon furthered by government regulation PP No. 18/1986 which required all NGOs without exception to register themselves with the government and a joint decree (*surat keputusan bersama*) SKB 1995 between Ministry of Home Affairs and Department of Social Affairs obliging NGOs to accept government’s supervision (Hadiwinata, 2003).

<sup>9</sup> This situation became favourable for Indonesian NGOs to some extent after *reformasi* (political reform) in 1998. Seen as part of the important actors that mobilised various elements in Indonesian civil society to overthrow the authoritarian regime (Hill, 2000; Uhlin, 1997), NGOs regained some trust from wider society who used to be ‘under the influence’ of the New Order’s anti-NGO campaign. Despite some difficulties, Indonesian NGOs managed to pin down their pivotal roles in the socio economic and political dynamics of the country, much by their role in continuously advancing the reform agenda.

<sup>10</sup> Interview with Muhammad Riza, 30/11/2005; Indro Surono, 3/12/2005.

<sup>11</sup> Interview with Antonius Waspotrianto, 28/10/2005; Indro Surono and Agung Prawoto, 3/12/2005; Yulia I. Sari, 19/12/2005.

<sup>12</sup> In general, not only for rural NGOs, this categorisation (advocacy and development NGOs), although may be too simplified, apparently works both in practice and also for analytical purpose (Eldridge, 1995; Ganie-Rochman, 2002; Hadiwinata, 2003; Holland and Henriot, 2002)

the call for all NGOs working in rural issues. As one NGO, reflecting on its activities, puts it:

We contribute in this context, particularly in empowering peasants. ... There are various ways to do so, but in order to empower them we need to help the farmers to help themselves in self-organising and self-mobilisation, then [we must help them with] good access to marketplaces using mechanism like quality assurance [for agricultural produces]. In the bigger context of rural movements what we have done is just a small part because we focus only on the empowerment of production and economic aspects. For other aspects that need empowerment, we have to collaborate with other NGOs or farmers organisations (Indro Surono, interview, 3/12/2005).

The comments of Indro Surono above represent the views of many other NGOs' on the matter. Certainly, having to limit their focus in their endeavour to promote rural sector reform, does not necessarily make NGOs lose view of the 'bigger picture' of their activities. In fact it can make it clearer:

[In our development activities] we apply some standards which actually reflect the socio-architectures of the problems, social justice that we aim to achieve. This all is part of our blueprint in promoting organic and sustainable agriculture. So, it is clear that social justice is structured in our organic movement. It is the same with our other activities like quality assurance for organic agricultural produces as it implies strong organisation of farmers. We want the farmers strongly organised to fight for their own rights. We work on this issue with other rural [advocacy] organisations. If farmers have strong associations or organisations, they can build their own internal mechanism. Externally, this strengthens their bargaining positions. Thus, while we work on quality assurance, other colleagues are working on strengthening farmers organisations. That's how we work (Agung Prawoto, interview, 3/12/2005).

The two reflections above indicate an emergent strategy, which has a new meaning and contextualisation: the networking of movement for rural empowerment. Such a strategy, while effective, requires (or presupposes) a relatively high-degree of co-operation and collaboration. For example, while nearly all rural development NGOs activities assume existing organising endeavour (*pengorganisasian*), many rural advocacy NGOs deduce that development-aspects of the community are being dealt with by their developmentalist colleagues. It is at this networking level that rural NGOs come together to share different issues or problems faced by farmers and can therefore solve them more effectively. For instance, problems related to economic aspects or access to markets are usually best resolved with a development approach and problems related to political aspects or development policy are best tackled using an advocacy approach (as also suggested previously by Billah, 1995; Fakhri, 1996). Such approaches are not only beneficial for NGOs, in that they can collaborate and network more effectively, but more importantly for farmers and rural communities, in that they increasingly become aware that development (or economic) aspects are strongly tied and influenced by advocacy (or political) aspects in rural reform and development. This is important so that the farmers can engage themselves more effectively and more meaningfully in the socio-dynamics of development and reform in the rural sector. In the recent political economy development, the rural sector is no longer subject exclusively to national development policies, but increasingly globalised and regulated within the World Trade Organisation (WTO) under AOA (Agreement on Agriculture)<sup>13</sup> (Kwa, 2004).

It is therefore important for NGOs to focus their endeavours on empowering farmers and rural society so that in the globalised economy they can still have a say in deciding their own life, as one NGO representative reflects below.

[We envisage that] one day it would be the farmers who are able to carry out advocacy works for themselves, to protect them from government repression or brutal [implications of] globalisation in rural sector. But we have to start building this ability now. We have to start by involving them to understand, become aware of, and identify the actual problems [in rural sector reform]. Then, we have to encourage them to find the solutions of their own, and communicate them to the communities through dialogues. Only by doing this we can stop the dependency vicious circle. Farmers used to be dependent on the [New Order] regime and now there are apparent dangers that they can be dependent upon NGOs. We have to avoid this. (Muhammad Riza, interview, 30/11/2005)

It seems clear that the orientation of rural sector reform, for NGOs, is more one of empowerment rather than merely development. This implies a strong building block of rural NGO movement so that the empowerment endeavour can be carried out effectively.

*Lastly*, this brings another characteristic of the current Indonesian rural NGO movement: its international links. Either for pursuing development goals or organising advocacy activities, the international network of rural NGOs, facilitated by the use of information and communication technology like the Internet, has increasingly become more instrumental. Such an engagement with international organisations has enabled the organisations not only to spread the concerns of

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<sup>13</sup> AOA, which is currently part of the new WTO trade round launched in November 2001, has elements that are likely to be problematic for Indonesia, e.g. (i) another round of reduction in tariffs; (ii) possible measures that could ensure State Trading Enterprises (STE), such as BULOG (Indonesia's STE for rice and other sensitive commodities) from having import monopoly powers; (iii) very little, or no real disciplines on *Domestic Supports*, e.g. no overall caps or limits on the *green box spending* is being discussed for the developed countries (which means that dumping of cheap agriculture produce by the US and EU into developing countries will continue, and could even increase); and (iv) *Special and Differential Treatment* for developing countries under discussion, e.g. the concept of Special Products and a Special Safeguard Mechanism (spearheaded by Indonesia) is extremely inadequate since these are merely band-aid measures. Food security and rural livelihoods cannot be limited to a small number of crops but should encompass the broad range of products small farmer produce. See (Kwa, 2004).

Indonesian NGOs about rural sector reform across the country in a speed and scale that has never been seen before, but also to help them network with other similar organisations at various levels, from local to global, to exchange ideas, experiences and support. A profound example is Indonesian rural NGOs' engagement with *La Via Campesina*, a growing international peasant movement network, which not only furthers the rural sector reform agenda at national level in Indonesia, but also advances rural issues and integrates them at global level.

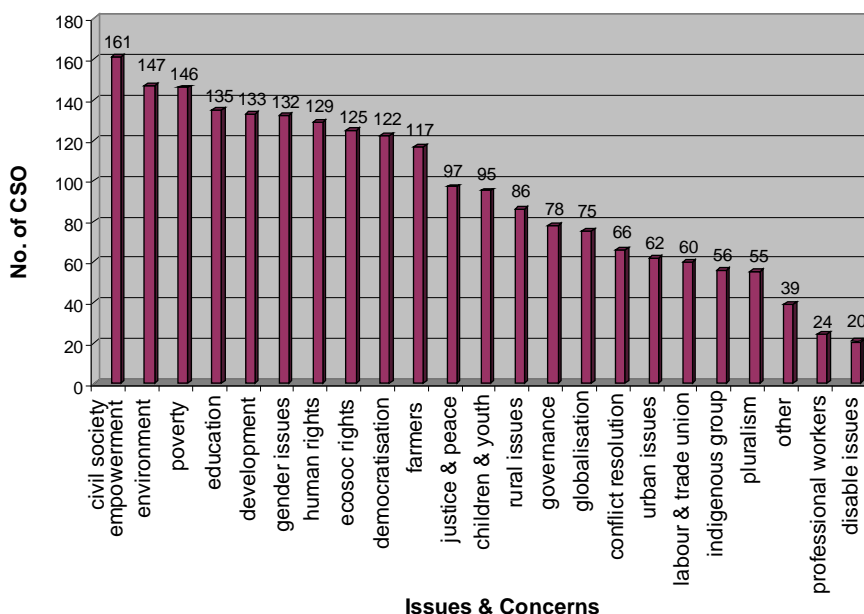
To summarise, four of the most important characteristics of rural NGOs in Indonesia today have been laid out: (i) they are part of a long standing movement that boomed in the 1990s; (ii) there has been a shift in the centre of activism, i.e. from economic development and food safety, to also include food sovereignty and empowerment; (iii) there has been the proliferation of two main categories of movement: advocacy and development; and (iv) a strong international component of the movement has emerged. These characteristics are very much influenced by –and reflected in–the way these rural NGOs operate, both at national and global levels and, arguably, are consequences (intended or unintended) of the use of information and communication technologies (ICTs), particularly the Internet, in the organisations.

