THE LINKAGE BETWEEN INDUSTRIALIZATION, URBANIZATION, AND TOURISM: LESSONS FROM ASEAN AND INDONESIA[1]

Richard Patty,
Mudrajad Kuncoro

ABSTRACT

The emergence of geographic concentration or clustering has become a major topic in the literature of economic geography, business strategy and national competitiveness. However, we still know little of where and why the phenomenon of clusters across provinces and industries. This paper explores the driving forces underpinning tourism clusters in Indonesia by using correlation, trends, and scatter diagrams. Our analysis finds that industrialization and tourism (reflected by trade-hotel-restaurants) have become main the driving force behind Indonesia's rapid rates of urbanization during 1960-2014. As urbanization rate in Indonesia increased from 15% (1960) to 53% (2014), industrialization and tourism increased around 7-28% and 11-71% respectively during the same period. Some key findings using correlation analysis show the interlinkages among industrialization, urbanization, and tourism as follows: (1) the higher the urbanization in a province, the higher share of manufacturing industry to Gross Regional Domestic Products (GRDP); (2) the higher the share of manufacturing industry in a province, the higher the share of trade-hotel-restaurant to GRDP; (3) the higher the number of urban dwellers in a province, the higher the share of trade-hotel-restaurants to GRDP, and vice versa. The major contribution of this paper has been to incorporate "space" explicitly into economic analysis of clusters and uneven development of industrialization, urbanization, and tourism within a country.

Keywords—urbanization, industrialization, tourism, correlation

JEL classifications: R12, J24, J61

Introduction

The most striking features of the geography of economic activity is *concentration* and *unevenness*. Spatial concentration of economic activities within a country indicates that industrialisation constitutes a geographically selective process. Within the U.S., for illustration, the majority of manufacturing has been concentrated in a relatively small part of the country, within the so-called manufacturing belt, since the second half of the nineteenth century (Krugman, 1991: 11-4). Spatial concentration is also found in the UK's Axial Belt of industry and the manufacturing belt of German Ruhr (Hayter, 1997: 45). Whereas, in many developing countries, the uneven spatial distribution of both industry and population gathers around capital cities such as Bangkok, New Delhi, Mexico City, Sao Paulo, and Jakarta, which engender a spatial system based on the accumulation of capital and labour in urban agglomerations.

The issue of geographic concentration or clustering has become a central attention in the literature of economic geography (Krugman, 1998), business strategy and national competitiveness (Porter, 1998, Porter & Solvell, 1998), and regional studies (Maskell *et al.*, 1997, Scott & Storper, 1992). However, we still know little of how common and widespread the phenomenon of agglomeration across regions, cities, and industries. Ironically, in mainstream economics, prior to the 1990s, economic geography—the study of where economic activity takes place and why—was quite surprisingly neglected (e.g. Fujita *et al.*, 1999: 1-2, Krugman, 1995), with only a few notably exception (e.g. Chinitz, 1961, Hoover, 1936, Isard, 1956).

Concentration of economic activities in Indonesia has been located overwhelmingly and geographically in Jawa and Sumatra Island since 2000. Statistics Indonesia shows the spatial structure of the Indonesian economy has been dominated by provinces in the Jawa Island, which contributed to the Indonesia's GDP of 58-61%, followed by about 21-24% of the island of Sumatra (BPS, 2012; 2016). Indonesia Eastern Region only gets the rest about 20%. Table 1 shows the role of the islands in the formation of the national GDP in detail.

The predominant role of Jawa is largely driven by industrial sector. Most of Indonesian modern manufacturing establishments (about 81-83%) have persisted to cluster in Jawa and to a much lesser extent, Sumatra island (Kuncoro, 2007). Even when we classify all provinces of Indonesia into five main islands (i.e. Sumatra, Jawa, Kalimantan, Sulawesi, Eastern Islands), Jawa and Sumatra provided more than 90% of Indonesia's manufacturing employment (and value added) over the period (Kuncoro, 2012b). The share of Jawa's employment tended to decline slightly, while Sumatra's share tended to increase substantially. Other main islands in Indonesia played a minor role in the Indonesia manufacturing employment.

---

[1] This paper is accepted in the Kuala Lumpur International Business, Economics and Law Conference, 17-18 December, 2016, in Kuala Lumpur, Malaysia.

Table 1: Percentage share of island to Indonesia's GDP, 2000-2016

Island**	2000	2004	2010	2012	2016*
Sumatra	22.66	22.25	21.07	23.60	22.02
Jawa	58.95	59.70	61.05	57.50	58.40
Bali & NusaTenggara	2.71	2.77	2.77	2.40	3.18
Kalimantan	9.55	9.29	8.57	9.50	7.72
Sulawesi	4.17	4.35	4.81	4.80	6.15
Maluku & Papua	1.96	1.65	1.74	2.20	2.53

*Third quarter
** Sum of GRDP Provinces within each island
Source: Calculated from BPS (2012; 2016)

Jawa with more than half of Indonesians inhabitants offers a huge potential market and is importance by its own rights. In terms of total population, Indonesia has been the fourth biggest country in the world after China, India, and USA. The number of Indonesian populations increased from 179.4 millions in 1990, 194.8 millions in 1995, 206.2 milllions in 2000, 237.6 millions in 2010, and projected to 255.5 millions in 2015 (BPS, 2012; 2016). Yet the increasing number of inhabitants was not followed by an equal distribution of population geographically. In 2015, Jawa Island resided by around 56.8 per cent of Indonesia population but it has area of only 7% of total area of Indonesia. With a current population of 145 millions now, Jawa is not only the 'heartland' of economic activities but also the world's most populous island amongst more than 17,000 islands in Indonesia.

The questions may arise: where have economic activities tend to clusters geographically? Do urbanization coincide with industrial and tourism clusters? How can measure the interlinkages among industrialization, urbanization, and tourism?

This paper attempts to address these unresolved research questions. First, the urban agglomerations and industrialization in the world, ASEAN, Indonesia will be introduced. Then, the interlinkages among industrialization, urbanization, and tourism in Indonesia will be discussed.

THE EMERGENCE OF URBANIZATION AND INDUSTRIALIZATION

The world is becoming increasingly urban. By 1995 almost half of the world's population lived in urban areas (UN, 1998: 2), the level of urbanization is expected to rise from 52% in 2011 to 67% in 2050 (UN, 2014: 4). Table 2 shows that the more developed regions are expected to see their urbanization rate increase from 78% in 2011 to 86% in 2050 while in the less developed regions, the proportion urban will likely increase from 47% to 64% over the same period. Urbanization rates in less developed regions have been higher, even tripple, than those of more developed regions since 1970.

