Elevating Fisherman Welfare: Designing Patterns of Marine Governance

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Abstract

This article examines the welfare of fishermen by designing patterns of marine governance. So it is very necessary a patterned marine management. Where the role of the state is very important in this marine governance. As for designing these patterns of governance, it should get basic ecological and social strategies. The study of ecological strategy itself is interpreted as the establishment of arrangements that are to restore and maintain the expected ecological conditions. Whereas for the social governance strategy is a governance model that is able to improve welfare and reduce social conflicts of fishermen, even able to build social awareness in fisheries and marine affairs to be involved as a marine guard. Therefore, there are 3 models of the role of the state in this study, namely hierarchical, co-governance and the government itself or known as the triple helix theory.

Keywords: Prosperity, Fishermen, Welfare, Patterns and Governance

1. Pendahuluan

Negara Indonesia termasuk salah satu wilayah dengan keanekaragaman hayati laut tertinggi di dunia (Hughes et al. 2002). Secara umum laut disebut sebagai wilayah yang bersifat *open access* dan milik bersama (*common property*). Perjuangan nelayan atas laut merupakan konsep tentang upaya nelayan dalam mengelola dan menjaga lautnya. Kenyataan ini menampilkan dua realita pengelolaan sumber daya laut, yaitu pengelolaan perikanan yang buruk dan mengancam keberadaan sumberdaya alam dan keanekaragaman spesies laut (Bryant et. al. 1998) dan konflik-konflik atas pengelolaan laut (Conner Bailey, 1988).

Indonesia termasuk negara dengan keanekaragaman hayati laut tertinggi di dunia (Hughes et al. 2002). Dimana wilayah laut Indonesia memiliki fungsi, makna dan arti peranan yang sangat penting dalam kaitannya dengan sumberdaya laut yang terkandung didalamnya dapat dikelola secara baik dan efisien serta berkelanjutan sejalan dengan tujuan pembangunan nasional. Kesadaran akan tanggung jawab pengelolaan wilayah laut didasarkan pada kenyataan bahwa potensi sumberdaya laut dan pesisir merupakan asset bangsa yang potensial bagi pengembangan wilayah serta juga menyimpan berbagai permasalahan yang signifikan.

Sebagaimana dalam Undang-Undang Dasar 1945 Pasal 33 terutama ayat 3 yang berbunyi: "Bumi, air dan kekayaan alam yang terkandung didalamnya dikuasai oleh negara dan dipergunakan untuk sebesar -besarnya kemakmuran rakyat", hal tersebut merupakan salah satu tujuan negara mengenai sumberdaya alam dan kawasan perairan laut perlu dimanfaatkan sebaik-baiknya, ditata dan dikelola sungguh-sungguh untuk meningkatkan kesejahteraan rakyat. Artinya wilayah laut Indonesia memiliki fungsi, makna dan arti peranan yang sangat penting dalam kaitannya wilayah laut beserta sumberdaya terkandung didalamnya dapat dikelola secara baik dan efisien serta berkelanjutan sejalan dengan

tujuan pembangunan nasional yaitu untuk kesejahteraan. Kesadaran akan tanggung jawab pengelolaan wilayah laut didasarkan pada kenyataan bahwa potensi sumberdaya laut dan pesisir merupakan aset bangsa yang potensial bagi pengembangan wilayah tersebut.

Studi ini secara khusus melakukan pengkajian pada perilaku nelayan dalam mengelola laut. Perjuangan nelayan atas laut menjadi pilihan topik untuk mengungkap upaya nelayan dalam menjaga lautnya sebagai bagian dari "*survival of the fittest*". Studi tentang perjuangan ini terutama melihat hubungan manusia dengan lingkungan terkait dengan perubahan ekologi (lingkungan) (Kusumah, 2016b).

Pengelolaan sumber daya yang buruk sumber daya alam dan sumber daya ikan banyak dilakukan oleh nelayan. Penangkapan yang bersifat *overfishing* dan bahkan *illegal fishing* yang mengarah pada perusakan lingkungan menjadi fenomena yang terus berlangsung dalam eksploitasi hasil laut. Studi dan pendekatan sosiologis tentang perilaku penangkapan, yang berakibat pada kerusakan laut, merupakan topik yang kurang menarik perhatian di Indonesia. Sebagian besar studi dan kajian sosiologis tentang nelayan menghubungkan pengelolaan laut ini dengan konflik-konflik nelayan dan perebutan wilayah di laut (Kusumah, 2015). Studi-studi tersebut lebih mengedepankan dua pokok pikiran utama, yaitu perlindungan hak atas wilayah penangkapan dari infiltrasi nelayan luar dan perlindungan terhadap sumber daya ikan dari *illegal fishing* dan perusakan lingkungan.

Perebutan atas hak laut dapat pula dinyatakan sebagai konflik pengelolaan atau perjuangan pengelolaan atas laut. Konflik terkait penangkapan ikan merupakan gejala sosial yang sering ditemukan di berbagai wilayah perairan (Adhuri, 1993;1998; 2002a; 2002b; Adhuri, Kanagaratnam, and Dey, 2006; Adhuri, dan Wahyono, (editor), 2004; Satria, 2009; Kusnadi, 2000, 2002; Bailey, 1986, 1988; Indrawasih, 2007; Kusumah, 2010a; 2010b). Gejala konflik sosial tersebut dapat dilihat dari perspektif sumber daya bahwa konflik yang terjadi karena perebutan sumberdaya ikan yang jumlahnya semakin terbatas. Perebutan ini muncul karena karateristik sumberdaya perikanan yang bersifat open access. Dengan kondisi sumberdaya yang bersifat open access, seolah-olah sumber daya dapat dikuasai sembarang orang, di sembarang waktu, dan dengan sembarang alat tangkap. Namun jika ditelusuri lebih jauh, sebenarnya kondisi sumberdaya yang benar-benar terbuka hampir sulit ditemukan (Satria, 2009; Kusumah, 2015; 2016a; 2016b).

Konflik-konflik di perairan Indonesia tersebar dari perairan pesisir timur Sumatra sampai kawasan Timur Indonesia (Adhuri,1993, Adhuri, Kanagaratnam, and Dey1, 2006; Adhuri dan Wahyono,2:2004). Perebutan atas laut di pantai Utara Jawa Timur terkait dengan sejumlah problema sosial ekonomi dan sumber daya perikanan merupakan sebuah fenomena lama yang terjadi sejak awal tahun 1970, ketika modernisasi perikanan mulai diperkenalkan (Emmerson, 1975; Kusnadi, 2000; 2002; 2007; Satriyati, 2006: hal. 525; Kusumah, 2010a; 2010b; Wahyudi, 2010; Suharyanto, 2009). Di era sebelum tahun 1980, konflik antara nelayan "tradisional" dengan nelayan trawl sangat sering terjadi, dan seringkali bersifat brutal (violent) sehingga memakan banyak korban jiwa yang cukup banyak (Bailey, 1986, Betke, 1988).

Akan tetapi sampai saat ini belum diterapkan teknik pengelolaan yang memadai. Penetapan jumlah alat tangkap pukat cincin (*purse seine*) yang boleh beroperasi tidak didasarkan pada potensi stok ikan lemuru yang ada, akan tetapi lebih berdasarkan pada jumlah alat tangkap yang telah ada. Kesenjangan ini dapat terjadi karena setiap peraturan yang dibuat tidak disertai dengan pengawasan dan pelaksaannya yang cukup optimal. Kondisi demikian merupakan salah satu faktor penyebab rendahnya tingkat efesiensi kegiatan penangkapan ikan lemuru di Selat Bali.

Penangkapan berlebih (*over fishing*) menguras sumber daya dan berdampak pada hilangnya sumber mata pencaharian nelayan. Pemerintah melalui Departemen Kelautan

dan Perikanan (DKP) mendapat mandat untuk mengatur tata kelola kelautan yang termasuk mengenai perikanan tangkap, sedemikian rupa untuk mencegah terjadinya penangkapan berlebih, mencegah terkurasnya sumber daya dan memaksimalkan keuntungan jangka panjang bagi nelayan. Dibawah ini merupakan grafik penangkapan ikan lemuru yang terjadi penurunan setiap tahunnya, yaitu:
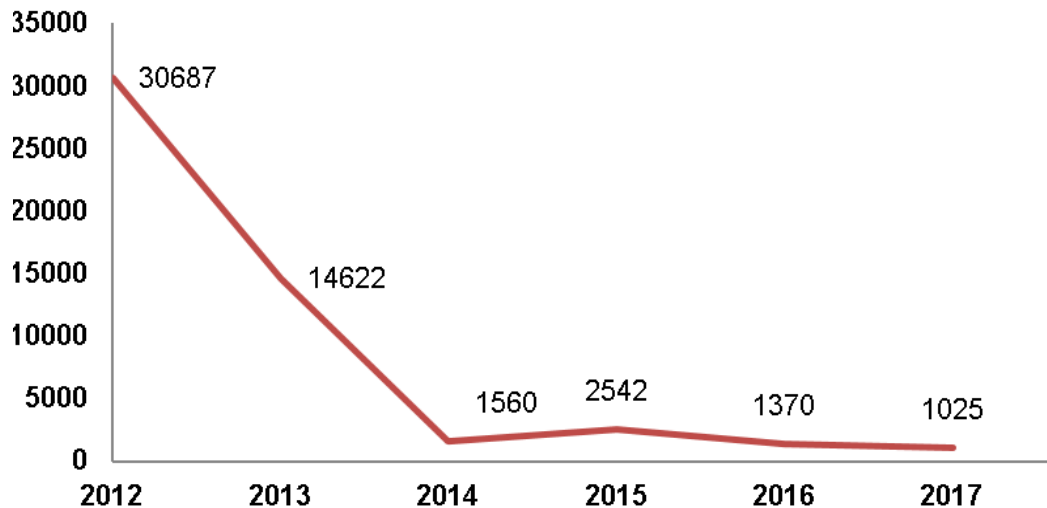
Gambar 1. Perbandingan Jumlah Ikan Lemuru di Selat Bali
(Sumber: Data DKP Provinsi Bali)