### 3. ADOPTING THE INTERNET, EMPOWERING THE MOVEMENT: FOUR DIMENSIONS OF ADOPTION<sup>14</sup>

NGOs and civil society organisations (CSOs) have been active users of the Internet since the early days of its introduction in Indonesia (Hill and Sen, 2005; Lim, 2003b; Purbo, 1996). As the Internet not only facilitates communication and collaboration of organisations within and between countries (Castells, 1996; Dutton, 1999; 2004; Warkentin, 2001) but also contributes to the spread of issues and concerns (Dutton, 2004; McConnell, 2000; Surman and Reilly, 2003), it plays a pivotal role in the change strategy of the NGO movement. However, not much is known about how and to what extent Indonesian NGOs adopt and use the Internet. By triangulating quantitative and qualitative methods (Danermark et al., 2002; Gilbert, 1992), this study aims to explore the features of the diffusion, use and impacts of the Internet in Indonesian NGOs<sup>15</sup>, especially in relation to advancing rural sector reform.

This study collects the data from a survey of 268 Indonesian NGOs, about half of which work on rural, or rural-development-related issues (e.g. rural issues, farmers, and development). See Fig 1. Therefore, for analytical purposes, it is safe to say that the general result derived from the survey also reflects the rural NGOs under study.

#### What are the main issues/concerns of your organisation?



**Fig. 1. Issues and concerns of NGOs under study**  
*N=268. Multiple responses possible.*

<sup>14</sup> For more detailed account, see Nugroho (2007a)

<sup>15</sup> The quantitative data was gathered through an exploratory survey, and served as input for some statistical observation including exploratory latent-class using *Latent Gold*® (MacCutcheon, 1987; Vermunt and Magidson, 2002) and temporal social network using *Pajek*® (Batagelj and Mrvar, 2003). The qualitative data was collected through interviews, workshops, and focus group discussions to build case studies (Eisenhardt, 1989; Stake, 1995). The overall data collection was carried out Oct 2005-April 2006.



From an observation where 94.03% use PCs in the organisation and 86.94% have access to the Internet, only a very small group has used the Internet for more than 10 years (5.97%). Most of them have used it between 5-10 years (28.73%) and 3-5 years (26.87%). Quite a proportion (19.03%) just started using it within the last 3 years<sup>16</sup>. See Table I.

**Table I. Adoption of ICTs in Indonesian NGOs**

Information Technology adoption	Length of adoption (years)			
	>10 (leaders)	5-10 (early majority)	3-5 (late majority)	<3 (laggard)
PC	21.64%	35.45%	24.25%	10.82%
The Internet	5.97%	28.73%	26.87%	19.03%

*N=268; classification of adopter based on diffusion theory (Rogers, 1995; 2003)*

But, what makes ‘leaders’ and ‘laggards’ (for this classification, see Rogers, 1995; 2003) in the Internet adoption? This study finds that leaders in the Internet adoption among Indonesian NGOs are usually those who (i) are longer established, (ii) have more staff, and (iii) manage more money. See parameter estimation (using MIMIC-LCA) in Table II (See also Appendix 1).

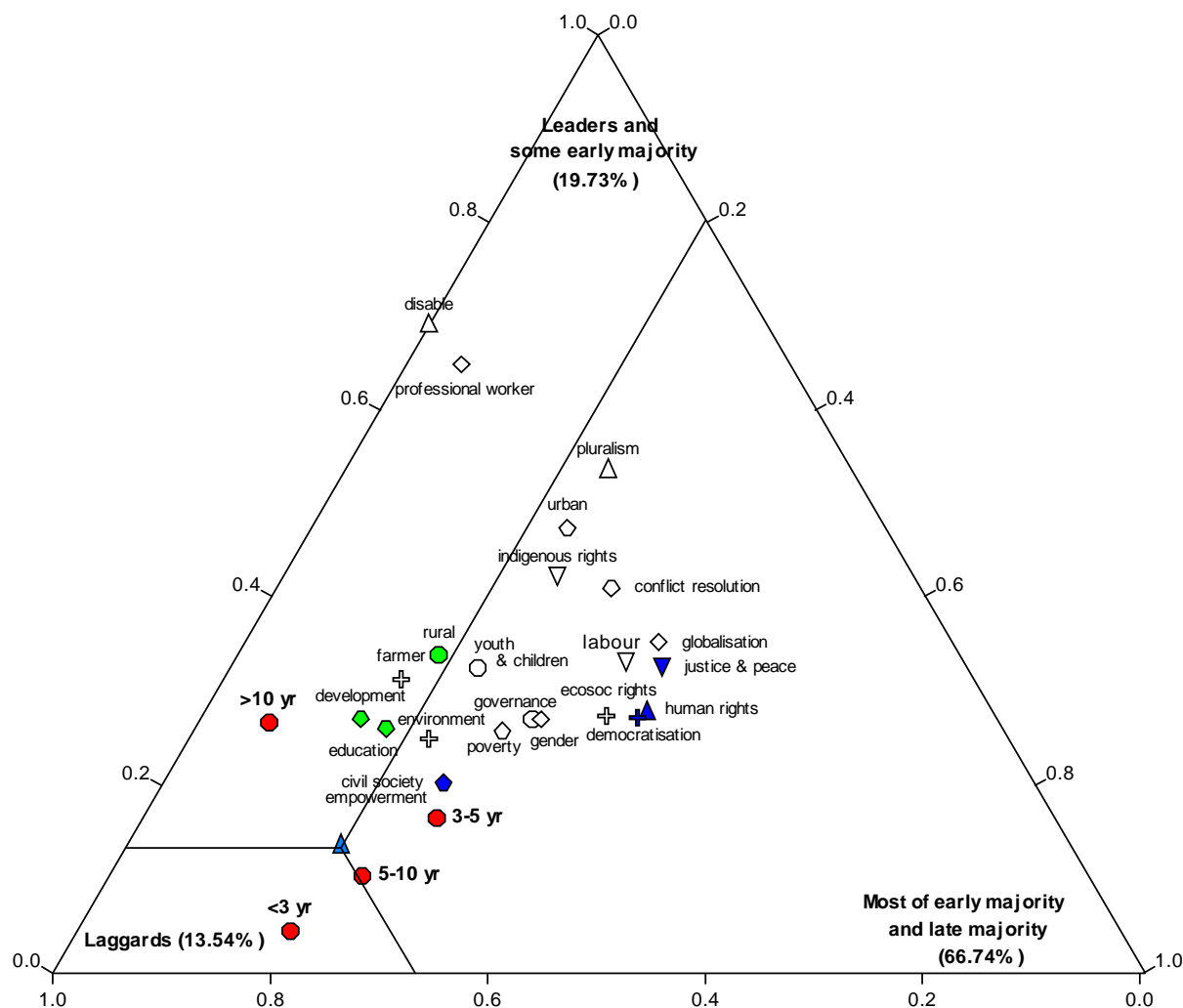
**Table II. Characteristics of Indonesian NGOs as adopter**

Estimated Variables	Late majority and laggards (75.56%)	Leaders and early majority (24.44%)
<i>Period of Internet use (years)</i>	<3; 3-5	5-10; >10
<i>Age of the organisation (years)</i>	0-1; 1-2; 2-5; 5-8; 8-10	>10
<i>Number of staff (persons)</i>	<5; 6-10; 11-15	16-20; 21-25; >25
<i>Annual turn over (IDR)</i>	<100 million; 100-500 million	500 million - 1 billion; 1-2 billion; >2 billion

*N=268. Latent Class Analysis. BIC(LL)=1816.7598; NPar=42; L<sup>2</sup>=1096.296; df=179; p<0.0001; and Class.Err=3.9% (See Appendix 1)*

While this contradicts what diffusion theory suggests that ‘earlier adopters are not different from later adopters in age’ and may disagree with the view that ‘economic factors do not explain comprehensively innovation behaviour’, it supports the idea that ‘early adopters usually are larger in units’ (Rogers, 2003:288-289). This finding poses a key question: does this pattern of adoption have anything to do with the issues and concerns that these NGOs are working on? It seems so. See Fig 2.