Table 2: Percentage urban population and rate of urbanization in the World, 1950-2050

Development group	Percentage urban					Rate of urbanization (percentage)			
	1950	1970	2011	2030	2050	1950-1970	1970-2011	2011-2030	2030-2050
World	29,4	36,6	52,1	59,9	67,2	1,09	0,86	0,74	0,57
More developed regions	54,5	66,6	77,7	82,1	85,9	1,01	0,38	0,29	0,23
Less developed regions	27,6	25,3	46,5	55,8	64,1	1,81	1,48	0,95	0,69

Source: UN (2014)

The urbanization rate in South East Asia is relatively higher than that of other Asian countries. During the last six decades the degree of urbanization, measured as the percentage of population residing in urban areas, has approximately tripled in the ASEAN countries, even quintupled for Indonesia (Table 3). In 1950 the degree of urbanization in the ASEAN countries was 15 percent, slightly below than that of other Asian countries. In 2000 most of ASEAN countries experienced a relatively higher degree of urbanization than the average Asian countries. However, at the world level, the degree of urbanization in ASEAN was still low.

Table 3: Urbanization by Southeast Asian countries, 1950-2030

	Urbanization degree (%)				
Country	1950	1975	2000	2015*	2030*
Brunei Darussalam	26,8	62,0	73,9	82,8	87,0
Cambodia	10,2	10,3	16,9	26,1	36,9

Timor Leste	10,0	8,9	7,4	9,5	15,2
Indonesia	12,4	19,3	42,0	57,8	67,7
Laos	7,2	11,1	19,3	27,4	38,2
Malaysia	20,4	37,7	61,8	71,0	77,6
Myanmar	16,2	23,9	28,0	37,6	49,1
Philippines	27,1	35,6	58,5	69,2	76,1
Singapore[1]	100,0	100,0	100,0	100,0	100,0
Thailand	16,5	23,8	31,1	36,7	47,0
Vietnam	11,6	18,9	24,3	32,4	43,2
Total	15,4	23,4	39,6	51,2	60,7

Note.*Projection.[1] Singapore is a city state with 100% of its inhabitants living in urban region.
Source: UN (2004; 2014)

Urbanization in Indonesia increased tremendously following the country's rapid development in the 1970s. Since then, Indonesia has been facing high urbanization rate driven by rural-urban migration. In 1950, 15% of Indonesia's population lived in urban areas. In 1990, 40 years later, this number is more than tripled to 42%. Indonesia took only another 15 years to increase the urban population to 57.8% in 2015, higher than those of ASEAN countries (51,2%).

Industrialization has become main the driving force behind Asia's rapid rates of urbanization. Table 4 indicates to what extent manufacturing sector has played a key role in GDP, export, and import. Except in the obvious case of resource-based industries, manufacturing has shown a strong tendency to locate in and around main cities. Agriculture and manufacturing have jostled for space around urban center, blurring the accepted distinction between rural and urban (McGee, 1991). Indeed, industries tend to agglomerate in areas where the localized capabilities are well suited to cater for their need, and they may benefit from spatial proximity. Cities offer various advantages in terms of higher productivity and incomes that attract new investment, new technology, educated and skilled workers to a disproportionate degree (Malecki, 1991).

Table 4: GDP share, export and import share of manufaturing sector: ASEAN countries, 2008 and 2009

Country	GDP Share[*)]		Employment Share[**)]		Export Share		Import Share	
	2008	2009	2008	2009	2008	2009	2008	2009
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Brunei Darussalam	54,8	-	5,8[1)]	-	3,5	-	79,0	-
Cambodia	30,1	26,8	9,5[2)]	-	96,5	97,3	82,7	80,5
Indonesia	42,1	41,7	12,2	12,1	50,2	49,5	67,8	70,3
Lao PDR	-	-	-	-	67,5	65,4	61,7	64,2
Malaysia	38,9	36,6	18,1	16,1	70,5	73,6	80,8	82,2
Myanmar	-	-	8,8[3)]	-	25,8	28,3	67,8	70,1
Philippines	32,8	31,8	8,4	8,3	57,9	64,2	49,2	53,6
Singapore	31,4	31,4	16,8	15,7	71,5	75,4	66,3	68,9
Thailand	48,0	47,0	13,9	13,7	79,4	75,4	66,3	68,9
Vietnam	41,8	41,7	14,0	14,4	46,5	79,0	73,9	75,1
Total in Percent					66,6	67,7	67,9	70,8
Total in Million US $					650.688	548.729	624.773	514.305

Source: ASEAN Secretariat (2010)

Next section will explore the interlinkages among industrialization, urbanization, and tourism in Indonesia as one of countries in ASEAN that experienced fast urbanization rate.

LITERATURE REVIEW
Industrial clusters are often associated with industrial districts. The empirical studies of SCE clusters have been triggered by the success of small firm industrial districts in Italy, especially in a region called the Third Italy (Tuscany, Emilia Romagna, and nearby regions) since the early 1980s. Some major features of the structure of manufacturing in this Italian industrial district, namely: geographic concentration, sectoral, specialization, and strong networks of small firms. Similar characteristics have been observed in Silicon Valley (USA), West Jutland (Denmark), and Baden-Wurttemberg (Germany), Madrid, Fuenlabrada, Castellon, Mondragon and Valles Oriental (Spain) (Pyke and Sengenberger, 1992); and some cases from Africa, Asia and Latin America (Hayter, 1997; Nadvi and Schmitz, 1994; Schmitz, 1995).

Clusters are defined most generally as geographic concentrations of the same manufacturing subsector (Kuncoro, 2000: chap.2; Kuncoro, 2012: chap 2). What emerge are spatially clustered networks of mostly small and cottage manufacturing establishments. The literature calls these industrial districts. Such "districts" have become a focus for the study of how and where industries locate and cluster. Alfred Marshall was the first economist to observe the disposition of certain kinds of industries to

localize in specific areas of England, Germany and other countries (Becattini, 1990; Bellandi, 1989). He defined an industrial district as a specialized geographical cluster of production (Marshall, 1919). These clusters represent "traditional" or Marshallian industrial districts and are commonly found in rural regions and company towns.