Berdasarkan data Dinas Kelautan dan Perikanan yang didaratkan di Selat Bali, selama periode tahun 2011-2017 terjadi 5 kali fluktuasi kenaikan yang puncaknya terjadi tahun 2012 dan mengalami 4 kali penurunan pada tahun 2014, 2015, 2016, 2017 (Gambar 1). Hasil tangkapan ikan lemuru berfluktuasi yang diduga disebabkan oleh siklus upwelling di Selat Bali. Ikan lemuru di perairan Bali kelihatan berhubungan erat dengan faktor-faktor lingkungan, terutama terjadinya kenaikan massa air atau *upwelling* (Setyohadi, 2010).

Padahal jika kita lihat ikan adalah salah satu kekayaan laut Indonesia yang sangat berharga dan menjadi penggerak roda perekonomian bangsa. Sedangkan laut merupakan kekayaan sumber daya alam dan telah berkontribusi besar terhadap pembangunan di Indonesia untuk mewujudkan kesejahteraan nelayan. Namun kenapa kekayaan laut yang terkandung didalamnya belum mensejahterahkan nelayan, terlebih lagi semakin berkurangnya ikan lemuru yang terjadi di Selat Bali.

2. Metode

Bogdan & Biklen, S (1992:21-22) menjelaskan bahwa penelitian kualitatif adalah salah satu prosedur penelitian yang menghasilkan data deskriptif berupa ucapan atau tulisan dan perilaku orang-orang yang diamati. Pendekatan kualitatif diharapkan mampu menghasilkan uraian yang mendalam tentang ucapan, tulisan dan atau perilaku yang dapat diamati dari suatu individu, kelompok, masyarakat dan atau organisasi tertentu dalam suatu setting konteks tertentu yang dikaji dari sudut pandang yang utuh, komprehensif dan holistik. Penelitian kualitatif bertujuan untuk mendapatkan pemahaman yang sifatnya umum terhadap kenyataan sosial dari perspektif partisipan. Pemahaman tersebut tidak ditentukan terlebih dahulu, tetapi didapat setelah melakukan analisis terhadap kenyataan sosial yang menjadi fokus penelitian. Penelitian kualitatif juga disebut dengan: *interpretive research, naturalistic research, phenomenological research.*

Penelitian kualitatif mempunyai pengertian yang berbeda-beda untuk setiap momen, meskipun demikian definisi secara umum bahwa penelitian kualitatif merupakan suatu metode berganda dalam fokus yang melibatkan suatu pendekatan interpretatif dan wajar terhadap setiap pokok permasalahannya. Ini berarti penelitian kualitatif bekerja dalam setting yang alami, berupaya memahami, memberi tafsiran pada fenomena yang dilihat dari arti yang diberikan orang-orang kepadanya. Penelitian kualitatif melibatkan penggunaan dan pengumpulan berbagai bahan empiris, seperti studi kasus, pengalaman pribadi, instropeksi, riwayat hidup, wawancara, pengamatan, teks sejarah, interaksional dan visual yang menggambarkan momen rutin dan problematis, serta maknanya dalam kehidupan individual dan kolektif (Denzim & Lincoln, 1994:2)

Dari paparan di atas dapat diketahui bahwa penelitian kualitatif nantinya akan menghasilkan data deskriptif atau pengertian berupa kata-kata tulisan maupun lisan dari orang dan perilaku yang diamati. Untuk itu alasan mengapa peneliti menggunakan metode penelitian kualitatif adalah dapat mempermudah peneliti dalam melaksanakan penelitian, selain itu juga lebih menyeluruh, rinci, mendalam dan bisa mengenal orang (subyek) secara pribadi serta dapat melihat pengalaman-pengalaman yang mungkin belum kita ketahui sama sekali.

3. Hasil dan Diskusi

Triple helix merupakan metafora untuk pemerintah, masyarakat dan *stakeholders* yang berinteraksi secara dekat dimana masing-masing mempertahankan identitas inde-pendesinya. Dalam *triple helix*, peran pemerintah, masyarakat dan *stakeholders* mengam-bil kesempata dari yang lain, meskipun masing-masing mempertahankan peran utama dan identitasnya. Menurut Leydesdorff dan Meyer (2013), model *triple helix* merupakan satu dari bentuk sistem inovasi yang berbasiskan pengetahuan (*knowledge-based innovation system*) yang mencoba menangkap dinamika komunikasi maupun organisasi dengan me-ngenalkan gagasan suatu hamparan pertukaran relasi yang bolak-balik (*feed back*) pada penyusunan institusi. Institusi dan relasinya menyediakan suatu infrastruktur pengetahuan yang (secara paradoks) membawa basis pengetahuan. Setiap elemen (*helic*) berkembang secara internal, namun juga berinteraksi dalam wujud pertukaran barang, jasa, dan fungsi.

Konsep Kooiman (2003) terdapat 3 model sebagai peran negara, yaitu pemerintah hierarkis, dimana hierarkis pemerintah ini dilakukan secara *top-down*. Kedua *co-governance* terjadi dalam kemitraan antara pemerintah, masyarakat sipil dan pemangku kepentingan industry. Terakhir pemerintah itu sendiri.

Demikian pula, *welfare state* atau negara kesejahteraan tidak dapat dipisahkan dari konsep mengenai kesejahteraan (*welfare*) itu sendiri. Dalam *Encyclopedia Americana* disebutkan bahwa welfare state adalah "*A form of government in which the state assumes responsibility for minimum standards of living for every person*" (bentuk pemerintahan dimana negara dianggap bertanggung jawab untuk menjamin standar hidup minimum bagi setiap warga negaranya).

Pola tata kelola penangkapan ikan yang selama ini mengarah pada eksploitasi secara tidak terkendali, akan berakibat pada sumber daya ikan dapat mengalami degradasi bahkan pemusnahan. Karena konsep dasarnya adalah mengelola. Perlu ada perubahan konstruksi pengelolaan menjadi tata kelola.

Meski sumber daya ikan merupakan sumber daya yang dapat pulih (*renewable re-sources*) secara langsung kondisi ini akan mempengaruhi keberlangsungan mata penca-harian nelayan. Tata kelola perikanan berkelanjutan adalah pemanfaatan perikanan dengan memperhatikan keberlanjutan bagi lingkungan alam dan tata kelola yang memperhatikan masa depan sumber daya ikan. Tata kelola adalah mengutamakan prinsip penataan dan

pada bagian ini pelibatan masyarakat menjadi syarat mutlak. Pelibatan masyarakat secara penuh dalam pemanfaatan sumber daya ikan (perencanaan, pelaksanaan sampai pengawasan termasuk rehabilitasi dan konservasi) dimaksudkan agar seluruh *stakeholders* merasa memiliki dan bertanggung jawab terhadap kelestarian sumber daya ikan.

Upaya lain yang dapat dilakukan untuk menghindari konflik antar nelayan adalah pengembangan usaha alternatif, misalnya di bidang budidaya ikan, pengolahan ikan, perbengkelan dll. Dengan adanya usaha alternatif diharapkan nelayan akan memperoleh penghasilan tambahan, sehingga ketergantungan terhadap hasil tangkapan ikan dapat dikurangi dan keinginan nelayan untuk menangkap ikan sebanyak-banyaknya juga dapat ditekan.

Kerusakan alam dan kelangkaan ikan tangkapan telah diakui sebagai akibat dari *illegal fishing* dan *over fishing*. *Illegal fishing* dapat dikendalikan dengan peningkatan pengawasan dan penegakan hukum sehingga dapat menghindari terjadinya konflik antarnelayan. Pengaturan penangkapan ikan sesuai aturan main perlu ada penegakkan aturan hukum yang melarang penggunaan teknologi penangkapan yang merusak lingkungan.

Untuk menghentikan penggunaan teknologi penangkapan yang merusak lingkungan dan memutus siklus hidup ikan dilakukan dengan strategi sosial berupa insentif usaha perikanan. Insentif usaha perikanan adalah bantuan berupa hibah yang dapat dilakukan oleh negara melalui kredit penangkapan ikan. Kredit ini harus tanpa bungan, yang diberikan sebagai jaminan sosial ekonomi yang di dapat nelayan selama tidak melaut.

Dalam setiap terjadinya konflik nelayan, selalu dianggap bahwa pemerintah bertindak terlambat. Banyak peraturan, baik perda Propinsi maupun Kabupaten bahkan juga UU untuk perikanan dan kelautan tetapi masalah utama adalah pada penegakan hukum. Negara selama ini hanya melakukan tindakan polisional dalam meminimalisasi konflik nelayan melalui penegakan hukum dan menjadi mediator dengan melaksanakan musyawarah mempertemukan pihak yang bertikai.