<sup>16</sup> This finding confirms the pattern of technological adoption suggested by diffusion theory –with ‘innovators’ and ‘early adopters’ (here referred to as ‘leaders’) leading the adoption, followed by ‘early majority’, ‘late majority’ and ‘laggards’— which forms a *bell-curve* and, cumulatively, *S-curve* (Rogers, 2003).



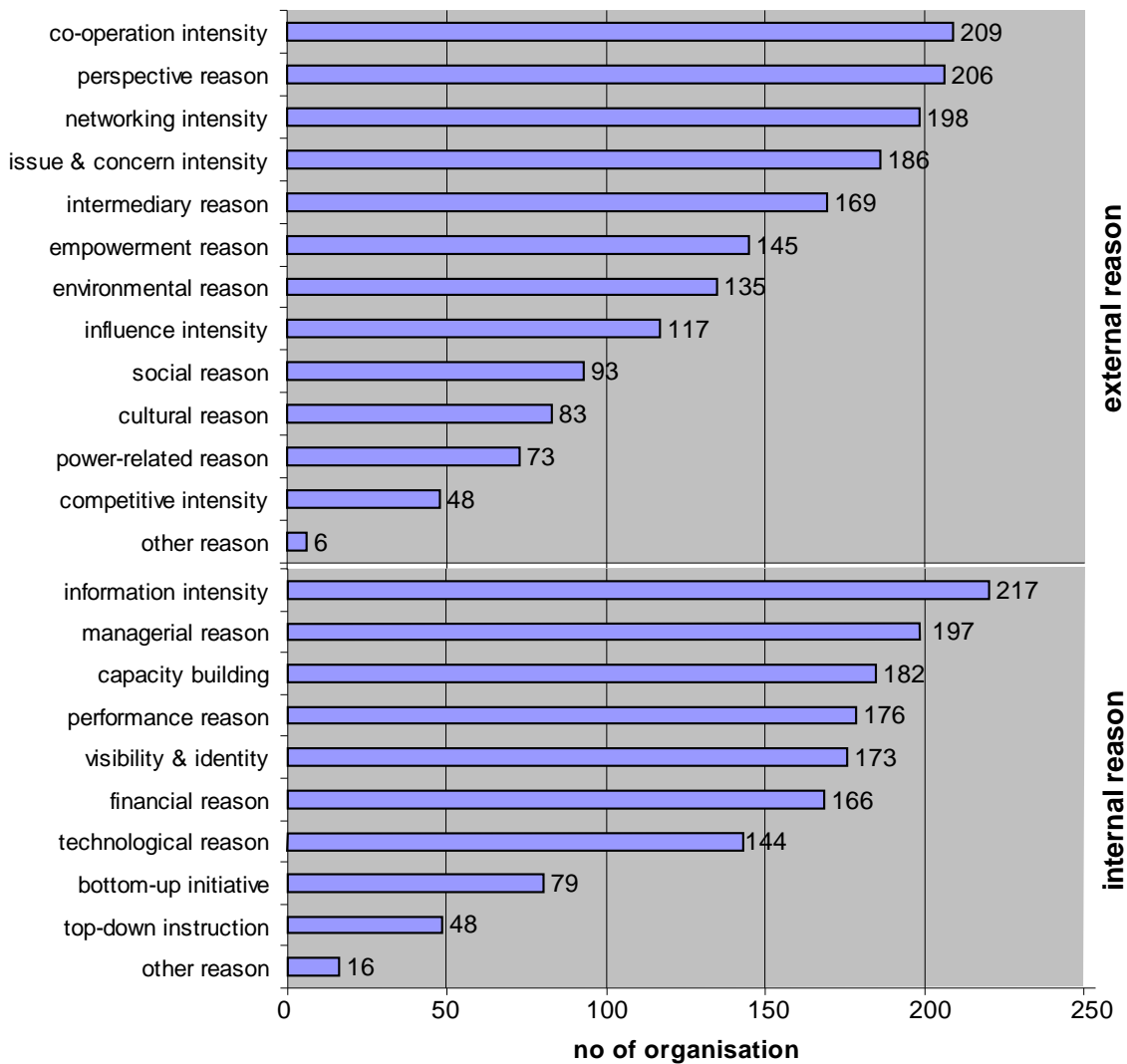
**Fig. 2. Issues and concerns of each adopter category**  
*N*=268. Latent Class Analysis. *BIC(LL)*=5407.792; *NPar*=94; *L*<sup>2</sup>=4214.830;  
*df*=127; *p*<0.0001; and *Class.Err*=2.6% (See Appendix 2)

It shows *the first dimension: adoption*. In general, NGOs working on development or development-related issues and concerns (salient issues are coded green) are estimated to be more likely to be early adopters of the Internet, than those working on advocacy-related issues (coded blue)<sup>17</sup>. A closer look at the figure shows that NGOs working around rural-related issues (farmers, rural, environment, poverty, civil society empowerment, and so on) are part of an ‘early majority’ group in terms of Internet adoption.

But, what actually drives the adoption of the Internet in Indonesian NGOs in general? Internally, it is the need to obtain information and to improve organisational effectiveness and efficiency; externally, it is the need to bring about mutually beneficial relationships and collaboration among organisations, instead of competition. Figure 3 below maps all the drivers for adoption, internally and externally.

<sup>17</sup> See Appendix 2 for a more detailed account. However, it should be taken into account that in the early days of the Internet use in Indonesian NGOs, it was advocacy organisations that pioneered the use of the Internet for pushing social movement. An interview with Wahyu Susilo of INFID (1/12/2005) reveals the birth of *Nusanet* initiated by INFID as the first secure communication exchange platform for civil society activists. *Nusanet* played an undeniably important role for Indonesian CSOs in establishing links with their partners across the archipelago in order to fight for democratisation and across the globe for mobilising global solidarity, especially in overthrowing the New Order regime.

## why does your organisation use the internet?



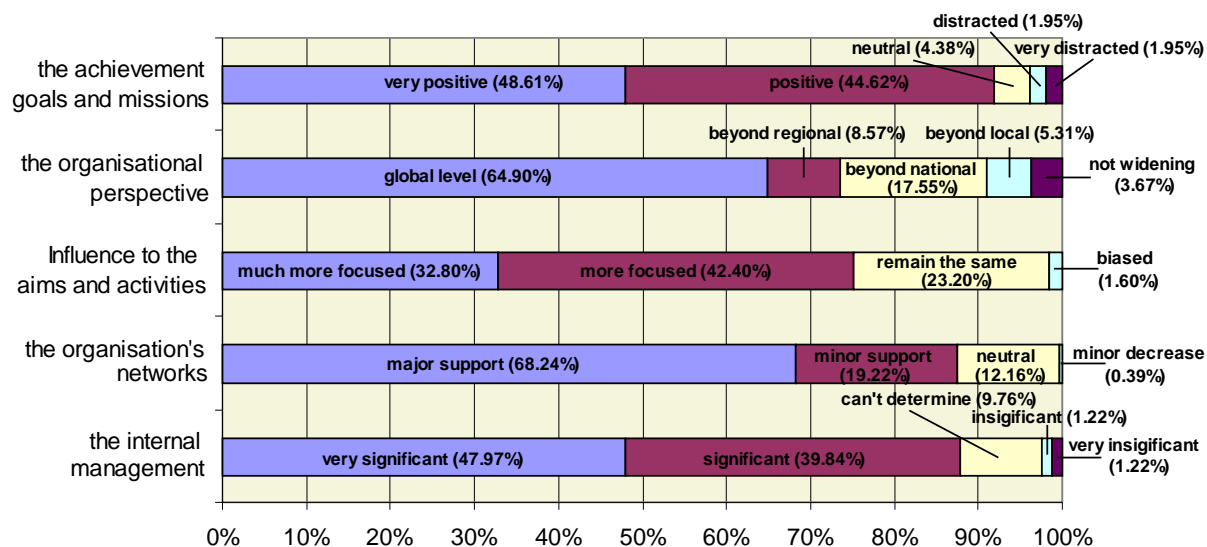
**Fig. 3. Internal and external reasons for adopting the Internet**

*N=268, multiple responses possible*

Although Indonesian civil society is not absent from conflicts and frictions of interest, organisational need for social esteem or status and egocentric and competitive motives are not strong drivers for Internet adoption in NGOs, unlike in other types of organisations (as found in, e.g. Coombs and Hull, 1996; Newell et al., 2003; Rogers, 2003). Apparently, for Indonesian NGOs, including the rural ones, adopting the technology which serves such internal and external purposes (see Fig 2) empowers them in organising their movement, expands their network, and, to some extent, therefore increases their bargaining position when dealing with other actors in Indonesian politics. From these findings, it is marked that for Indonesian NGOs, *in the dimension of adoption, activities do matter*.