The recent literature on clusters argues that new types of industrial districts have emerged. Theorizing about new industrial districts (NID) of flexibly specialized firms, including prototypical forms such as the Emilia-Romagna region of Italy or Silicon Valley in the United States, symbolizes this move beyond neoclassical agglomeration theory to explain the dynamics of industrial districts. Markusen (1996), for example, based on a survey of US metropolitan growth during 1970-1990, introduced at least three types of additional industrial districts, namely the hub-and-spoke districts, satellite industrial platform districts, and state-centered districts. Recent literature also argues that the Marshallian external economies alone are insufficient to explain cluster development. Theories of industrial district neglect the conscious pursuit of joint action, overrate the success of small enterprise clusters and underrate the strength of the large corporation, and fail to distinguish between incipient and more advanced stages of industrialization (Schmitz & Nadvi, 1999: 1504-7).

The role of sub-national region, province, district, and city in affecting the location of economic activity would appear to be more important. Numerous studies from the field of socio-economic restructuring and structural change have emphasized recently the growing importance of regions and their new role as basic economic actors in the configuration of a new spatial pattern of economic development (Rodriguez-Pose, 1998: chap.3).

Table 5 summarizes previous empirical studies. However, there are no studies that explore the linkages between urbanization, industrialization, and tourism cluster using data at sub-national level or regions within a country. Unlike most previous studies, this study used combination of regional spatial data and correlation analyses to identify the linkages among industrialization, urbanization, and tourism in Indonesia using provincial data. Industrialization, tourism, and urbanization is a selective process geographically. This study will try to fulfill the gaps, especially studies with respect to regional economic performance, tourism clusters, industrialization, and urbanization for Indonesia.

ROLE OF INDUSTRIALIZATION, URBANIZATION, AND TOURISM IN INDONESIA

With 255.5 million inhabitants in 2015, Indonesia offers a huge potential market. Indonesia is recorded as the world's fourth most populous country after China, India and the United States, and as the largest Moslem population in the world. Indonesia promotes 'unity in diversity' where its people can live together in peace and harmony, and also an example of how democracy can go hand in hand with religiosity especially Islam. MSU (2013), using Market Potential Index, put Indonesia ranked 16th based on eight dimensions that is chosen to represent the market potential of a country among emerging economies comprise more than half of the world's population.

Table 5: Previous empirical studies

No.	Researcher	Methods of Analysis	Findings
1.	Tsang & Yip (2009)	OLS regression	The results suggest that only high star-ranking joint venture hotels contribute to heightened demand while hotels of all star rankings benefit similarly from agglomeration.
2.	Rogerson (2010)	Explorative studies	Butic hotels have clustered in residential areas with high income and CBD (i.e. Cape Town and Johanesburg), around periphery urban areas with high income, and close to International Airport of Tambo, CBD Johannesburg, and *heritage* tourism clusters.
3.	McCann & Vroom (2010)	Explorative studies	Incumbent establishments price higher when facing entrants whose agglomeration benefits are more likely to outweigh their competitive effects. This association is stronger for incumbents that have greater experience with entry.
4.	Gülcan, *et al.* (2009)	Location quotient & econometric model	A comparison of regional structures of the regions reveals that 30% of tourism licensed accommodation establishments are located in the Aegean Region. The results from the location quotient estimates for 1995 and 2001 reveal that the Aegean Region is highly specialized in the tourism industry, particularly when the spatial distribution of the hotels is observed. Value added created by hotels of the Aegean Region is higher than the country average as well. In addition, the econometric model shows that the regional value added created by the tourism sector between 1995 and 2001 is significantly enhanced by public policies that focus on the sector.
5	Wahyuddin (2004)	GIS and logistic regression	Manufacturing industries tended to clustered in Jawa, Kalimantan, and Sumatra. Resource intensity, output, population, and crisis are associated with industrial clusters.
6	Kuncoro &	Logistic regression,	Promotion activities, technology, number of employees, abd

	Supomo (2003)	descriptive analysis	age of firms affected market orientation of ceramic companies in Kasongan.
7	Arifin & Kuncoro (2002)	GIS, regression, convergence analysis	Identification of industrial cluster in East Jawa by using thematic maps and industrial density in terms of employment and value added.
8	Kagami (2002)	Descriptive analysis on Clusters in a diverse set of countries including China, Italy, Japan, Mexico, South Korea, the USA and Vietnam.	It provides an interesting split between studies of IT and software-related industries, and more traditional sectors, such as steel and vehicle manufacturing.

Originating from a traditionally agricultural-based economy, Indonesia has shifted a larger portion of its economic activities toward manufacturing and service oriented sectors (Figure 1). In 1968, agriculture sector contributed about 51% of Gross Domestic Products (GDP), the highest relative to other sectors while manufacturing industry only contributed 8.5%. The industrialization had not dominated the Indonesian economy until 1978. Agriculture sector's contribution in 1978 decreased 21.5% compared to that in 1968. In 1978, manufacturing industry contribution reached 10% of GDP, or rose 1.5% than that in 1968. Other sectors that had been experiencing increase in its contribution to GDP were service sector, in particular trade-hotel-restaurant. Figure 1 shows that manufacturing industry and services have become the leading sectors in Indonesia since 1993. In 1998, manufacturing industry contributed 23.9% to GDP and kept increasing until 2004 (28%), and so did the services.

Figure 1: Sectoral contribution to Indonesian GDP, 1968-2014 (%)
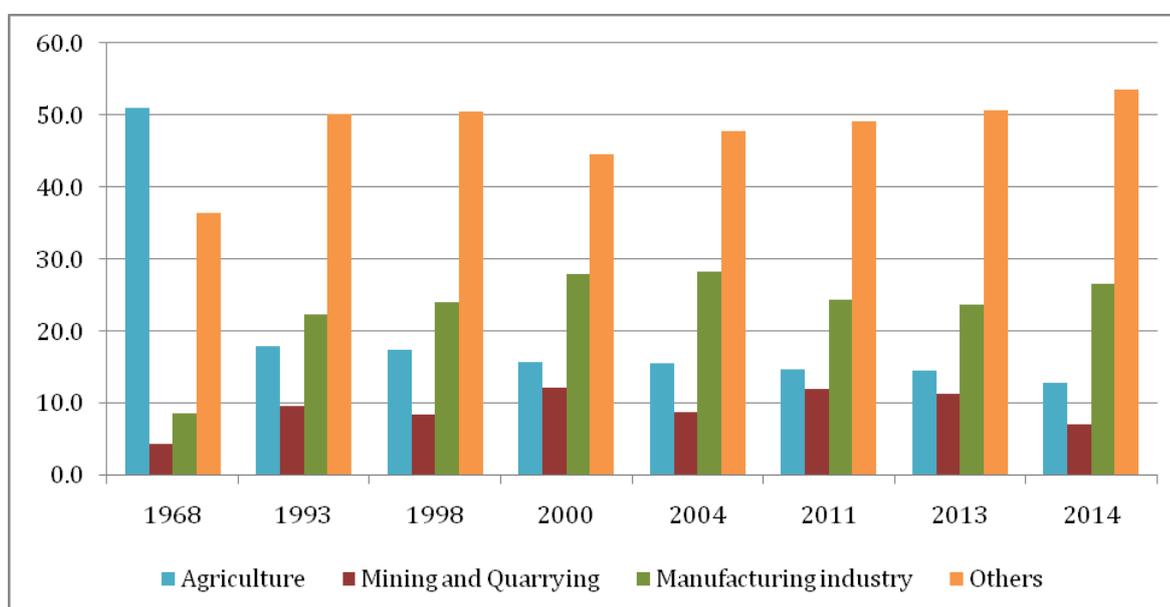
Source: Calculated from BPS (2008, 2010b; 2015)