Kehadiran negara dapat menjadi pendulum resolusi konflik nelayan. Konflik dan perdamaian adalah dua sisi berdampingan dengan pendulum yang terus bergerak sesuai kepentingan. Sebagai hasil penelitian asumsi tentang dorongan konflik dapat disejajarkan berseberangan dengan dorongan untuk melakukan perdamaian.

Pendulum kepentingan adalah bola virtual (maya atau tidak nyata). Pendulum yang nyata adalah dorongan konflik dan dorongan perdamaian. Pendulum kepentingan diatas tergantung pada perhatian dan kehadiran negara dalam kancah persaingan nelayan. Artinya pendulum ini merupakan konsep yang mempertemukan negara dengan nelayan. Nelayan sebagai komunitas sosial adalah masyarakat yang sudah memiliki kelengkapan nilai dan budaya. Dalam struktur pengetahuan nelayan telah tertanam nilai konflik dan sekaligus juga nilai perdamaian.

Jika mempelajari alur realita peran negara dan konflik serta resolusi konflik yang berlangsung sebagaimana telah diuraikan diatas, maka gerakan pendulum akan sangat dipengaruhi oleh 3 hal yaitu konsolidasi nelayan dalam bentuk permufakatan, pembangunan nilai harmoni dan perdamaian, penumbuhan kesadaran dan kepedulian.

Dari uraian tentang konflik terungkap bahwa meskipun terlambat, negara mampu meredakan konflik horisontal antar nelayan. Ketegasan dalam penegakan hukum sangat dibutuhkan untuk membuat pendulum kepentingan tidak membawa konflik mencapai titik puncak konflik. Sejumlah pertemuan dalam bentuk musyawarah untuk mempertemukan antara pihak yang bertikai sangat penting.

Dalam hal pengaturan, Menteri Kelautan dan Perikanan membuat kebijakan Nomor 18/MEN-KP/I/2015 tentang Penangkapan Lobster (*Panulirus spp.*), Kepiting (*Scylla spp.*)

dan Rajungan (*Portunus spp.*). Penerbitan surat edaran ini untuk memberikan kejelasan pada publik terkait pelaksanaan Peraturan Menteri Kelautan dan Perikanan Nomor 1/ PERMEN-KP/2015 tentang Penangkapan Lobster (*Panulirus*), Kepiting (*Scylla*) dan Rajungan (Portunus) khususnya terkait dengan ukuran berat yang boleh ditangkap dan diperjualbelikan. Surat edaran ini menjelaskan soal pembatasan penangkapan lobster, rajungan dan kepiting yang boleh ditangkap. Ketentuan pembatasan ini dilakukan secara bertahap, antara lain: bahwa larangan dan pembatasan penangkapan lobster, kepiting dan rajungan dikecualikan untuk kegiatan penelitian, pengembangan dan pendidikan. Seperti diketahui selain pembatasan penangkapan tiga jenis hewan laut tersebut juga berdasarkan ukuran. Menteri Kelautan dan Perikanan Susi Pudjiastuti juga melarang penangkapan lobster, kepiting dan rajungan yang bertelur.

Sejak lahirnya undang-undang No. 22 tahun 1999 tentang pemerintahan daerah sering terjadinya konflik antar nelayan di Indonesia telah terjadi sejak lama dan makin marak akhir–akhir ini (Solihin, Akhmad dkk, 2005). Namun, karena implementasi desentralisasi pengelolaan wilayah laut belum tergambar secara jelas maka timbul penafsiran yang berbeda-beda baik dikalangan pemerintah daerah maupun nelayan. Akhirnya pemanfaatan sumber daya wilayah pesisir dan kelautan masih jauh dari optimal. Maka diharapkan dengan dilaksanakannya otonomi daerah dapat mendorong pertumbuhan yang lebih merata ke seluruh daerah, serta peran masyarakat dalam pembangunan dapat lebih diberdayakan.

Berdasarkan kebijakan diatas, maka berlakunya UU No. 23 Tahun 2014 tentang otonomi daerah, dimana terjadi perubahan kewenangan pengelolaan laut Provinsi yang semula 4-12 mil kini menjadi 0-12 mil, pengelolaan perairan yang dilakukan sebelumnya oleh Pemerintah Kabupaten/ Kota diambil alih oleh Pemerintah Provinsi, sebagaia salah satunya kewenangan zonasi laut yang dahulu 4-12 mil, kini menjadi 0-12 mil. Sebelumnya zonasi laut 0-4 mil menjadi kewenangan Pemerintah Kabupaten/ Kota. Sebagaimana sesuai dengan Rancangan Peraturan Daerah (Raperda) nomor 7 tahun 2016 tentang bendega atau nelayan, dimana tentang perlindungan dan pemberdayaan nelayan, pembudi daya ikan dan penambak garam memberikan kewenangan kepada pemerintah provinsi untuk menetapkan kebijakan. Sedangkan dalam kaitannya dengan pasal-pasal yang mengatur tentang "awig-awig" (aturan adat tertulis) adalah suatu bentuk pengaturan terkait dengan adanya upaya pencapaian keadilan bagi bendega dalam kegiatan yang bersifat sosial religius sebagai cerminan dari konsep "Tri Hita Karana".

Peran negara ini sangat diperlukan dalam tata kelola kelautan untuk mensejahterakan masyarakat, karena peran negara masih lemah dalam manajemen kelembagaan dan pengawasannya. Selama ini peraturan pemerintah daerah bertujuan untuk menanggulangi masalah-masalah yang dihadapi diantaranya, seperti tata kelola sumberdaya kelautan yang belum optimal dan berkelanjutan, tata ruang laut dalam hal kewenangan pengelolaan serta konflik kepentingan antara tujuan pelindungan lingkungan laut atau ekonomi.

Sementara itu, upaya memanfaatkan sumberdaya ikan secara optimal, berkelanjutan dan lestari yang merupakan tuntutan sangat mendesak untuk sebesarnya-besarnya kemakmuran rakyat, terutama meningkatkan kesejahteraan nelayan dan pembudidaya ikan, pemenuhan kebutuhan gizi masyarakat, memperluas lapangan kerja dan kesempatan berusaha serta peningkatan ekspor untuk menghasilkan devisa negara. Berdasarkan hal ini, guna memberikan manfaat yang maksimal bagi masyarakat dan negara Indonesia serta menjamin keberlangsungan usaha perikanan itu sendiri, maka sudah seharusnya pembangunan dan aktivitas perikanan nasional secepatnya diarahkan dengan menerapkan kaidah-kaidah perikanan berkelanjutan (*sustainable fishing*). Pada dasarnya pembangunan berkelanjutan, termasuk bidang perikanan mencakup tiga aspek utama, yaitu: ekologi, ekonomi dan sosial (Munasinghe, 2002:53).

Tanpa keberlanjutan ekologi, misalnya penggunaan teknologi yang merusak atau tidak ramah lingkungan, akan menyebabkan menurunnya sumber daya ikan bahkan juga bisa punah, sehingga akibatnya kegiatan ekonomi perikanan akan terhenti dan tentu akan berdampak pula pada kehidupan ekonomi dan sosial masyarakat yang terlibat kegiatan perikanan. Kemudian, tanpa keberlanjutan ekonomi, misalnya rendahnya harga ikan yang tidak sesuai dengan biaya operasional, maka akan menimbulkan eksploitasi besar-besaran untuk dapat menutup biaya produksi yang dapat merusak kehidupan ekologi perikanan. Begitu pula tanpa keberlanjutan kehidupan sosial para stakeholder perikanan maka proses pemanfaatan perikanan dan kegiatan ekonominya menimbulkan berbagai konflik sosial di masyarakat penggunanya. Dengan demikian, agar perikanan yang berkelanjutan tersebut dapat segera terwujud, maka tentunya harus diimbangi dengan regulasi dan kebijakan yang tepat dan efektif.

Persoalan perumusan kebijakan pembangunan sebagai pemanfaatan sumber daya kepulauan dapat didekati dengan dua pendekatan penting: dinamika sistem dan teori permainan. Pendekatan dinamika sistem (Forrester, 1969) adalah aplikasi teori pengendalian pada sebuah sistem. Langkah pertama untuk mengelola sebuah sistem alamiah (*natural resource system*) agar memberi manfaat dalam jangka panjang adalah dengan memperlakukan sistem tersebut sebagai sebuah *managed system* (sistem yang dikelola). Ini berarti menciptakan sebuah komponen buatan pada sistem alamiah tersebut melalui pembentukan kelembagaan atau pengaturan (*governance*) atas sistem ini. Salah satu komponen buatan yang penting adalah informasi dan umpan balik (*feed back*) sistem

Sedangkan untuk menentukan bentuk intervensi (kebijakan/*policy*) atas sistem alamiah ini, pendekatan permainan dapat membantu (Ostrom,1997). Pendekatan permainan berarti bahwa persoalan pemanfaatan sumber daya kepulauan dipahami sebagai sebuah multi players game. Ini berarti hasil akhir pemanfaatan sumber daya kepulauan merupakan hasil interaksi antara berbagai strategi pemanfaatan oleh setiap pemain dalam permainan tersebut. Isu terpenting dalam pengelolaan sumber daya kepulauan sebagai sumber daya bersama (*common pool resources*) adalah isu *free riding*. Oleh sebab itu, untuk memanfaatkan sumber daya atau sistem kepulauan ini, para pemanfaat sumber daya kepulauan dapat mempertimbangkan kluster baru teknologi kapal ikan dengan memanfaatkan layar yang telah dikembangkan untuk negara berkembang saat harga BBM belum semahal saat ini (Rosyid and Johnson, 2005). Teknologi ini telah diimplementasikan untuk Kabupaten Jembrana dan NAD.