The survey also shows *the second dimension: impact*. More than 92% of Indonesian NGOs under study, who have used the Internet, find that its use positively or very positively affects the achievement of the organisations' goals and missions. It is also found that the Internet use significantly or very significantly increases the performance of the internal management of more than 87% of NGOs in this study and helps nearly 75% of them to become more focused or much more focused in their aims and activities. But more importantly, it has widened nearly two-third of the NGOs' perspective to global level or at least beyond regional, national or local boundaries. As consequence, the use of the Internet has become a major support for the expansion of NGOs' networks. See Fig 4.

## impact of the internet use to ...



**Fig. 4. Impact of the Internet use in Indonesian NGOs**

*N=268, single response, Likert-scale*

The impacts of Internet use in NGOs as depicted above are also true for rural NGOs<sup>18</sup>. Externally, the Internet has been instrumental in expanding organisational perspective and network so that rural NGOs and farmer communities are aware of the latest developments in issues and take part not only at local but also at global level. This has enabled much cooperation and collaboration which was difficult, if not impossible, before<sup>19</sup>. Internally, the Internet has facilitated capacity-building in many rural NGOs and also for farmers. With such capacity-building, NGOs can help farmers to have more direct access to the market, which is essential to introduce fairer trade and build firmer economic ground for rural development<sup>20</sup>. This finding characterises the third dimension of impact: the adoption and use of the Internet in NGOs has *created strong impacts both on internal and external activities*.

**The third dimension is networking.** It is evident that the Indonesian NGO network has expanded significantly over the past decade. Not only are more links established nationally and globally, but the network has also become more cohesive over different periods of democratic transformation in the country. At the national level, major socio-political events took place in Indonesia during the heightened period from pre-1995 to 1998 and significantly affected, but were also affected by, civil society activism (as also reported by Harney and Olivia, 2003; McCarthy, 2002). This study argues that these socio-political events are both outcomes and fabrics of the socio-political engagement of Indonesian civil society. As outcomes, the events reflect how Indonesian civil society has advanced its movement and partaking in social change. As fabrics of civic engagement, such socio-political events provide context and opportunity for Indonesian civil society organisations to link each other's work. Here lies the central explanation on the growth of the *national* network: the network is not just instrumental to social change in the country; it is the arena for change in its own right, including in the rural sector.

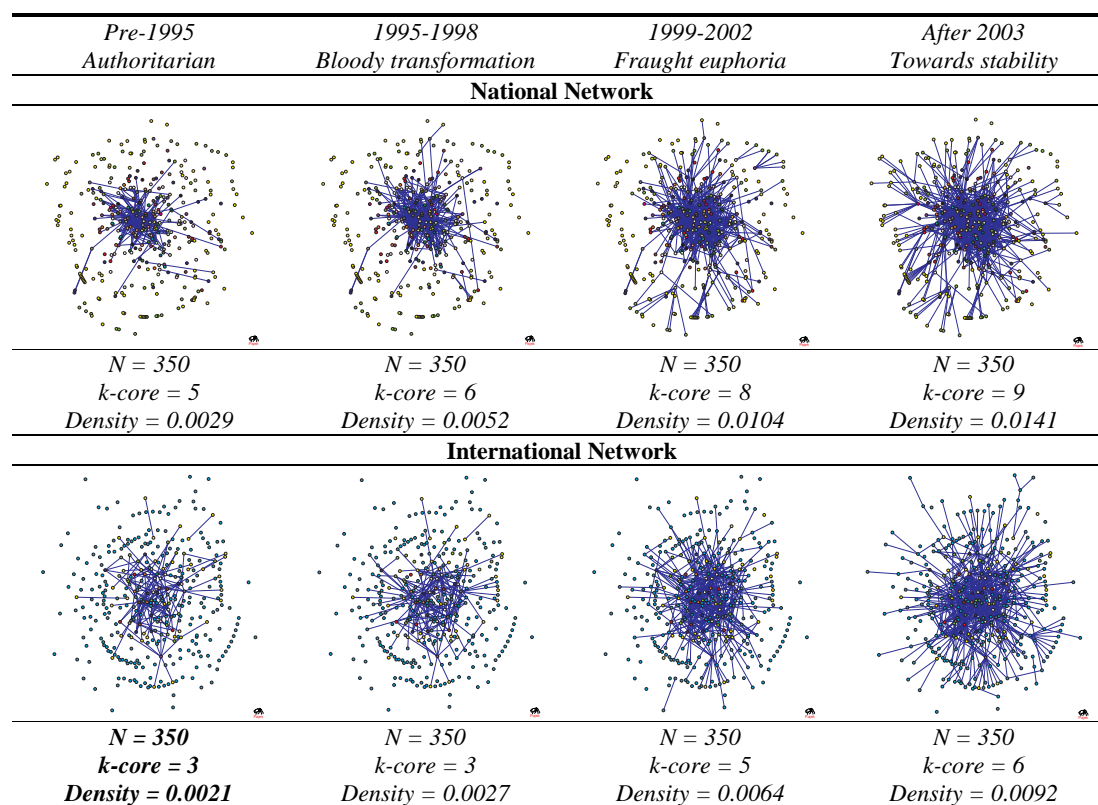
At the international level, networking between Indonesian civil society and international partners has been around for quite a long time (already explicitly expressed by Billah, 1995; Fakhri, 1996). By means of such networking, local organisations voiced their concern or passed relevant information about socio-political problems (usually related to state violence, human rights violation or development policies) onto their international partners who would use the information to pressure the Indonesian government in international gatherings through their own governments or by way of protests<sup>21</sup>. The network, with international partners, has been able to give Indonesian civil society some bargaining power to challenge the authoritarian regime and, arguably, to contribute to the efforts in bringing it to an end, despite questions about the role of international networks during the heightened period of change in Indonesia prior to 1999 (e.g. as addressed in Nugroho and Tampubolon, 2006). Fig. 5 depicts the expansion of Indonesian CSO (Civil Society Organisation) –including NGO– networks, both nationally and internationally.

<sup>18</sup> Recall Fig 1. NGOs with rural-development-related issues make

<sup>19</sup> Interview with Indro Surono, 3/12/2005. Agung Prawoto, 3/12/2005; Muhammad Riza, 30/11/2005; Antonius Waspotrianto, 28/10/2005

<sup>20</sup> Interview with Muhammad Riza, 30/11/2005; Antonius Waspotrianto, 28/10/2005; Agung Prawoto, 3/12/2005

<sup>21</sup> For a profound example, see "*Brussels incident*", when Indonesian NGOs, perceived as powerless, used international networks to question the Indonesian government's development policies during a multi-lateral meeting (Hadiwinata, 2003:98-100) – something that would never have happened in Indonesia.



**Fig. 5. Expansion of Indonesian CSOs Networks**

*N-network=350, all nodes depicted across period, links represent "join action", data collected 2005-6*

*Source: Author, based on fieldwork survey and network mapping. This figure appears in author's earlier works, which also explain the nature of the periodisation (Nugroho, 2007a; Nugroho and Tampubolon, 2006).*

This networking, particularly for rural NGOs, has been essential not only in enlarging capacity, but also in being part of global rural movement. An instance would be the involvement of many Indonesian rural NGOs in the *La Via Campesina*, whose secretariat is now in Jakarta, Indonesia<sup>22</sup>. It is evident that in the third dimension of networking, *there is an enlargement of NGOs' capacity through networking.*

These three dimensions bring about **the fourth dimension: roles of the Internet in building NGO movement.** The adoption of the Internet in NGOs has given new impetus to many NGOs in bridging global and national politics. On the one hand, facilitated by the Internet, more global NGOs paid more attention to the Indonesian situation and collaborated with Indonesian NGOs. Political events like the elections in 1999 and 2004 became an opportunity for connecting with global NGOs (be it in terms of financial support, coalition, joint activities or other types of collaboration). Humanitarian relief actions too have been always important junctures for collaboration. The aftermath of the Tsunami in 2004, for instance, saw a massive scale of global NGOs networking with Indonesian organisations, possibly unprecedented in the country's civil society history. On the other hand, the use of the Internet has contributed in building capacity of Indonesian NGOs so that they participate better and integrate closer with global civil society. Participation of Indonesian civil society, including rural NGOs, in parallel meetings challenging multilateral or world summits (such as in Seattle in 1999), as well as attendance in the series of World Social Forums (since 2001), arguably contributes to the growing global NGOs collaboration with Indonesian groups. In this sense, the advancement of global NGO movements seems to be both an outcome and a means of global collaboration, which is heavily mediated by the Internet.