During the last 15 years, manufacturing industry and trade-hotels-restaurants have played an important role in the Indonesia's economy. Compared to other sectors during 2000-2014, trade-hotels-restaurants, together with manufacturing industry, have made a significant contribution as the share of the manufacturing industry and trade-hotels-restaurants to GDP remained stable around 24-28% and 17% respectively over the last 14 years. Figure 2 shows that the predominant role of these two sectors in average was higher than the other 7 sectors, which only accounted for only about 0.7-13.95%. Trade-hotel-restaurant sector is largely supported by three major sub-sectors: wholesale and retail trade (14.1%), followed by restaurants (2.24%), and hotels (0.71%).

Figure 2: Share of trade-hotels-restaurants, manufacturing industry and other sectors to GDP: Indonesia, 2000-2014
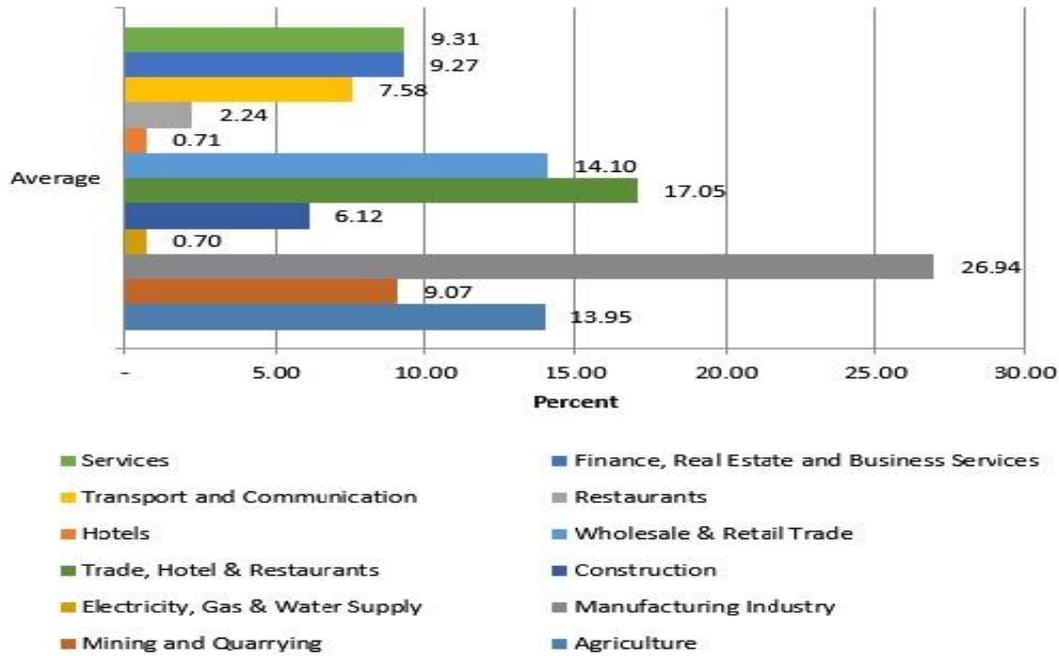
Source: Calculated from BPS (2000-2014)

Figure 3 shows that industrialisation and tourism (reflected by trade trade-hotels-restaurants) have become main the driving force behind Indonesia's rapid rates of urbanization during 1960-2014. Urbanization rate in Indonesia increased from 15% in 1960 to 53% in 2014. At the same time, industrialization and tourism increased around 7-28% and 11-71% respectively.

Further detailed analysis using Pearson correlation and provincial data show that the correlation between manufacturing industry and tourism is 0.31 and significant with $\alpha=1\%$. The positive correlation shows that the relationship between manufacturing industry and tourism is parallel: the higher the contribution of manufacturing industry, the higher the contribution of tourism, and vice versa.

The positive correlation between industrialization and tourism is supported by the scatter diagram, which shows positive trend between industrialization and tourism. In other words, the higher the development of manufacturing industry, the higher the tourism in a province, and vice versa. Figure 4 shows that East Jawa, Bali, Maluku, DKI Jakarta, and Central Jawa are provinces which have high industrialization and tourism cluster. On the contrary, Aceh and Papua are provinces with low share of manufacturing industry and low concentration of tourism cluster.

Figure 3: Industrialization, urbanization, and tourism in Indonesia, 1960-2014
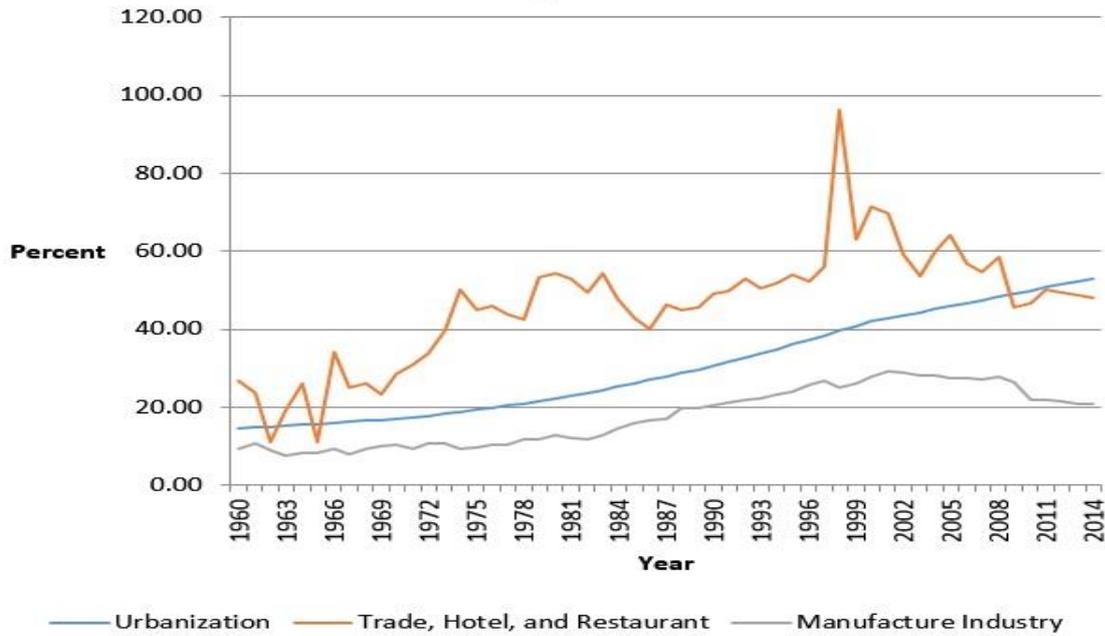
Source: Calculated from World Bank (1960-2014)