4. Kesimpulan

Partisipasi nelayan dalam meningkatkan kesejahteraan merupakan kunci pokok dalam implementasi kebijakan pemerintah untuk kesejahteraan nelayan. Peran Negara sangat dibutuhkan bagi nelayan dalam menerapkan tata kelola yang baik. Pemerintah dalam hal ini pemerintah daerah harus proakatif menjadi mediator sekaligus pengendali pendulum perubahan dalam tata kelola kemaritiman.

Berdasarkan uraian diatas paling tidak terdapat 5 arena pemerintah untuk hadir dalam tatakelola kemaritiman, yaitu, penguatan kelembagaan, perubahan perilaku pola penangkapan, perlindungan ekologis, pengaturan kemaritiman dan perlindungan pasar produk hasil tangkapan. Pemerintah perlu hadir pula dalam penguatan kelembagaan nelayan mulai dari fundamen dasar budaya pengelolaan kelautan sampai dengan perlindungan pasar produk tangkapan untuk menjamin terwujudnya kesejahteraan nelayan.

Daftar Pustaka

[1] Adhuri, D. S, 1998, *Hak Ulayat Laut, Stratifikasi Sosial dan Politik Kepala Desa: Memahami Konteks Sosial, Kebijakan dan Masalah Kependudukan dalam Pengelolaan Sumber Daya Kawasan Pesisir Indonesia*, 20-21 April, Jakarta: Jurusan Antropologi, FISIP Universitas Indonesia.

[2] _____ 2002a, *Perang-Perang atas Laut, Menghitung Tantangan pada Manajemen Sumberdaya Laut di Era Otonomi: Pelajaran dari Kepulauan Kei, Maluku Tenggara, Reconfiguring the Environment in Decentralizing Indonesia: Towards Multi-Layered Resource Management* 16-19 Juli 2002, hal. 300-308, Denpasar Bali.

[3] _____ 2002b, *Selling the Sea Fishing for Power: A Study of Conflict over Marine Tenure in the Kei Islands, Eastern Indonesia, Research School of Pacific and Asian Studies*, Dept. Anthropology, Canberra: The Australian National University.

[4] Adhuri, D., Kanagaratnam, U., and Dey, M, 2006, *Resilience, Rights and Resources: Two Years of Recovery In Coastal Zona Aceh*, Bogor: World Agroforestry Center.

[5] Adhuri, D., S dan Wahyono, A., (editor), 2004, *Konflik-Konflik Kenelayanan: Distribusi, Pola, Akar Masalah dan Resolusinya*, Jakarta: LIPI.

[6] Bogdan, R. C., & Biklen, S.K. (1992), *Qualitative research for education: An Introduction to Theory and Methods*. Boston: Allyn and Bacon.

[7] Bryant, D, L. Burke, J. McManus and M. Spaulding, 1998, *Reefs at Risk: A Map-Based Indicator of Threats to the World's Coral Reefs*, Washington, D.C: WRI/ICLARM/WCMC/ UNEP, World Resources Institute.

[8] Conner Bailey. (1986, Oktober), *Conflict in the Commons: The Case of Indonesia Fisheries, Annual Meeting of the Association for Asian Studies*, Chicago: Association for Asian Studies.

[9] Conner Bailey. (1988). *The Political Economy of Marine Fisheries Development in Indonesia*, Vol . 46 (Oct ., 1988), pp . 25-38 Published by: Southeast Asia Program Publications at Cornell University Stable URL: http://www.jstor, 46, 25–38.

[10] Denzim, Norman K, and Lincoln, Yvonna S, 1994, *Handbook of Qualitative Research*, Thousand Oaks, London, New Delhi: Sage.

[11] Emmerson, D. K, 1975, *Bitting the Helping hand: Modernization and Violance in an Indonesia Fishing Community*, Land Tannure Center Newsletter No. 51.

[12] Forrester, Jay Wright, 1969, *Urban Dynamics*, Productivity Press.

[13] Hughes, T.P., Bellwood, D.R, and Connolly S.R, 2002, Biodiversity hotspots, centers of endemicity, and the conservation of coral reefs, *Ecology Letters*, 5, 775-784.

[14] Indrawasih, R, 2007, *Konflik-Konflik Kenelayanan: Distribusi, Pola, Akar Masalah dan Resolusinya (Konflik Klaim Wilayah Laut di Maluku Utara)*, Jakarta: LIPI.

[15] Kooiman, J, 2003, *Governing as Governance*, Thousand Oaks: SAGE.

[16] Kusnadi, (2000, Januari) Konflik Antar Komunitas Nelayan dalam Memperebutkan Sumber Daya Laut di Perairan Pantai Utara Jawa Timur, *Jurnal Ilmu-Ilmu Humaniora*, Vol. 1 No. 1, hal. 27-37.

[17] _____ , 2002, *Konflik Sosial Nelayan (Kemiskinan dan Perebutan Sumber Daya Perikanan*, Yogyakarta, LKIS.

[18] _____ ,2007, *Jaminan Sosial Nelayan*, Yogyakarta: LKIS.

[19] Kusumah, M. S, (2010a), Preferensi dan Bentuk Konflik dalam Konflik Nelayan, *Jurnal Humaniora dan Pendidikan*, 2 (1), 55-64.

[20] _____ , (2010b, Mei), Sumber Konflik dan Pola Resolusi Konflik Nelayan di Muncar Banyuwangi dan Panarukan Situbondo, *JSBP (Jurnal Sosial, Budaya dan Politik)*, No. 1 (1), 1111-1128.

[21] _____ , 2015. "Perjuangan Nelayan atas Laut (Studi tentang Konstruksi Relasi Nelayan, Pelembagaan Nilai Konflik dan Resiliensi Sosial-Ekologis Nelayan Muncar Banyuwangi." *Dissertation*. Malang: Program Pascasarjana Ilmu-ilmu Pertanian, Fakultas Pertanian Universitas Brawijaya Malang.

[22] _____ , (2016a) "Flisherman Struggle Over The Sea: a construction of fisherman social action respond to ecological degradation". *Makalah dipresentasikan dalam KRIPIK-SciFiMaS 2016*, Center For Maritime Bioscience Studies, Institute For Research And Community Empowerment, Jenderal Soedirman University

[23] _____ , (2016b) "Kuasa Atas Laut: Perebutan Hak Atas Subsistensi Sebuah Politik Ekologi Pengelolan Laut" *Makalah disajikan dalam Seminar Nasional Kelautan (SEMINAKEL) XI*, dengan tema: "Penguatan Riset dan Teknologi Dalam Rangka Meningkatkan Pengelolaan Sumberdaya Laut dan Pesisir, Tanggal 2 Juni 2016 di Universitas Hang Tuah Surabaya. diterbitkan dalam prosiding ISSN halaman. 93–99.

[24] Meyer and Leydesdorff, 2013, *Triple Helix of University Industry Government Relations*, http://leydesdorff.net/th scientom

[25] Munasinghe, M, 2002, *Analysing the nexus of sustainable and climate change: An overview*, Oecd. France.

[26] Ostrom, Elanor, 1997, *Governing the Commons*, Oxford University Press.

[27] Rosyid, Daniel M and Johnson, Roger M, 2005, *Developing Sustainable Fishing Vesseis for Developing Countries in the 21 Century, Rina Transactions*, Vol. 147.

[28] Satria, A, 2009, *Ekologi Politik Nelayan*, Yogyakarta: LKIS.

[29] Satriyati, E (2006, Desember), Manajemen Konflik Antara Nelayan Madura dengan Nelayan Pasuruan dengan Implikasi Sosial Ekonominya, *Jurnal Manajemen, Akuntansi dan Bisnis*, Vol. 4 No. 5, Hal. 517-525.

[30] Solihin, Akhmad dkk, 2005, *Strategi Pembangunan Kelautan dan Perikanan Indonesia (Bunga Rampai)*, Bandung: Humaniora Utama Press.

[31] Suharyanto, H, 2009, Perlawanan Nelayan dan Petani Tambak Terhadap Perusahaan Multinasional di Ujung Pangkah Gresik Surabaya. *Disertasi*, Program Pascasarjana Universitas Airlangga.

[32] Wahyudi, I. Muzni, A. I, Suryanto (2010), *Model Pengembangan Resolusi Konflik Nelayan Pantai Utara Jawa Timur*, Gresik: LPPM Universitas Muhammadiyah Gresik.