Having mapped the dimensions of Internet adoption in NGOs from a general perspective, the next section presents a detailed account of the way a rural NGO adopts and uses the Internet and the impacts it brings, using a case study.

<sup>22</sup> *La Via Campesina* means "the road of the peasants" and is the international movement of peasants, small- and medium-sized producers, landless, rural women, indigenous people, rural youth and agricultural workers. *La Via Campesina* defends the values and the basic interests of farmers. Its members come from 56 countries in Asia, Africa, Europe, and America. The objectives of *La Via Campesina* is to develop solidarity and unity among small farmer organisations in order to promote gender parity and social justice in fair economic relations; the preservation of land, water, seeds and other natural resources; food sovereignty; sustainable agricultural production based on small and medium-sized producers. Since 1994, its secretariat is in Jakarta, Indonesia.

#### 4. A TALE FROM THE FIELD: YAYASAN DUTA AWAM<sup>23</sup>

To reach a more nuanced understanding about how rural NGOs work and how they benefit from the use of the Internet in their organisations, the case of Yayasan Duta Awam (YDA) is presented here.

YDA is a local farmer advocacy NGO based in Central Java province but works in other regions, i.e. Riau, West Kalimantan, Bengkulu and South Kalimantan provinces, in a close network with tens of other local NGOs working in similar issues. In addition to its international networking with international organisations like the *Catholic Relief Service* and *Ford Foundation*, YDA is also an active member of *SatuDunia*, a national Indonesian civil society network, part of *OneWorld.Net*<sup>24</sup>. Together with its networks, YDA is now championing the monitoring of the implementation of CERD (Community Empowerment for Rural Development), a nation-wide project funded by a loan from the Asian Development Bank (ADB).

The hullabaloo of rural development has become a bitter picture for farmers –the beneficiaries that YDA works for and with. However, apart from realising that they are poor, many of these farmers do not understand the bigger picture and thus they lose hope in their life. YDA aspires to give this life back to the farmers. At policy level, this is done by promoting their rights; at a practical level, it is carried out by widening farmers' perspectives about the complexities of the broader situation – not to get them lost in the complexities but to let them decide what is best for their own life. To YDA, farmers should be the main actors determining their own life – they should not and must not be neglected in rural development policies and practices.

Despite being an advocacy NGO, what YDA does is perhaps representative of some of the typical courses of action of rural NGOs in Indonesia. Even with huge variations in activism and different approaches (development *vis-à-vis* advocacy), by and large, there are three common areas of activity oriented towards farmers: (i) awareness raising; (ii) professional capacity-building; and (iii) empowerment of farmers as citizens. *Firstly*, raising farmer's awareness has never been more important, as rural development policies, which directly affect farmer's life, are not always in their interests. For many rural NGOs like YDA, awareness raising is central, particularly because globalisation has been affecting rural life. The abstract idea of globalisation has a very real face in rural development, which is often frightening and intimidating for ordinary farmers in Indonesia<sup>25</sup>. Globalised rural development, influenced by global interests, has transformed the country's rural sector into a sector of misery which is being sacrificed for urban development and industrialisation; where land is being converted for industrial purposes and where human resources are being lost.<sup>26</sup> Farmers need to be aware of the situation.

*Secondly*, building capacity of farmers helps them cope with what has been left by the failure of three decades of green-revolution in the country. In Indonesia, mainstream farming and agricultural policies based on the green-revolution have destroyed a lot of rural land which has become very difficult, if not impossible, to restore to its natural fertility. Capacity building for farmers (for example by introducing low input and organic farming, sustainable agriculture and promotion of fairer trading, etc.) not only improves farmer's skills and knowledge but significantly contributes to the effort to restore soil's fertility. Capacity building of this sort also offers a possible way out of the vicious circle of structural poverty, as farmers lose their own land and become mere 'workers' (*petani penggarap*) and earn little in return for their hard work, giving rural people little opportunity to make decisions about their own life. For organisations like YDA, capacity building is therefore not only about providing skills but also providing knowledge and awareness for rural communities.

*Lastly*, in such a context, rural empowerment now has a new dimension: it provides farmers and rural inhabitants with a better opportunity to participate in rural development and hence enables them to take part in the very processes that affect their life and fully participate as citizens. It is in this spirit that the use of technology like the Internet in rural empowerment has been introduced deliberately. YDA throws away the perception that the Internet is the technology only for 'people of the city', the haves, or even the '*techy-literate*': the Internet is also the technology for farmers, for 'people of the villages'. YDA set up two web communities and a mailing list that farmers can join and participate in. One community, *agrodev*, is aimed at helping Indonesian farmer groups with market access and promoting sustainable livelihoods through social networking. The other one, *indosl*, is an Indonesian watchdog network *Pesticide and Transgenic Network*, that focuses its concern on monitoring the use of chemical pesticide and transgenic organisms in

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<sup>23</sup> This case study aims to look at more detailed accounts on the strategic implementations of the Internet in a rural NGO. This section is based on the survey and interview with YDA's Executive Director, Muhammad Riza (30/11/2005), and also appears in Nugroho (2007b).

<sup>24</sup> *SatuDunia* is a newly established Indonesian node of the global network OneWorld.net ([www.oneworld.net](http://www.oneworld.net)), which was established since 1995 and currently has more than 1,600 partners internationally. *SatuDunia* is an initiative of HIVOS, Yayasan Jaring and OneWorld UK and was officially set-up on 16 December 2006. See <http://satudunia.oneworld.net/article/view/144597/> (viewed 20 June 2007).

<sup>25</sup> Recall the integration of rural sector within WTO regime through AOA, as outlined in Section 2 above.

<sup>26</sup> Ample studies on the literature on poverty demonstrate that land tenure or land ownership is a critical factor implicated in poverty incidence. There is also effect of out-migration of productive labour from villages to urban and sub-urban areas in search of work, mainly in industrial sector (Aidit, unknown; Reynolds, 2002; Tjondronegoro, 1984).



the country<sup>27</sup>. Although these online communities (possibly the first of their sort in Indonesia) are formally set up to help disseminate important agricultural-related issues to its NGO networks, YDA also encourages farmers to be active users of the Internet, to be aware of the global issues in agriculture and rural development, and to engage with international farmers' networks as the Internet has become increasingly available in some villages through *warnet*/telecentres<sup>28</sup>. The result of this effort, for YDA, is sometimes beyond expectation (see Tukimin's experience in Box 1).

YDA itself has reaped the benefit of Internet use. There are three important aspects of such Internet use to consider. *One*, the Internet is a resource to improve effectiveness as it helps the organisation to access sources of information and is important for communication purpose. YDA's staff have become familiar in using email not only for regular communication with their colleagues and networks, but also for reporting activities; information searching through the WWW has become common practice to help with participatory research and advocacy work. *Two*, the Internet has been a means by which both the NGO and the farmers with whom they work can become embedded in national and international movements. For example, the change of YDA's website from a show-window-type of website into *blog-styled* website reflects the vision of a shared and networked community. Furthermore, using email for internal communication and external networking has proven to be beneficial for YDA and its beneficiary groups, being involved in the rural movement both nationally and internationally. *Three*, despite this, the adoption and use of technology is not a straightforward process. There is a gradual process of mastering, usually known as 'social learning', or *pendampingan* (literally means 'companionship') through which staff who use the Internet less intensively are accompanied by others who use more intensively. This learning process, apparently, does not stop at organisation level.