**Figure 4: Linkage between industrialization and trade-hotels-restaurants:
Indonesia, 2000-2013**
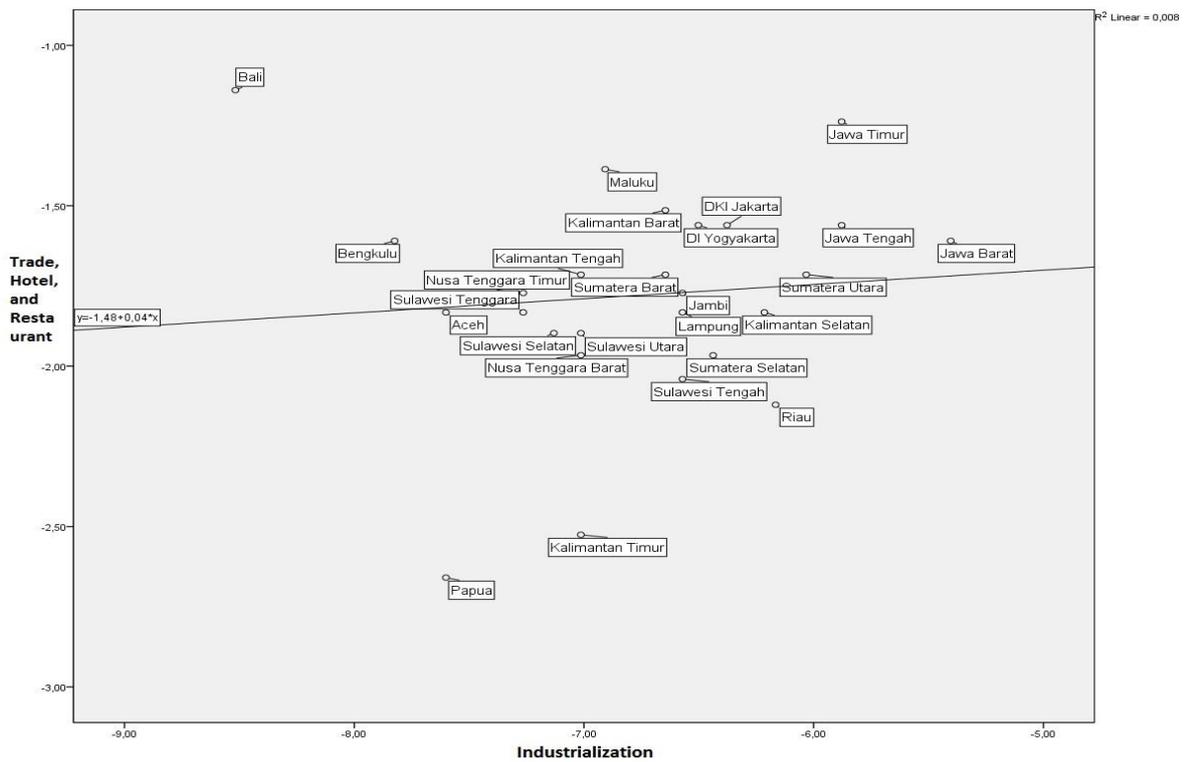
Figure 5: Trend between industrialisation and urbanization: Indonesia, 2000-2013
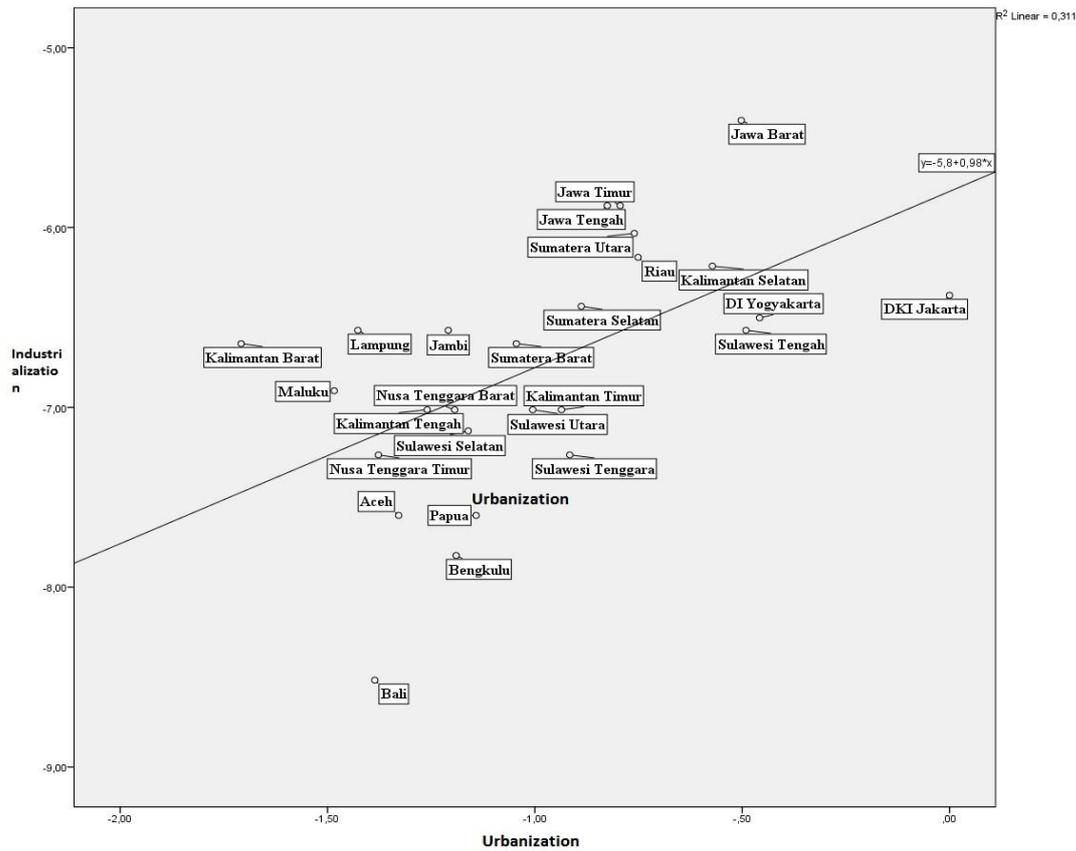
The positive correlation between urbanization and industrialization is supported by scatter diagram which shows a positive trend between urbanization and industrialization. In another word, the higher the urbanization, then the higher the industrialization, and vice versa. Figure 5 shows that East Jawa, Bali, DKI Jakarta, and Central Jawa are densely populated provinces with high industrialization. Meanwhile, Aceh and Papua are provinces with low urbanization and industrialization.