Coastal Community's Economic Empowerment Through The Processing Mangroves Minapolitan Agribusiness Fruits With Concept *(Case Study of Mangrove Conservation Area Baros, Tirtohargo, Kretek, Bantul, Special Region of Yogyakarta)*

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Abstract

Mangroves are typical plants found in coastal areas. Mangroves have natural resource components such as landscapes, flora, and fauna. So that mangrove has an influence on the local community where the interaction of surrounding communities that have one unity that is ecological, economic, and social functions. This research is based on the powerful interaction of the economic community, in this case is MSME the which will bring changes to the coastal economy. The concept of minapolitan agribusiness applied will prioritize the development of adequate infrastructure and process of marketing mangrove processing with the role of local government to create an environmentally friendly economy. The purpose of this research is (1) to know the participation of coastal communities in the processing of magrove fruit, (2) to find out how the concept of agribusiness minapolitan effect on mangrove fruit processing. This research is designed as a field study with qualitative descriptive method. The case study is in the Mangrove Conservation Area Baros Bantul, Yogyakarta. The hope of this research with the concept of minapolitan agribusiness community and the role of government can the make the mangrove as new economic commodity in coastal areas, coastal MSME community can use to improve the processed of mangrove fruit.

Keywords: Coastal Communities, Mangrove, Agribusiness, Minapolitan

1. Introduction

The mangrove ecosystem has unique characteristics. This ecosystem is located in the brackish areas, namely the meeting between land and sea. Many species of plants and organisms that live in the mangrove ecosystem. Plants that live in it consisted of native plants that grow in swampy areas, as well as plants that generally live on land and then brought up to live in the mangrove ecosystem. Muddy soil is also a characteristic of the present mangrove ecosystem. Various types of crab, shellfish, snakes, and lizards can live in the mangrove. Mangrove itself also has economic value when utilized properly and correctly will make the unique characteristics of the coastal area.[1]

The existence of mangroves as a typical plant of the coastal area and plays an important role for the sustainability of community activity around the coast. Of the approximately 16.9 million hectares of mangrove forest in the world, approximately 27% were in Indonesia that mangrove forests are found in almost all coastal and marine areas of Indonesia have a direct relationship with the tide along the coast.[2]

One of the areas that are the mangrove ecosystem is the southern coastal district of Bantul, precisely in the estuary or meetings between the southern ocean with Opak River estuary. Based on the Decree of the Regent of Bantul, No. 284 of 2014 on Backup Conservation Areas Coastal Park, an area of mangrove forests Baros designated as a conservation area with a total area of area 132 hectares, divided into three zones, namely

the core zone (10 ha), the other zones (94 ha) and limited use zones (28 ha).[3]

The main obstacle encountered in efforts to conserve the mangrove ecosystem is increased awareness and community empowerment. Increased awareness of coastal communities will aim to convince long-term benefits of the management of mangrove areas. The cause of failure in the process of community development is the use of a centralized management approach that is both top-down means people only have little authority on the ecosystem. Community ownership of resources mangrove ecosystem will also be very small. An important strategy in the planning and management of mangrove ecosystems that involve the community through community-based management.[4]

Development and utilization of mangrove forest can run optimally in line with good management and correct by the local community and the support of the local government, with a good cooperation will create a proper utilization of the target without damaging the mangrove ecosystem. Development and utilization of mangroves for economic activities in the form of empowering community businesses to be more efficient, productive, and competitive, namely by creating a conducive business climate and business opportunities as broad as possible.[5]

Resolving the problems facing the coastal region required an innovative strategic policy and measures of effective breakthrough. Necessary sector development system based region with the concept minapolitan region. Minapolitan is the conception of economic development of region-based marine and fisheries based on the principles of integration, efficiency, quality, and speed. Minapolitan is a part of the region that has a primary function of the economy that consists of production centers, processing, marketing of fishery commodities, services, or other supporting activities. Linkages with minapolitan, how the concept can be a solution minapolitan and landing in the coastal area management and utilization of mangrove as the economic potential of environmentally friendly,

Agribusiness Minapolitan concept is a concept of particular agricultural development, in this case in the coastal areas of mangrove forest areas of agricultural development in the broad sense are introduced to the concept of "Agropolitan". In its development, the mangrove areas serve as the activity of economic activity with the concept of city facilities. Not mengkotakan coastal areas, but develop activity in coastal regions with the support by the urban infrastructure. In other words Minapolitan is an area with a functional system of the villages on the coast, the village hierarchy of growth centers (DPP) with villages in the vicinity (hinterland).

In Act No. 26 of 2007 on Spatial Planning, paragraph 2, section 51, is loaded on the development of agriculture known as "Agropolitan". Agropolitan zone is a region consisting of one or more activity centers in rural areas as agricultural production systems and management of certain natural resources represented by an association-functional and hierarchical spatial linkage system unit housing, and agribusiness systems. The structure and hierarchy Minapolitan development can consist of:

1. City District as a strategic city (Strategic City);
2. Fishing town / area of mangrove (Minapolis) who is administratively can be either district or village;
3. Production Location administratively can be either the village or region. Villages or areas of mangrove though production has urban infrastructure, but is not designed to be a city[6]

In the development of the Minapolitan expected to form a panorama of mangrove forests and mangrove village lush, cool and peaceful with urban infrastructure, such as road networks, financial institutions, markets, offices, counseling and technology transfer

institutions, educational institutions, and research. With urban facilities will be available the water infrastructure, institutional offices, medical institutions, and social and public facilities. This means that the development of agriculture (mangrove) is done with an agribusiness approach that is closely associated with the industrialization of agriculture (agro-industry development). The agribusiness development include: agribusiness sub system upstream (upstream), agriculture (on farm system), agri downstream (downstream) and support services (support system institution). As the driving force of agribusiness is a sub-system downstream agribusiness (down stream) in this case is the agro-industry, not just on the sub on farm system only. The strategy implemented by the assumption that the development of agribusiness/agro-industry:

1. Is a continuation of the agricultural sector development strategy that has been implemented previously.
2. Approach to agribusiness / agro-industry and its spatial orientation on the air-based systems increased production of biological resources (farming system production) and on demand (market oriented);
3. An economic activity on which the majority of the people;
4. Able to accommodate dam empower stakeholders and their linkages between macro and micro economic performance.[7]

Table 1. Agribusiness Minapolitan Concept For Processed Mangroves

Promotion, Information Market, Market Intelligence (Government)				
Subsystem Marketing				
Subsystem upstream		Subsystem cultivation		Downstream subsystem
Technology developers (National park hall / groups observer coastal areas) and training	→	The activity of farming / livestock (communities and local governments)	→	Industry argo (Housing industries and channeling institutions such as cooperatives, Pokdarwis, rural enterprises)
Subsystem Support Services				
R & D, Rural, Information Systems, Services Keswan, Transportation, Etc. Awareness Training				

Minapolitan development mechanism contained several steps, among others:

1. Socialization program (at the central, provincial, district, and region)
2. Selection and determination of the location (by the Regent, the Governor and the Minister)
3. Minapolitan Working Group drafting the District (the Regent)
4. Compilation MASTER PLAN / RPJM minapolitan (by governments and diasistensi POKJA)
5. Preparation of DETAIL DESIGN
6. Minapolitan development implementation (funding across sectors with stimulants from the center)
7. Monitoring and evaluation (by the task force team agro / minapolitan central, provincial, district)
8. After 3 years development facilitation minapolitan (towards minapolitan independently by the community with the facilitation of local authorities)
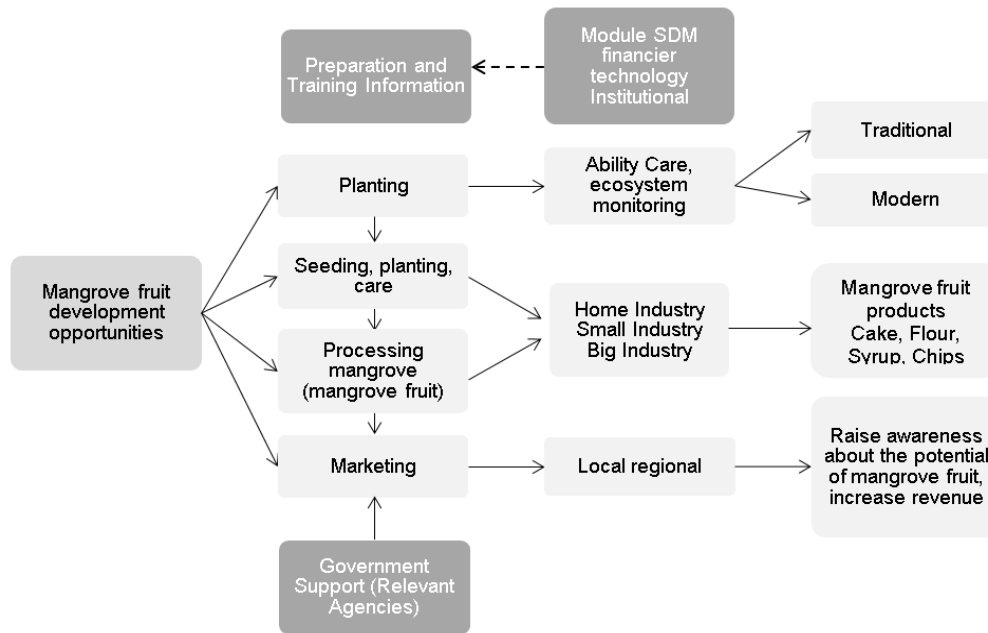
Figure 1. Chronology of Development Opportunities and Mangrove Fruit Processing