*Pendampingan* [(companionship)] is the best way [to work with our beneficiaries]. Unfortunately, our NGOs colleagues, to our observation, are still minimal in sharing farmers' issues. Only few do it properly. Whereas we know that there are abundant issues related to farmer and rural development out there, at national and global scale ... like genetics engineering or [chemical] pesticide. ... That's why I think we should help these [NGOs] to use the Internet more strategically in long-term perspective, and not just for [organisations'] visibility and social status. Because, in many cases, although they can access email and Internet [WWW] they still come to us, YDA, to ask questions to which the answers can actually be found in the Internet very easily. I wonder why this happens (Muhammad Riza, interview, 30/11/2005)

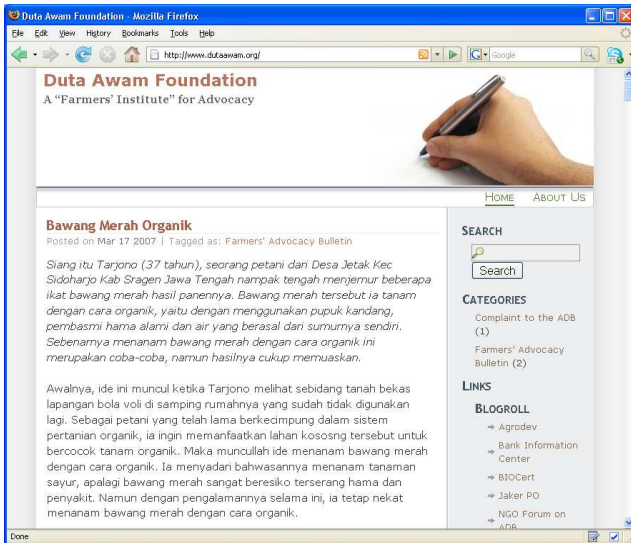
It seems that by creating space for social learning, both at organisation and network level, familiarisation with the Internet becomes much easier for the organisations and networks, and the benefit of such technological implementation can also be enjoyed relatively more quickly, especially by the beneficiaries they work with: the farmers.

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<sup>27</sup> See <http://agrodev.multiply.com> and <http://indosl.multiply.com>. The mailing list is <http://groups.yahoo.com/group/agrodev/>

<sup>28</sup> *Telecentre*, or *warnet* (in Indonesian), literally means *internet kiosk*. It is a public internet access points often available in areas where internet infrastructure is not well developed (James, 2006). Lim argues that to understand 'Indonesian Internet' is to understand *warnet* (Lim, 2002; 2004; 2006).

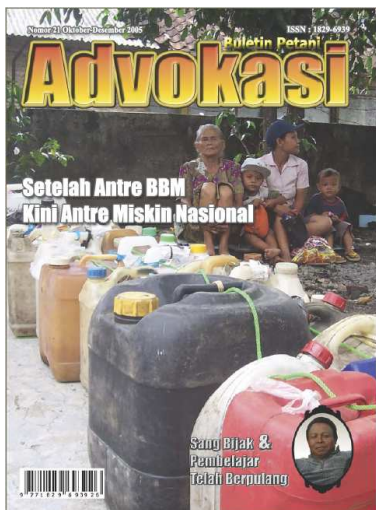
## Box 1. YDA and Advocasi



**About the organisation.** Yayasan Duta Awam (YDA), set up in Solo, Central Java in 1996, is a NGO working on the issue of farmers advocacy and civil society empowerment. Working with 16 full-timers, YDA aims particularly to empower the farmers so that they can advocate themselves independently in the future, when agricultural and rural development issues are projected to escalate politically in Indonesia. This goal is to be achieved through three main strategic activities: participatory research and monitoring, stakeholder dialogue forums and grassroots media. As a "Farmers' Institute for Advocacy" YDA has formulated its strategy to empower and increase farmers' capacity through educations, trainings and mobilisation; advocacy; development of public discourse; database; and capacity building for institutions and organisations. To help running the organisation, YDA has been using the internet since 1998, when Internet was firstly introduced to public in Solo and was probably the first NGO in the area which adopted the Internet.

**Internet use for communication and networking.** For YDA, the main reason for using the Internet was plain: the increasing need for up-to-date information, both for the organisation and mainly for its beneficiaries, namely farmers and rural communities. As a part of the organisation's strategy, the Internet is introduced to YDA's staff, networks, and their beneficiaries: local farmers. Not only is the farmer's bulletin "Advokasi" made available online, but despite difficulties, YDA has also endeavoured to pioneer online communities for farmers and its NGO networks. The result of YDA's engagement with the Internet sometimes goes beyond what can be imagined. It would certainly be simplifying to claim that farmers' broadened understanding about global political-economic issues surrounding agricultural development and policy is the result from YDA's (and its network's) use of the Internet. But certainly it is difficult, if not impossible, for YDA and its networks to keep updated with the latest development in agricultural development policy, including the global issues surrounding it, if they do not adopt the Internet.

**Building farmers capacity.** To take a case, Tukimin is an ordinary farmer from Kiram Village, Banjar, and a regular reader of *Advokasi*. He once confidently argued with an Asian Development Bank (ADB)'s project executor when he saw the mismatch between the planning and the actual project undertaking during CERD project. He insisted that there should be participatory approach in the project instead of top-down implementation, because "This project is being financed by the government's debt to ADB, and it is us, the people, who will have to pay it back", replying against the statement of an ADB's engineer that the project was possible merely because of ADB's fund (Advokasi, 2007:12). Using the Internet for dissemination of awareness and broadening perspectives, YDA helps farmers like Tukimin to understand the direct impact of globalisation in their local context.



"After queuing for oil, now, queuing for national poverty"; "Public participatory advocacy in Riau: Advocacy was successful and not anarchic"; "Tip for planting coffee and rice"; "Participatory development in Talang Bunut"; "Is state still there for the poor?"  
 Source: Farmer's bulletin *Advokasi*, Edition 21, downloaded from <http://www.dutaawam.org/> (15 May 2007)

For rural NGOs like YDA, the Internet can be used as more than a mere communication tool. More importantly, it could be an important means for empowerment: to build farmer's capacity as an active citizen who has the voice and the rights to be involved in the very process of rural development where they belong – which is the heart of reform in rural sector in Indonesia. (\*)

Source: Survey, observation and interview with YDA's Executive Director, Muhammad Riza (30/11/2005)



## 5. REFLECTION

The survey on the use of the Internet in NGOs and the case study of YDA brings some points of reflection. *Firstly*, the distinction between ‘evolutionary’ and ‘revolutionary’ views of technology<sup>29</sup> is made. Although the advent of Internet technology is considered to be revolutionary in that it fundamentally empowers the role of NGOs in social movements as conceived by them in the survey (recall the discussion of Fig. 4 and Fig 5.)<sup>30</sup>, the adoption of it seems to follow an evolutionary path. The explanation lies in the nature of the social engagement of NGOs: using technology for cyberactivism is important (as theorised by McCaughey and Ayers, 2003), but it is only secondary to direct interaction and engagement with the beneficiaries. This is a major point in the case of the NGO movement in the rural sector. Using the Internet for rural empowerment is important, but the real rural reform takes place in the ‘off-line’ realm: the real engagement with farmers and rural issues and activism –as clearly shown in the case of YDA. To take the reflection further, on the one hand, the substitution effect of the Internet is not fully realised most probably because of the problems of access availability. On the other hand, using the Internet as a communication tool does not mean replacing ‘older’ technologies like the telephone or fax; neither does it mean swapping printed bulletins for online newsletters for the dissemination of information and managing organisational networks, precisely because the ‘older’ technologies are a mediation for a more ‘direct’ engagement and interaction with beneficiaries and networks.

Secondly, the *adaptation of technology means building organisational capability*. From close observation of Indonesian NGOs like YDA, this study suggests that what characterises the adoption and use of technology like the Internet is the effort to build organisational capability, particularly to configure and reconfigure the technology according to their needs<sup>31</sup>. At empirical level, as shown both by the survey and case study, strategic use of the Internet in civil society means that the technology is recognised as having the potential to be a platform for strategic activities (like campaigning, civic engagement, fundraising, coalition building, etc). What matters in the use of the Internet in NGOs, then, is whether or not these potentials can be realised and thus become an advantage for strategic use. It is imperative that Indonesian NGOs build their capabilities in strategically using the Internet by configuring and reconfiguring both technological and organisational properties. As shown in the case of YDA, the development of these capabilities (and their aspects) depends on the provision of continuous learning in the organisations and networks through social learning or ‘companionship’. Such a process is substantial for change management issues in an information system strategy (Galliers, 2004; 2007), for it addresses not only strategies (and strategising) but also the unanticipated consequences of the strategic use of the Internet in NGOs.