By examining Pearson correlations, trend and scatter diagrams in Figure 6, we found several interesting findings below: First, the relationship between industrialization and urbanization shows the highest positive correlation (0.418) and significant with α one percent. It means, the higher the urbanization in a province, the higher the manufacturing industry towards GRDP, and vice versa.

Second, the relationship between manufacturing industry and trade-hotel-restaurant is positive 0.318 and significant with α one percent. In other words, the higher the share of manufacturing industry in a province, the higher the share of trade-hotel-restaurant to GRDP, and vice versa.

Third, the relationship between urbanization and trade-hotel-restaurant is positive and significant with α = 0.01. It suggests that the higher the number of urban dwellers in a province, the higher the share of tourism to GRDP, and vice versa.

Figure 6: Interlinkages among industrialization, urbanization, and trade-hotel-restaurant
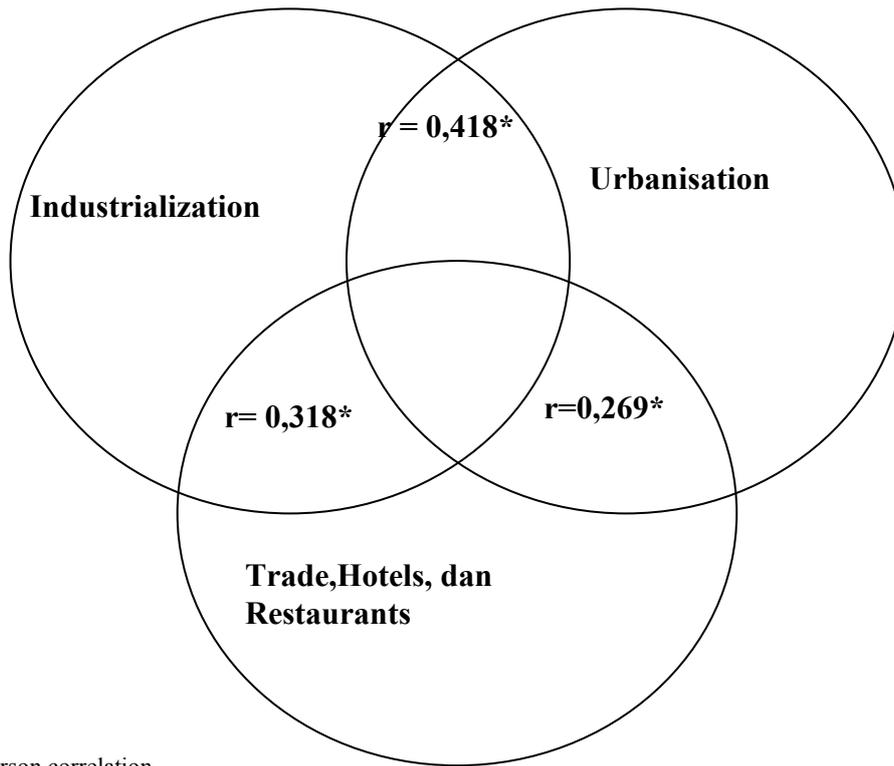
Note: * α=1%; r=Pearson correlation

CONCLUSIONS

The major contribution of this paper has been to incorporate "space" explicitly into economic analysis of uneven development of manufacturing industry, urbanization and trade-hotel-restaurant within a country (Indonesia). A growing number of economists and business strategists have become interested in the study of location problems and clustering (e.g. Ellison & Glaeser, 1997, Krugman, 1995, Lucas, 1988, Porter & Solvell, 1998; Harrison, 1992; Hayter, 1997), which trigger the attention to the role of geography in the economic process. Despite this growing awareness, these concepts are as yet little tested empirically. Our study has attempted to fill this gap by exploring where and why clusters in a particular country (i.e. Indonesia) and at a particular time.

Our analysis finds that industrialisation and tourism (reflected by trade-hotel-restaurant) have become main the driving force behind Indonesia's rapid rates of urbanization during 1960-2014. As urbanization rate in Indonesia increased from 15% (1960) to 53% (2014), industrialization and tourism increased around 7-28% and 11-71% respectively. Except in the obvious case of resource-based provinces, manufacturing industry has shown a strong tendency to locate in and around main cities, largely in Jawa island. The rise of urban agglomeration has shown that the agglomeration economies have reinforced the geographic concentration and unequal distribution of economic activities especially manufacturing industry and trade-hotel-restaurant.

Our study offers some new insights on studies of why economic activities are concentrated geographicaly (e.g.WB, 2009; Harrison, 1992) with an understanding of where they are located regionally and interplay between industrialization, urbanization, and tourism. As we have shown, Indonesia need to boost regional development in particular in 122 backward districts in Indonesia by integrating industrialization, urbanization, and tourism strategy. National development priorities and implementation national medium-term plan (RPJMN) need to be followed up with concrete actions to improve the coherence between various level of governments (central, provinces, municipalities, cities), businesses, academicians, and civil society. Therefore our study recommends two strategic steps: first, urban development need to be combined with industrial and tourism policy. The higher the urbanization in a province, the higher the manufacturing industry or tourism sector to GRDP. The development of an inclusive strategy needs to be implemented more seriously. Major objective of this strategy is to reach out and uplift the whole society (development for all). Our findings offer some insights about interregional inequality and spatial aspect of the industrialization, urbanization, and tourism.