Infrastructure development (cultivation) the development of coastal areas by agribusiness concept minapolitan region is expected to serve agricultural production, in this case the mangrove and can become the center of agribusiness activities for the area surrounding the Hinterland region. As for the infrastructure to be provided include [8]:

1. Characteristically Infrastructure Software
   a. Rules related to infrastructure policy minapolitan (spatial masterplan / RPJM, RPIJM, DED)
   b. Service empowering farmers, namely the extension of technology and institutional empowerment model.
2. Environmental Infrastructure / Cultivation
   a. Marine Aquaculture (collectively jankar, KJA, nets step, dock harvest, handling space, office management / saung meeting / warehouse, drying seaweed
   b. Aquaculture Pond / Pool (sluice, irrigation network revenue and disposal, production road, bridges, culverts and handling space, mini ice plant / warehouse es).
3. Region infrastructure
   Road access (bridges, roads, culverts), the electrical grid, telephone network, drainage network, and the network of water
4. Supporting infrastructure
   a. Input Means of Production: such as fertilizers, seeds, medicines, equipment, and others.
   b. Supporting Production: enlargement of production facilities, means of seed, feed mills, drug stores, ice plants, brodstock center.
   c. Supporting Processing: mangrove industrial area, cold storage, transportation, packing industry for mangrove results.
   d. Support Marketing: modal transportation, where the promotion, information centers and other markets. The location can be in the centers or sub-terminal consumer market in the production centers.
   e. Production Support Facilities: such as banking institutions, cooperatives and others.

2. Methods

This research is designed as a field study using the method of data collection interviews and direct observation. This research is a qualitative descriptive study describes a phenomenon in the context of socio-economic in nature by promoting the process of interaction-depth communication, the state of perception, participation and community and local government in the economic empowerment of coastal communities through the processed fruit mangrove with the concept of agribusiness minapolitan area of mangrove conservation Baros, Yogyakarta.

3. Findings and Argument

Mangrove Areas condition Baros

Baros mangrove area located between Depok Beach and Samas Beach. Baros mangrove area located at the mouth of the River Opak is the estuary of the 10 rivers around him with Merapi as upstream and also across the karst region of Mount Sewu (Oyo River). Based on the Decree of the Regent of Bantul, No. 284 of 2014 on Backup Conservation Areas Coastal Park, an area of mangrove forests Baros designated as a conservation area with a total area of area 132 hectares, divided into three zones, namely the core zone (10 ha), the other zones (94 ha), and limited use zones (28 ha). Currently the mangrove forest area of Bantul was still less than 10 hectares that is necessary to expand gradually.

Opak River estuary region does have a high level of abrasion even if the water is rising, sea water can enter into the fields of society which resulted in damage to land and crop farmers. Mangrove plants can not directly prevent abrasion. This plant still be at risk for strokes lost big waves and strong winds. Therefore, we recommend planting mangroves along the coastal belt development. The coastal belt serves as a breakwater and stabilize water to facilitate the development of mangrove.

Damaged coastal ecosystems can be restored by planting mangrove forest. Forests can also restore biota that live in the ecosystem. Mangrove become a food source for small biota and fish that live in the vicinity. Mangroves can also be used as spawning sites. In addition, if the mangrove rehabilitation is successful it will eventually be able to restore land lost due to the effects of abrasion.

Table 2. Characteristics of Mangrove Ecosystem Baros

No.	Indicator	Mangrove Ecosystem Condition
1	Mangrove Species Diversity	*Avicennia, Bruguiera gymnorrhiza, Rhizopora sp, Nypa, Sonneratia, egrets, Periphotalamus, Wipe SP, SP coenobita, Telescopium*
2	Ecosystem damage	Still there (the accumulation of garbage on the beach)
3	Mangrove standard Good Condition	1. Age 3 years since planting has begun to be utilized 2. Mangrove height of 1.3 M 3. High conservation of mangrove minimum of 3-4 m
4	In Ecological Mangrove benefits	1. Inhibit the rate of abrasion 2. Inhibiting tsunami 3. restore ecosystem 4. The leaves and fruit can be used 5. Reducing wind during rainy season 6. Creating a cool air
5	Biota type Living In Mangrove Ecosystem	Prawns, mud crabs, several species of fish, snakes, lizards, and birds

No.	Indicator	Mangrove Ecosystem Condition
6	Already mangrove to Utilized	Inhibit the rate of abrasion
7	Mangrove Cause Damage	Hit by wave Wind
8	Strengthening Mangrove Ecosystem	The coastal belt (greenbelt) and socialization right

source: observation and interviews with stakeholders, processed

Ecosystem management is still so up due to the physical condition of areas which were not well-organized, and there are still many unresolved problems.

Table 3. Business mangrove ecosystem Baros

No.	Indicator	Condition
1	Nurseries	Less fulfilling aspect of the nursery
2	Parties associated with the management	KP2B
3	Damage	Stacking bins, big waves, and wind
4	Limitations of mangrove management	Nurseries, supervision, maintenance
5	Citizen's awareness	Very high
6	Plans for strengthening the mangrove ecosystem	Nurseries

source: observation and interviews with stakeholders, processed

Less than the maximum management has resulted in less development and utilization of mangrove plants optimally. It takes the cooperation of several parties to be able to process the mangrove well, like society, government, marine and fisheries department, department of environment, BKSDA, tourism agencies, and others. However, in the management of Coastal Mangrove Baros is still constrained by lack of coordination and cooperation between the parties concerned. The government should be able to understand what is required and how risks will occur by looking at the state of mangroves in Turkish Baros today. When one party has been trying to manage for example by seeding but the other party can not support, then the management also can not be maximized and the results are not optimal.[9]

How Coastal Community Participation in Mangrove Fruit Processing

In the case of mangrove fruit processing, because people still do not enthusiastically productive mangrove forests Baros yet to be exploited physically. Currently Baros mangrove fruit production is relatively small. The fruit will be used for breeding and seedlings will be planted in the area of mangrove forests Baros. According to KP2B, mangrove forests Baros is still necessary to expand because there are still a lot of land that has not been planted mangroves. Until now the expansion is still running with the help of the community and the government. KP2B party is trying to develop Baros mangrove forests that can be used as an educational tourist attractions, not mass tourism. But still constrained because the government has not fully plunge to handle Baros mangrove forest. Baros Turkish coastal communities enthusiastically in activities conducted in Mangrove Beach Baros, such as

cleaning trash from the sea and the installation of the net net. When there is a guest aimed at studying or doing activities such as planting, the KP2B excited to welcome and assist needs of visitors.

Counseling about the mangroves have been done, but there is no significant movement to make this area really became the mangroves and make economic resources which are environmentally friendly. So far the utilization of mangrove extent of abrasion and a protective barrier for the fields of society, because the livelihoods of surrounding communities are farmers. Obstacles in the mangrove forest management Baros Beach is a great southern ocean waves and strong winds brought increasingly disturbing marine litter Baros mangrove ecosystem.

The role of the government and the public is needed to create the mangrove area that has a characteristic of the region, development of the area that is being done there should be good communication between elements for later development of this area can be precisely targeted and can be used as an economic resource friendly alternative would environment.

How Influential Minapolitan Against Agribusiness Concepts Processed Fruits Mangrove

Mangrove utilization for the benefit of communities that are environmentally friendly economy requires a large amount of mangrove. Mangrove condition in Baros is not currently allow for the utilization of mangrove to make economy products. So far the concept of minapolitan agribusiness cannot be applied in mangrove fruit processing because the condition of mangroves that have not fulfilled to be processed as food or drinks, but the concept minapolitan already underway in terms of regional infrastructure improvements in infrastructure has been started since 2006, ranging from the manufacture MCK, praying, gazebo, as well as access roads, other supporting infrastructure development is still very necessary.

Minapolitan argribisnis concept should be applied properly in the implementation, no communication is established with good and intense, so far only limited Minapolitan in Baros but in its implementation plan is still lacking.

4. Conclusion

The effort to empower the mangrove community through the concept of Minapolitan angribusiness is wrong to provide good for environmentally friendly economic alternatives, but in fact the concept of Minapolitan angribusiness for processed mangrove fruit in baros cannot be applied properly because the raw material conditions have not been met.

5. Acknowledgements

References

[1] EY Agungguratno, "*Mangrove Ecosystem Strengthening Economic Empowerment For Coastal Community,*" vol. 11, no. 1, pp. 1-9, 2016.

[2] S. Umayyad et al."The level of Mangrove Ecosystem damage in Teluk Merbau Belitung District of Kepulauan Meranti," Riau *J. Biol.*, Vol. 1, no. 4, pp. 24-30, 2016.

[3] usm, "*Baros Mangrove Conservation Area Continues to* http://jogja.tribunnews.com/2016/10/15/kawasan-konservasi-mangrove-baros-terus-dibenahi".

[4] R. Haryanto, "Rehabilitation of Mangrove Forests: Conservation of Coastal Ecosystems and Coastal Community Empowerment," *J. Karsa*, Vol. XIV (2), no. October 2008, pp. 1-14, 2008.

[5] Marhawati Mappatoba, "*Marginal Community Empowerment Synergy In The Village Backward / Municipal Central Sulawesi Province especially for those who have been associated with middlemen for lending bias that has been done before.*," Vol. 2, no. 1, pp. 34-43, 2009.