Thirdly, there are *two strategic uses of the Internet in rural NGOs: networking and empowerment of actors*. Using the Internet is more than just applying technology for a particular purpose, more importantly, it is about using technology to support the strategic and political work of NGOs (Surman and Reilly, 2003; Warkentin, 2001). However, it should be noted, that the strategic realm of NGO –and other civil society groups—movements actually stem from ‘traditional strengths’ of the civil society sector, like pertinent issues and concerns, tactical social and political orientation, and distinctive activities (Deakin, 2001; Keane, 1998). Using the Internet does endorse these strengths and make potencies more realisable, but it does not replace them.

The data and the case presented here suggest that rural NGOs have potential –and can indeed realise such potential— to use the Internet strategically and politically in promoting rural sector reform. One particular strategic use revolves around the idea of *networking the movement*. While networking with global civil society is undoubtedly important today, in order to take rural sector reform onboard, networking with local and national organisations has never been as significant. Why is this? Social movement is all about networking: of ideas, of awareness, of organisations, and of activism (Diani, 2003; McAdam, 2003). It is thus important, from an NGO perspective, to channel the grand policies of rural development (as may have been reinvigorated by the government) into local concerns and to widen the direct involvement of organisations and their beneficiaries towards the implementation of such policies. In this sense, networking is important not only to help expand and animate the networks themselves, but also to facilitate the understanding about the complex nature of rural development issues in the local context. Fuelled by the use of technological artefacts like the Internet, a network of social movement in a country like Indonesia is no longer just an instrument for civil society to mobilise resources and action: it has become a locus of power in society, a powerful fabric

<sup>29</sup> See, for example, Freeman and Perez (1998).

<sup>30</sup> This points are also observed by some scholars (e.g. Harney and Olivia, 2003; Hill, 2003; Hill and Sen, 2005; Lim, 2003b)

<sup>31</sup> This is what this study defines as ‘building configurational capability’ in this case: NGOs have to build their capacity and ability to arrange their use of the Internet by modifying its settings and configurations, including hardware and software, and at the same time, also modifying organisation’s routines like working arrangements, internal policies, etc. There are four aspects of *configurational capabilities* observed when NGOs implement the Internet: (i) cognitive (configuring distributed knowledge of different kinds), (ii) organisational (configuring distributed actors and other repositories of knowledge and know-how), (iii) design (configuring functional features and solutions), and (iv) affective (configuring motivation, shared value, issues and concerns). The first three aspects was also observed by scholars who also found similar capabilities when researching low-tech companies in PILOT project (Bender, 2005; 2006; Bender and Laestadius, 2005; Hirsch-Kreinsen et al., 2005). The affective aspect, which may have escaped their attention because of the nature of the organisations being studied, appears very strongly in this study. These aspects together build the organisation’s configurational capabilities.

of social change. The Internet itself, working as driver of these networks, as a direct consequence, should be viewed as more than just a communication tool.

Another strategic use of the Internet in rural NGOs is the *empowerment of beneficiaries*. The case of YDA shows that through Internet use, NGOs can really empower their beneficiaries by broadening their perspectives towards various global issues that resonate with their local context. Just like most Indonesian NGOs, which do not have the luxury of being able to afford an IT specialist to help them use the technology, YDA chose social learning as strategy for Internet implementation because it suits the way NGOs work. The case further suggests that organisations could actually exploit and explore technology more effectively to improve operational management and provide strategic management information to achieve their missions and goals. More importantly, the use of technologies like the Internet can be used by NGOs to help their beneficiaries widen their perspectives about global issues which affect the very context of their work: rural development. This is of paramount important because a lot of problematic rural development issues at macro level need to be disentangled, and one way to do so is to articulate the issues in local circumstance and to understand the implication in context (Kwa, 2004; Raynolds, 2000).

As a final reflection, there is one critical note about these strategic uses: the Internet and its use in Indonesian NGOs cannot be seen as homogenous. While large parts of the population do not have access or capabilities to use the Internet, NGOs still need to “translate” and “interpret” un-adapted content of the Net. That it is true not only for technicalities like language, also in terms of the ‘context’: global issues need to be rearticulated and made to be understood within the local context. Only if such problems can be properly tackled, the use of the Internet can significantly impact Indonesian NGOs’ relationship with their national and international partners and to empower their beneficiaries.

## 6. CONCLUDING NOTES

Rural sector reform, it is claimed, has been a major agenda of Indonesia’s *reformasi*, both by the government agencies and by non-government institutions. However, NGOs have always been very critical of various policies in rural development imposed by the government, mainly because NGOs view –from past experiences and future projections— that these policies are not in favour of farmers and rural communities in the long term. While, for the government, rural reform generally means ‘development’, for NGOs this implies ‘empowerment’. Consequently, while rural communities are seen as ‘objects of development’ by the government (as in the notion of ‘food security’), they are ‘subject’ in the eyes of NGOs (as in ‘food sovereignty’). The implication of this is fundamental: rural sector reform is not only about building rural communities through agricultural and rural development in the grand political economy scenario as largely envisaged by the government. Rather, it is about reclaiming farmers’ and rural communities’ social, political and economic rights to determine their own life; it concerns elevating standards of living in rural areas; it involves protection of the rural environment; and it invokes rural sector sustainability –objectives which are commonly shared among Indonesian NGOs, particularly those who work in the rural sector.

It is important to take this into account when examining how rural NGOs use the Internet to help them to take on board rural sector reform in their activism, because both their adoption of the technology and their response towards the issue cannot be taken for granted.

Evidence here suggests that not only does the Internet use impact upon NGO’s performance in terms of internal management, but more importantly, that such a use has contributed to the widening of organisational perspectives, expansion of organisational networks and thus the increase of organisational influences in the society, including in the furtherance of rural sector reform. In fact, this technological use can also, to some extent, be seen to be part of the strategy of Indonesian rural NGOs to build critical views towards policies and practices of rural development through their engagement with various civic groups, including farmers.

While this suggests strongly that the Internet has become a significant means for NGOs and their beneficiary groups to actively participate in social transformation, direct engagement and interaction with the beneficiaries is irreplaceable, for the fabric of social change is, in the context of Indonesia, often localised in the *offline* world. Although such a change may also be initiated in the *online* world, as the Internet has become a sphere to in which to exist and to act (and thus ‘cyberspace’ –a ‘spatial’ dimension in which life exists (Graham, 1999)), for rural NGOs this may not be always the first focus. It is not because NGOs do not understand the importance of technology, but because technological use is secondary to the real engagement with rural communities.

Nevertheless, working largely in local contexts, while maintaining global networks, has made Indonesian rural NGOs, to some extent, able to spot increasing disillusionment about rural sector reform, especially when more a global perspective is taken (e.g. Kwa, 2004; Raynolds, 2000). Being able to address adequate criticism towards rural sector development (as imposed by the government in favour of more global control) is not always easy for many Indonesian rural NGOs. This is why *national* networking among Indonesian NGOs remains important.

Finally, there are some strategic areas in NGOs activism where the Internet can, and has been, used strategically and politically to advance NGO involvement in rural sector reform. However, there is a real need for further thinking and reflection focusing on what can actually be done with the strategic implementation of the Internet within organisations working in rural issues generally.

## APPENDIX

### Appendix 1.

#### Analysing adopter category using MIMIC-LCA

The multiple indicators multiple causes (MIMIC) latent class analysis (LCA) model is a classification method when researchers cannot find a “gold standard” to classify participants. The MIMIC-LCA model includes features of a typical LCA model and introduces a new relation between the latent class and covariates (MacCutcheon, 1987; Magidson and Vermunt, 2002; Vermunt and Magidson, 2002).

In this case, the covariates are: length of the Internet use (*intsinc*), PC use (*pcsinc*), IT expenditure as percentage of annual turnover (*itexpproc*), and IT expenditure in nominal (*itexpnom*); while variables being estimated are the demographical data: age of organisation (*est*), no of staff (*staff*), and annual turn over (*ato*). The task is to find out the patterns of internet adoption and their stratification based on demography variables, given that there are many items and multiple stratification factors. The criteria for choosing among various models is based on the goodness of fit, with the lowest BIC (Model 1) is preferred (Magidson and Vermunt, 2002; Vermunt and Magidson, 2002).