Second, to accelerate provinces with low industrialization, urbanization, and tourism, the government should incorporate "space" explicitly into economic analysis of clusters and uneven development of industrialization, urbanization, and tourism within a country. Some imperative measures are suggested: (1) reallocate some funds from ministries and central institution tasks to transfer funds to the backward regions; (2) increase public investments to accelerate infrastructure development for industrial zones and tourism clusters especially in urban and backward regions; (3) encourage private investments by providing ease of licensing and the provision of adequate infrastructure for industries and tourism.

REFERENCES

Arifin, Z. & Kuncoro, M. (2002). Konsentrasi Spasial dan Dinamika Pertumbuhan Industri Manufaktur di Jawa Timur [Spatial concentration and dynamics of manfacturing industry growth in East Jawa], *Empirika*, 11(1), 49-64.

ASEAN Secretariat. (2010). *ASEAN statistical yearbook 2010,* Jakarta: ASEAN Secretariat.

Badan Pusat Statistik (BPS). (2008). Produk Domestik Regional Bruto atas dasar harga konstan 2000 menurut provinsi, 2001-2007 [Regional Gross Domestic Products based on constant price 2000 by provinces, 2001-2007]. Retrieved from http://www.bps.go.id/tab_sub/view.php?kat=2&tabel=1&daftar=1&id_subyek=52&notab=2

BPS. (2010b). Produk Domestik Regional Bruto atas dasar harga konstan 2000 menurut provinsi, 2003-2009 [Regional Gross Domestic Products based on constant price 2000 by provinces, 2003-2009]. Retrieved from http://www.bps.go.id/tab_sub/view.php?kat=2&tabel=1&daftar=1&id_subyek=52&notab=2

BPS. (2012). Penduduk Indonesia menurut Provinsi 1971, 1980, 1990, 1995, 2000 dan 2010 [Indonesia Population based by Provinces 1971, 1980, 1990, 1995, 2000 and 2010]. Retrieved from http://www.bps.go.id/tab_sub/view.php?kat=1&tabel=1&daftar=1&id_subyek=12&notab=1.

BPS. (2012a). Berita resmi statistik [Official statistic news], No. 31/05/Th. XV, 7 May, Jakarta: BPS.

BPS. (2012b). Data sosial ekonomi [Economic social data], 3 August. Jakarta: BPS.

BPS. (2012c). Produk Domestik Regional Bruto atas dasar harga konstan 2000 menurut provinsi, 2004-2010 [Regional Gross Domestic Products based on constant price 2000 by provinces, 2004-2010]. Retrieved from http://www.bps.go.id/tab_sub/view.php?kat=2&tabel=1&daftar=1&id_subyek=52&notab=2.

BPS. (2015). Produk Domestik Regional Bruto atas dasar harga konstan 2000 menurut provinsi, 2008-2014 [Regional Gross Domestic Products based on constant price 2000 by provinces, 2008-2014]. Retrieved from http://www.bps.go.id/tab_sub/view.php?kat=2&tabel=1&daftar=1&id_subyek=52&notab=2

BPS. (2016). Berita resmi statistik [Official statistic news]. No. 101/11/Th.XIX, 7 November 2016, Jakarta: BPS.

Becattini, G. (1990). The Marshallian industrial district as a socioeconomic notion, in: F. Pyke, G. Becattini & W. Sengenberger (Eds) *Industrial districts and inter-firm cooperation in Italy*, Geneva: ILO.

Bellandi, M. (1989). The industrial district in Marshall, in: E. Goodman, J. Bamford & P. Saynor (Eds) *Small firms and industrial districts in Italy,* London and New York: Routledge.

Chinitz, B. (1961). Contrasts in agglomeration: New York and Pittsburg. *American Economic Review*, 51(2), 279-289.

Ellison, G. & Glaeser, E.L. (1997). Geographic concentration in U.S. manufacturing industries: a dartboard approach. *Journal of Political Economy*, 105, 889-927.

Fujita, M., Krugman, P. & Venables, A.J. (1999). *The spatial economy: cities, regions, and international trade*, Cambridge and London: The MIT Press.

Gülcan, Y., et al. (2009). Public policies and development of the tourism industry in the ASEAN gegion. *European Planning Studies*, 17(10), 1509-1523.

Harrison, B. (1992). Industrial districts: old wine in new bottles? *Regional Studies*, 26, 469-83.

Hayter, R. (1997). *The dynamic of industrial location: the factory, the firm, and the production system*, Chichester: John W iley and Sons.

Hoover, E. (1936). The measurement of industrial localization. *Review of Economics and Statistics*, XVIII, 162-71.

Isard, W. (1956). *Location and space economy,* New York: John Wiley.

Isard, W. (1960). *Methods of regional analysis: an introduction to regional science*, Cambridge and London: M.I.T Press.

Kagami, M. (2002). Iron town cluster: Yawata, its glory, decline and rebirth, *International Joint Research Project.* Japan Institute of Developing Economies.

Krugman, P. (1991). *Geography and trade*, London: MIT Press/Leuven UP.

Krugman, P. (1995). *Development, geography, and economic theory*, Cambridge and London: The MIT Press.

Krugman, P. (1998). Space: the final frontier. *Journal of Economic Perspectives*, 12(2), 161-174.

Kuncoro, M. (2000). The economics of industrial agglomeration and clustering (1976-1996): the case of Indonesia (Java), *Dissertation*. University of Melbourne.

Kuncoro, M. & Supomo, I. A. (2003). Analisis formasi keterkaitan pola kluster dan orientasi pasar: studi kasus sentra industri keramik di Kasongan, Bantul, Daerah Istimewa Yogyakarta [Linkage formation analysis of clustering and market orientated pattern: case study of cermaic industrial cluster in Kasongan, Yogyakarta Special Regions. *Jurnal Empirika,* 16 (1), 1-20.

Kuncoro, M. (2007). *Ekonomika industri Indonesia: menuju negara industri baru 2030? [Industrial economics of Indonesia: towards a new industrial nation 2030?],* Yogyakarta: ANDI Offset.

Kuncoro, M. (2012). *Perencanaan daerah: bagaimana membangun ekonomi lokal, kota, dan kawasan [Regional planning: how to develop local economy, cities and zones],* Jakarta: Salemba Empat.

Kuncoro, M. (2012b). *Ekonomika aglomerasi: dinamika dan dimensi spasial kluster industri indonesia [economics of agglomeration: dynamics and spatial dimension of Indonesia's industrial clusters]*, Yogyakarta: UPP STIM YKPN.

Lucas, R.E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22, 3-22.