[6] Ministry of Public Works and Housing, "*Law No. 26 Year 2007 on Spatial Planning*" The Government of the Republic of Indones., Pp. 1-107, 2007.

[7] MA Ridlo, U. Islam, and S. Grand, "*Coastal Area Development Concepts With*" no. October, pp. 301-308, 2017.

[8] Director of Facilities and Infrastructure, "*Minapolitan DEVELOPMENT POLICY AS A STEP IN SUPPORTING REGIONAL DEVELOPMENT DKP*".

[9] RP 2 Irawan Waluyo Jati 1, "*Mangrove tersistem as Solution Addition Mangrove Forest Land Cover Size Baros in Coastal South Beach district of Bantul,*" vol. 14, pp. 148-153, 2017.

Sustainable Development Strategies for Micro, Small, and Medium Enterprises (MSME) Using SWOT: A Case Study of MSME in Banyuwangi and Tulungagung Regencies in East Java Province

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Abstract

Evaluating the current situation of micro, small, medium enterprises (MSME) activities in Banyuwangi and Tulungagung in East Java province and offering strategies for its sustainable development are the main objectives of this study. To this end, different decision making tools were used including questionnaires and interviews with experts, local owners of MSME and consumers of the MSME's products. Strengths, weaknesses, opportunities and threats (SWOT) analysis techniques were conducted to identify the required management strategies. Results showed that the existing MSME business activities within two regencies not in line with the sustainability requirements. Although the result of the present study showed that Banyuwangi and Tulungagung have an unsustainable situation with regard to its current management strategies, if authorities take its great opportunities and strengths more into consideration, it can have positive effects on developing sustainable strategies to increase level of sustainability in business activities for SMME in the both of regions and to reduce the adverse effects on the environment.

Keywords: Sustainability; Development Strategy; SMME; SWOT analysis

1. Introduction

Sustainable development in a business strategy is increasingly popular for some literatures of drivers of business transformation more than twenty years. Sustainable development, according to Brien and Hamburg (2014), is adopting business strategies and activities that fulfill the companies' needs and its stakeholders while protecting, sustaining and enhancing the human and natural resources needed. It is important to measure progress of a company transition to more sustainable, however, more important is to establish and to find ways in which the enterprise has ability to move toward a sustainability level. Elkington (1994) argued that a company should prepare three different bottom lines; first bottom line is the company maintains its orientation to increase profits through financial performance, return on investment, shareholder value and the broader economic size; the second bottom line is to measure interaction with neighbor societies where the company operates; the third one is to measure the company's environmental responsibility. The company with a positive triple bottom line should have a positive impact on the 3Ps (profit, people, planet). Roles of a skillful, experiential, competent manager are needed to apply changes within a company moving toward sustainability. Achieving sustainable development of companies also defined as one that is economically feasible, socially acceptable and ecologically benign, is dependent on environmental protection and reconciling shareholders' purposes with social values.

For micro, small, and medium enterprises (MSMEs) as companies which employ less than 100 people, sustainable development is relatively new trend which has impact to people's lives and would be demanded by consumers in the coming years. Despite the fact

that many admit to confusion over what sustainability is and how to introduce sustainable measures into MSMEs' daily activities and how to evaluate its benefits (Hill, 2016). Moreover, MSMEs managers do not fully understand and are not ready to prepare resource allocations to sustainability initiatives, when their main focus tends to how to increase sale values for survival. Those may motivate the MSMEs to conduct sustainable business to be more competitive, even though the MSMEs' have only smaller-scale production than other companies' size.

The role of micro, small and medium enterprises (MSMEs), in Indonesia has been recognized by various groups to help many communities to improve living standards and reduce unemployment with all its effects. But without realizing it, the activities of the economic agents (production, distribution and consumption) of MSMEs with the application of the latest simple technology have resulted in side effects, namely the production of waste or waste substances that are discharged into the environment. Wastes that are wasted in the environment tend to damage the ecosystem with different scales in the long run and potentially reduce the quality of the environment (Greenan, Humphreys, dan McIvor, 1997; Colyer, 2003).

The characteristics of the existence of MSMEs in Indonesia, especially in the areas observed in Tulungagung and Banyuwangi districts, has product-scale is limited with not many product variations. Lack of well-administration and financial management have been points of inefficiency for the owners and managers. Even though some MSME could access banking sector for financing, the role some non-banking institutions has been dominating financing assistance of MSME living for years. Another feature is low level of the ability of human resources that are not evenly distributed in terms of technical production. This condition certainly requires special handling and treatment by the regional government to be able to become a regional economic buffer.

The purpose of this study is to evaluate the current situation of MSME management and the implementation of sustainable business development strategies that is environmentally friendly in Tulungagung and Banyuwangi districts. Observed MSMEs in two regencies have been trying specific strategies for developing environmentally friendly products. The development focused on how the production process adopted a triple bottom line which involved three aspects, namely economic, environmental and social aspects. Therefore, the SWOT analysis method can be used to analyze this study. With the SWOT approach, it can be analyzed the strengths and weaknesses (internal factors) and opportunities and threats (external factors) of MSME in Banyuwangi and Tulungagung for implementing of sustainable development with a triple bottom line approach. Achieving sustainable development with this approach, stakeholders and owners of MSME are tested through questionnaires, structural interviews and focus group discussion (FGD).

From the analysis of research conducted, it was discovered empirical facts that the triple bottom line based sustainable development strategies are being not in line with the environmental development policies in which government issue. This is because some factors including the supervision of managerial board of MSMEs who is in charge not discipline doing those strategies. From government side, there is still no encouragement for law enforcement of business units which violate environmental laws in the production process. The reluctance of local governments in the enforcement of environmental law is in doubt because this policy is less popular and have an effect in local general elections. If the local government really considers the strengths and opportunities in the SWOT analysis, it can have a positive effect on the achievement of strategies for achieving sustainability in the production of MSME production. Other implications certainly have an effect on efforts to prevent harmful impacts on environmental sustainability in the long run.

2. Methods

Study Site

This study takes place in two regencies in East Java which are the centers of MSMEs, namely Banyuwangi and Tulungagung districts. Both regions have characteristics of MSME products produced. For Tulungagung, for example, many export-oriented convection, mukena, handicrafts, regional souvenirs and so on. One of the typical and prominent culinary products from this area is chicken lodho cuisine which is much loved by local tourists from the surrounding area. While for Banyuwangi regency dominated products derived from marine products and then followed by batik products and typical Banyuwangi headbands.

Banyuwangi and Tulungagung districts have two different cultures. Banyuwangi consists of three strong cultures: Javanese, Madurese and Osing who coexist peacefully, while Tulungagung is dominated by a strong Javanese Mataraman culture. Both styles of typical regional cultures influence the mindset of its citizens how to manage business. Likewise, in developing sustainable and environmentally friendly businesses, they have their own style and ways of managing sustainable businesses.

Survey respondents

Respondents from this study consisted of business owners, employees, relevant government officials and product consumers with questionnaire instruments and focus group discussions. They are selected through multi-stage stratified random method so as to minimize the occurrence of bias in selected respondents. With a varied background of respondents, they are considered to have complete knowledge regarding business continuity issues and environmental sustainability to complement the SWOT analysis of sustainable development strategies.

Data collection

In collecting data, primary and secondary data are collected. Primary data is collected from observations and the results of the focus group discussion on the strength of the Stakeholder group, namely business owners, employees, consumers and government officials. Secondary data was obtained from the Cooperative and UMKM Service related to the number of UMKM and the type of business. After the questionnaire data was collected, the data was analyzed with MS Excel to determine the opinion index. SWOT is determined and several policies related to development are recommended according to the results of the SWOT analysis.

SWOT analysis and development strategies

SWOT analysis is derived from the assessment of S, W, O and F faced by industry organizations, companies, sectors and every organization. The roots of SWOT come from strategic management research conducted in the 1960s and 1970s. SWOT analysis can also be used to identify potential projects and plans to be completed in a development strategy. S and W (Local analysis) are internal factors when O and T (global analysis) are external factors. Internal evaluations and external factors are an important part of strategic planning which is an instrument in the adoption of strategies and a component of the development of sustainable business units.

SWOT analysis aims to identify key internal and external factors as important aspects in achieving goals. This analysis classifies key parts of information into internal factors consisting of S and W and external factors that consist of O and T from outside the company.