#### The goodness of fit of the MIMIC model.

Model	LL	BIC(LL)	Npar	L <sup>2</sup>	Df	p-value	Class. Err.
2 class	-795.019	1816.7598	42	1096.2965	179	1.50e-131	0.0395
3 class	-736.693	1851.2579	70	979.6461	151	2.00e-121	0.0568
4 class	-696.628	1922.275	98	899.5146	123	2.70e-118	0.0413

#### The profile of indicators.

	Class1	Class2		Class1	Class2
Class size	0.7556	0.2444	Class size	0.7556	0.2444
<b>Indicators</b>			<b>Covariates</b>		
<b>est</b>			<b>pcsinc</b>		
0-1yr	0.0431	0.0003	3-5 yr	0.3025	0.0451
1-2 yr	0.0493	0.0004	5-10 yr	0.3644	0.2431
10+ yr	0.2038	0.8581	<3 yr	0.1555	0
2-5 yr	0.2711	0.0023	>10 yr	0.0774	0.6885
5-8 yr	0.299	0.0717		0.1002	0.0233
8-10 yr	0.1336	0.0672	<b>intsinc</b>		
<b>staff</b>			3-5 yr	0.3309	0.0871
11-15	0.1478	0.0343	5-10 yr	0.2104	0.5356
16-20	0.0461	0.1303	<3 yr	0.2562	0.0218
21-25	0.0001	0.0575	>10 yr	0.0049	0.2633
6-10	0.3259	0.2658		0.1976	0.0922
<5	0.4798	0.0891	<b>itexpproc</b>		
>25	0.0003	0.4229	25-50%	0.1428	0.2995
<b>ato</b>			50-75%	0.0239	0.0186
1-2b	0.079	0.2935	<25%	0.6949	0.4798
100-500m	0.3541	0.1738	>75%	0.006	0
500m-1b	0.1556	0.1838		0.1323	0.2021
<100m	0.3809	0.0043	<b>itexpnom</b>		
>2b	0.0303	0.3446	100-500m	0.018	0.1112
			50-100m	0.0536	0.2608
			500m-1b	0.0179	0
			<50m	0.741	0.3926
			>1b	0	0.0186
				0.1695	0.2168

### Appendix 2.

#### Analysing Indonesian NGO’s issues and concerns and adoption pattern using MIMIC-LCA

Using exactly the same method as explained in Appendix 1, in this case, the covariates remain: length of the Internet use (*intsinc*), PC use (*pcsinc*), IT expenditure as percentage of annual turnover (*itexpproc*), and IT expenditure in nominal (*itexpnom*); while variables being estimated are the issues and concerns data: *ic\_env* (environment), *ic\_glob* (globalisation), *ic\_rural* (rural), *ic\_urban* (urban), *ic\_devp* (development), *ic\_hrights* (human rights), *ic\_justpec* (justice and peace), *ic\_democ* (democratisation), *ic\_gender* (gender), *ic\_child* (children and youth), *ic\_poverty* (poverty alleviation), *ic\_educ* (education), *ic\_disabl* (disable), *ic\_labour* (labour and trade union), *ic\_farmer* (farmer), *ic\_prof* (professional worker), *ic\_gov* (governance), *ic\_csemp* (civil society empowerment), *ic\_confres* (conflict resolution), *ic\_plural* (pluralism), *ic\_idigns* (indigenous rights), *ic\_ecosoc* (economic, cultural and social rights), *ic\_oth* (other issues). The results from multiple indicators multiple causes (MIMIC) latent class analysis (LCA) models and the profile are presented below.

### The goodness of fit of the MIMIC model.

Model	LL	BIC(LL)	Npar	L <sup>2</sup>	Df	p-value	Class. Err.
2 class	-2553.67	5420.4256	58	4421.7976	163	1.8e-811	0.0153
3 class	-2450.18	5407.792	94	4214.8303	127	1.3e-794	0.0258
4 class	-2363.57	5428.8913	130	4041.5957	91	1.7e-786	0.0384

### The profile of indicators.

	Class 1	Class 2	Class 3		Class 1	Class 2	Class 3
<b>Class Size</b>	0.6674	0.1973	0.1354	<b>Class Size</b>	0.6674	0.1973	0.1354
<b>Indicators</b>				<b>Indicators</b>			
<b>ic_env</b>				<b>ic_educ</b>			
0	0.5716	0.4027	0.0051	0	0.5788	0.559	0.0427
1	0.4284	0.5973	0.9949	1	0.4212	0.441	0.9573
Mean	0.4284	0.5973	0.9949	Mean	0.4212	0.441	0.9573
<b>ic_glob</b>				<b>ic_disabl</b>			
0	0.8782	0.4172	0.2107	0	0.9661	0.9995	0.6334
1	0.1218	0.5828	0.7893	1	0.0339	0.0005	0.3666
Mean	0.1218	0.5828	0.7893	Mean	0.0339	0.0005	0.3666
<b>ic_rural</b>				<b>ic_labour</b>			
0	0.7605	0.6886	0.1612	0	0.8936	0.5822	0.4291
1	0.2395	0.3114	0.8388	1	0.1064	0.4178	0.5709
Mean	0.2395	0.3114	0.8388	Mean	0.1064	0.4178	0.5709
<b>ic_urban</b>				<b>ic_farmer</b>			
0	0.905	0.7422	0.2401	0	0.6726	0.6555	0.0413
1	0.095	0.2578	0.7599	1	0.3274	0.3445	0.9587
Mean	0.095	0.2578	0.7599	Mean	0.3274	0.3445	0.9587
<b>ic_devp</b>				<b>ic_prof</b>			
0	0.5659	0.6272	0.0066	0	0.959	0.9764	0.5684
1	0.4341	0.3728	0.9934	1	0.041	0.0236	0.4316
Mean	0.4341	0.3728	0.9934	Mean	0.041	0.0236	0.4316
<b>ic_hrights</b>				<b>ic_gov</b>			
0	0.7764	0.0299	0.0399	0	0.8184	0.5605	0.4299
1	0.2236	0.9701	0.9601	1	0.1816	0.4395	0.5701
Mean	0.2236	0.9701	0.9601	Mean	0.1816	0.4395	0.5701
<b>ic_justpec</b>				<b>ic_csemp</b>			
0	0.8419	0.2439	0.074	0	0.5163	0.2241	0.1035
1	0.1581	0.7561	0.926	1	0.4837	0.7759	0.8965
Mean	0.1581	0.7561	0.926	Mean	0.4837	0.7759	0.8965
<b>ic_democ</b>				<b>ic_confres</b>			
0	0.782	0.1033	0.1059	0	0.8924	0.6059	0.2333
1	0.218	0.8967	0.8941	1	0.1076	0.3941	0.7667
Mean	0.218	0.8967	0.8941	Mean	0.1076	0.3941	0.7667
<b>ic_gender</b>				<b>ic_plural</b>			
0	0.711	0.2742	0.0735	0	0.9312	0.7507	0.1986
1	0.289	0.7258	0.9265	1	0.0688	0.2493	0.8014
Mean	0.289	0.7258	0.9265	Mean	0.0688	0.2493	0.8014
<b>ic_child</b>				<b>ic_idigns</b>			
0	0.7512	0.5723	0.1091	0	0.9032	0.7488	0.3728
1	0.2488	0.4277	0.8909	1	0.0968	0.2512	0.6272
Mean	0.2488	0.4277	0.8909	Mean	0.0968	0.2512	0.6272
<b>ic_poverty</b>				<b>ic_ecosoc</b>			
0	0.6424	0.2548	0.0053	0	0.7567	0.1437	0.0716
1	0.3576	0.7452	0.9947	1	0.2433	0.8563	0.9284
Mean	0.3576	0.7452	0.9947	Mean	0.2433	0.8563	0.9284

	Class 1	Class 2	Class 3
<b>Class Size</b>	0.6674	0.1973	0.1354
<b>Covariates</b>			
<b>pcsinc</b>			
3-5 yr	0.2305	0.3224	0.1653
5-10 yr	0.3106	0.4337	0.3107
<3 yr	0.148	0.0267	0.0996
>10 yr	0.2255	0.1622	0.3233
	0.0853	0.0549	0.101
<b>intsinc</b>			
3-5 yr	0.2298	0.3716	0.3324
5-10 yr	0.2875	0.3399	0.2267
<3 yr	0.2261	0.1974	0.0674
>10 yr	0.0679	0.022	0.1346
	0.1887	0.0691	0.2389
<b>itexpproc</b>			
25-50%	0.1685	0.2757	0.1047
50-75%	0.0135	0.023	0.0673
<25%	0.6418	0.701	0.5607
>75%	0.0068	0	0
	0.1694	0.0003	0.2673
<b>itexpnom</b>			
100-500m	0.0262	0.0716	0.068
50-100m	0.1121	0.1033	0.065
500m-1b	0.0068	0.046	0
<50m	0.6645	0.6891	0.566
>1b	0.0068	0	0
	0.1836	0.0899	0.301

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