Malecki, E.J. (1991). *Technology and economic development: the dynamics of local, regional, and national change*, New York: John Wiley & Sons, Inc.

Markusen, A. (1996). Sticky places in slippery space: A typology of industrial districts. *Economic Geography*, 72(3), 293-313.

Marshall, A. (1919). *Industry and trade,* London: Macmillan.

Maskell, P., Eskelinen, H., Hannibalsson, I., Malmberg, A., & Vatne, W. (1997). *Competitiveness, localised learning and regional development*, London and New York: Routledge.

McCann, B.T. & Vroom, G. (2010). Pricing response to entry and agglomeration effects. *Strategic Management Journal*, 31 (3), 284–305.

McGee, T. G. (1991). The emergence of desakota regions in Asia: expanding a hypothesis. In N. Ginsburg, B. Koppel, & T. G. McGee (Eds.), *The extended metropolis: settlement transition in Asia*, Honolulu: University of Hawaii Press.

Michigan State University (MSU) (2013). *Market Potential Index (MPI) for emerging markets–2013*. Retrieved from http://globaledge.msu.edu/mpi.

Nadvi, K. & Schmitz, H. (1994). *Industrial clusters in LDCs: review of experiences and research agenda,* Brighton: IDS, University of Sussex.

Porter, M.E. (1998). Clusters and the new economics of competition. *Harvard Business Review*, November-December, 6, 77-91.

Porter, M.E. & Solvell, O. (1998). The role of geography in the process of innovation and the sustainable competitive advantage of firms, in: J. Alfred D. Chandler, P. Hagstrom & O. Solvell (Eds) *The dynamic firm: the role of technology, strategy, organization, and regions*, Oxford: Oxford University Press.

Pyke, F. & Sengenberger, W. (1992). *Industrial district and local economic regeneration,* Geneva: ILO.

Rodriguez-Pose, A. (1998). *The dynamics of regional growth in europe: social and political factors*, Oxford: Clarendon Press.

Rogerson, M. J. (2010). The boutique hotel industry in South Africa: definition, scope and organization. *Urban Forum*, 17, 199-213.

Schmitz, H. (1995). Small shoemakers and fordist giants: a tale of supercluster. *World Development,* 23(1), 9-28.

Schmitz, H., & Nadvi, K. (1999). Clustering and industrialization: introduction. *World Development*, 27(9), 1503-1514.

Scott, A. J., & Storper, M. (1992). Regional development reconsidered. In H. Ernste & V. Meier (eds.), *Regional development and contemporary industrial response: extending flexible specialisation*, London: Belhaven Press.

Tsang, E.W. K. & Yip, P. S. L. (2009). Competition, agglomeration, and performance of Beijing hotels. *Service Industries Journal*, 29(2):155-171.

Wahyuddin, M. (2004). *Industri dan orientasi ekspor: dinamika dan analisis spasial*, Surakarta: Muhammadyah University Press.

World Bank (WB). (2009). *World development report 2009: reshaping economic geography*, Washington DC: World Bank.

United Nations (UN). (1998). *World urbanization prospects the 1996 revision: estimates and projections of urban and rural populations and of urban agglomerations*. New York: Department of Economic and Social Affairs, Population Division, United Nations.

UN. (2004). World urbanization prospects: the 2003 revision, highlights (ST/ESA/SER.A/237). New York: Department of Economic and Social Affairs, Population Division, United Nations:

UN. (2014). World urbanization prospects: the 2014 revision, highlights (ST/ESA/SER.A/352). New York: Department of Economic and Social Affairs, Population Division, United Nations.

Richard Patty
PhD Program in Economics, Faculty of Economics &
Business Universitas Gadjah Mada (FEB UGM) and
Fakultas Ekonomi Universitas Cenderawasih Indonesia
Email: richard.patty@yahoo.co.id

Mudrajad Kuncoro
Professor in economics
FEB UGM Indonesia
Email: profmudrajadk@gmail.com

About Author (s):

MUDRAJAD KUNCORO has been a professor in economics in the Faculty of Economics and Business (FEB), Gadjah Mada University (GMU), Indonesia since October 2006. GMU is the oldest and largest university in Indonesia, while FEB of GMU is the only faculty in Indonesia that accredited internationally by AACSB. Recent Webometrics survey (http://www.webometrics.info/en/node/96) put me in the top 20 scientists in Indonesia and the most leading economists in the 4th world largest populous country. Born in Yogyakarta, September 4, 1965, I obtained his Bachelor in Economics & Development Studies in GMU (1989), Graduate Diploma in Local Government Finance (1992) and Master of Social Science in Development Finance from the University of Birmingham, UK (1993), and Ph.D in Business & Regional Development from the University of Melbourne, Australia (2001). In FEB UGM, Having assigned as the head department of economics (2008-2011) and manager of Publication Office (2013), I currently the Director of PhD Program in Economics (since January 2016). I have joined in the economist team in the Indonesian Chamber of Commerce (2007-2009), researcher team in JICA (2010), International Labour Organization, Jakarta office (2012), Korea Development Institute, and currently a Chief Economist in Jaya Samudra Karunia Group (www.jsk.co.id). Some award*s* that have been received, e.g.: (1) Teaching Award and Lecture Notes Award from QUE-Economics which is sponsored by World Bank; (2) Top Three Best International Publication in GMU (2010); (3) Best tract presentation and award of honour from the Academy of Business and Retail Management in London (2013); (4) Best paper award in the International Conference on Advances in Management, Economics, and Social Science, 18-19 August, 2016, in Rome Italy. I have written 41 books and many articles for peer review international journals. Further detailed information on his works can be obtained from http://www.mudrajad.com.

RICHARD PATTY is a lecturer at Faculty of Economics, Cendrawasih University. He was born at Biak, 10 Mei 1974 and accepted Bachelor of Economy degree at 1997 from Cendrawasih University, Master of Science with Asset Management and Property Assessment specialization (2001). Currently, he is a doctorate student with Public Economics at PhD Program in Economics, Faculty of Business and Economics, Gadjah Mada University. He became the facilitator of Budget Preparation Work, Building Institutions for Good Governance (BIGG) held by Internatonal City/County Management Association (ICMA) in association with Ministry of Finance, Ministry of Home Affairs and Regional Autonomy, and financed by United States Agency for International Development (USAID) (2002-2004). He was also team of health economy of United Nations Children's Fund (UNICEF) Papua Region (2004-2006). He won the 2nd best paper award in the National Seminar and Plenary Session of Indonesian Economists Association in Gorontalo Indonesia, 28-30 September 2016.