Scanning factors outside and inside environment and considered as a major component of the sustainable development process. An analysis of this kind of strategic environment is an instrument in the formulation of strategies and can help researchers benefit from past events and think of possible solutions to existing problems. In this study, SWOT analysis was conducted on MSMEs to test the behavior of MSMEs in conducting SDS (Sustainable Development Strategies). First, internal factors in MSME are classified as Strengths or Weaknesses and external cyclical factors as Opportunities or Threats.
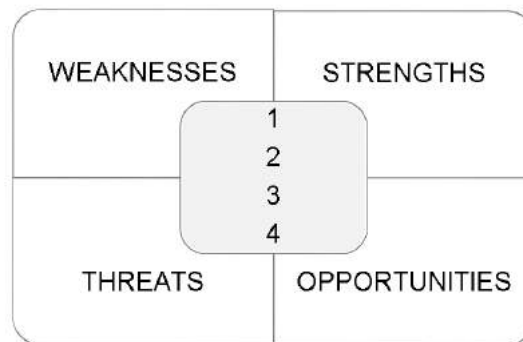
Figure 1. Variables based on SWOT Analysis

Accordingly, a list of Ss and Ws and a list of Os and Ts were drawn. The first group was tabulated into Internal Factor Estimate Matrix (IFEM), while the second ones were tabulated into External Factor Estimate Matrix (EFEM). These factors are given weight and score by selected respondents and the final score is calculated. Following is the scoring process for the SWOT analysis:

1. Factors are given coefficients between 0 and 1, to "not important and" most important. This coefficient represents the relative significance of factors at the success rate and is represented by the weight in IFEM.
2. Each factor is scored between 1 and 4 where *1 = Very weak, 2 = weak, 3 = strong and 4 = very strong.*
3. To determine the final score of each factor, the weight is multiplied by the score
4. The total score is totaled all to calculate the final IFEM score
5. If the total IFEM value is less than 2.5, then the strength is smaller than the weakness and vice versa, if the value is more than 2.5, the strength exceeds the weakness.

3. Findings and Argument
External factor estimation

There are 25 pertaining to O and T factors with weights between 0.01 to 0.05 and effectiveness scores between 2 and 4, while T has a weight between 0.02 and 0.4 and an effectiveness score between 2 and 5. According to the results, the most important to be obtained with the highest weight identified (for opportunities) as "Environmentally Friendly products of MSMEs are preferred by global consumers". The next important factors, including followed by "Reducing of fossil fuels for machines of production processing, will be implemented for "environmental auditing for production processing in the coming years". On the other hand, the first less important factor is the "Product-scale is relatively larger than ordinary SMEs 'product scale", followed by "Communities has taken benefits for existing of MSME" and "MSMEs' potential products are exported to frequently into developed countries". For the highest threats is the "Global economic conditions tend to be able" to be followed by each of "the national economic recovery process is not as fast as expected" and

"Green public space is going down city areas". Conversely, "the level of forest fire is quite high in Kalimantan and Sumatra islands" followed by the "Decreased rate of water reserves in alarming levels", each of which has the lowest score. The total value of EFM is 2.36 more than 2.5, which means Opportunities exceeds Threats (Table 1).

Table 1. External factor estimation matrix (EFEM)

	Weight	Effectiveness Score	Final Score
Opportunities **Economic**			
1. MSMEs' potential products exported frequently into devel-oped countries	0.03	3	0.09
2. Environmentally Friendly products of MSMEs are preferred by global consumers	0.05	4	0.20
3. Exhibition of newly local products for foreign consumers is prioritized for the owners of SMEs	0.03	2	0.06
4. Good relationship between suppliers and SMEs' owners	0.02	3	0.06
5. Product-scale is relatively larger than ordinary SMEs' product scale	0.01	3	0.03
Environment			
1. Enforcement of environmental law is more strict in the future	0.03	4	0.12
2. Environmental audit would be implemented for production processing in the coming years	0.05	3	0.15
3. Reducing of fossil fuel for machines of production processing	0.06	3	0.18
Social			
1. Implementation of corporate social responsibility for neigh-bourhood is realised	0.03	2	0.06
2. Communities has taken benefits for existing of MSME	0.02	3	0.06
3. Labour law is protecting labour rights	0.03	3	0.09
4. Environmental law protects people	0.05	3	0.15
Threats **Economic**			
1. Global economic conditions tend to be instable	0.05	3	0.15
2. National recovery economic process is not as fast as expected	0.04	3	0.12
3. People purchasing power tend to decrease	0.03	3	0.09
4. Exchange rate of Indonesia rupiah against United State dollar is fluctuated currently.	0.04	3	0.12
5. Interest rate of banking sector is going up	0.04	3	0.12

	Weight	Effectiveness Score	Final Score
Environment			
1. Level of forest fire is quite high in some forest areas in Kalimantan and Sumatera islands	0.02	2	0.04
2. Level of pollution seems uncontrollable rate	0.03	2	0.06
3. Decreased rate of water reserves is in alarming level	0.02	3	0.06
4. Green public space is going down city areas	0.03	3	0.09
Social			
1. Individualism in communities increases currently	0.04	2	0.08
2. No interaction among other people is due to busy matters	0.03	3	0.09
3. ASEAN Economic Community has been applied since 2015 and has affected social life of people	0.03	3	0.09

Internal factor estimation

Regarding strengths and weaknesses, 15 and 10 factors are surveyed and respectively is selected (Table 2). The weights of strengths were allocated for factors between 0.01 and 0.05 and scores ranged between 2 and 3. For weaknesses, weights were allocated 0.02 and 0.05 and scores were between 2 and 4. For strengths, "Government giving tax incentives for MSME products which have export orientation", return rates of capital in faster than other SMEs", "SMES recruits its clients who the most of them from villages" have the highest final scores, while "More active in the communities' events are prioritized", "Family approaches are used to bond with people around SMEs" and "Reducing water programs are applied within the production process of SMEs" are having the lowest final scores. In relation to weaknesses, "Finance management of SMEs is not being separated with household finance management", "Low punishment for pollutants is unavoidable", "the competition to capture both national and global markets has been defeated by other non-SMES competitors" have a high weight. On the contrary, the "Local power is afraid to lose popularity for local general election" because the environmental law is enforced and "Environmental matter is government business not ordinary people" have the lowest weight. The total value of internal factors is calculated as 2.26, which means more than 2.5, meaning that strength exceeds weakness (Table 2).

Table 2. internal factor estimation matrix (IFEM)

	Weight	Effectiveness Score	Final Score
Opportunities			
Economic			
1. SMEs products selling is higher than non SMEs products	0.02	3	0.06
2. Segmented market of SMEs products is wider for low and middle income people	0.03	2	0.06
3. Return rates of capital in SMEs is faster than other compa-nies	0.05	3	0.15
4. Government is giving tax incentive for MSME products which have export orientation	0.06	3	0.18
5. SMES recruits its labors who is most of them from villages	0.04	3	0.12

Environment			
1. SMES installs instruments to manage waste of production processing	0.03	2	0.06
2. Input of production process is recycle materials	0.03	3	0.09
3. Saving energy machines have been used for production pro-cess in SMEs	0.03	2	0.06
4. Reducing water program is applied within production process of SMEs	0.02	2	0.04
5. Design and products SMEs are environmental friendly	0.04	3	0.12
Social			
1. Family approach is used to bond with people around SMEs buildings	0.02	2	0.04
2. More active in the communities' events is prioritised	0.01	2	0.02
3. No violence of environmental law during production process of SMEs	0.04	2	0.08
4. The SMEs owners always give a tax report to authorised insti-tution routinely	0.03	2	0.06
5. Reputation of SMES is high for social activities	0.03	3	0.09
Threats **Economic**			
1. Finance management of SMEs is not being separated with household's finance management	0.05	4	0.2
2. Using much unskilled labour has caused low productivity in SMEs	0.03	3	0.09
3. Competition to capture both national and global markets has been defeated by other non-SMES competitors	0.04	3	0.12
Environment			
1. Supervision for violence of an environmental law is not effec-tive	0.04	3	0.12
2. Low punishment for pollutants is unavoidable	0.05	3	0.15
3. Supervision of production processing for SMEs which cause pollution is not working well	0.03	3	0.09
4. Environmental matter is government business not ordinary people	0.03	3	0.09
Social			
1. Low level of people disciplines for obeying the law is a hard problem to law enforcement	0.03	3	0.09
2. Relationship between employees and employers need a third party	0.02	2	0.04
3. Local power is afraid to lose popularity for local general elec-tion because an environmental law is enforced	0.02	2	0.04

SWOT Strategies

After selecting and evaluating the most important internal and external factors and identifying internal and external feature relationships, four strategies are developed through SWOT analysis that can be used effectively for the Sustainable development strategies of MSMEs. For example, strong bonds between strengths and opportunities can represent the good conditions of MSMEs and allow aggressive strategies. On the other hand, a strong relationship between weakness and threat can be considered as a warning and inform the use of defensive strategies. Further strong relationships between strength and threat can use different strategies. And finally a strong relationship between weakness and opportunities can be analyzed as a potential use of an overview strategy. Results are shown in table 3.

Table 3. Sustainable development strategies for MSMEs

| **SO strategies** |
| 1. Special tax incentives for MSMEs whose products are environmentally friendly and export-oriented |
| 2. Reducing the use of fuel oil in production to accelerate the rate of return on capital |
| 3. Environmental audits can maintain the sustainability of MSMEs |
| **ST strategies** |
| 1. Export of products that have strong brands in the midst of the global economic crisis |
| 2. Suppress production costs by recruiting workers from the countryside |
| **WO strategies** |
| 1. Separation of business finances with family finances to encourage exports |
| 2. Providing legal sanctions for pollution makers so that consumers are sure of the UMKM products purchased |
| **WT strategies** |
| 1. Convincing the public that the government has the power to approve regulations |
| 2. The implementation of 30 percent of the area becomes green public space |

To Explain the combination of SO and WO, ST and WT pairs in the table 3, the strategic key is determined by SO of MSME. The SO strategies propose to maintain sustainability is the provision of special tax incentives for MSMEs whose products are environmentally friendly and favored by local and global consumers. As for the ST strategy, MSMEs should reduce production costs by employing people from the villages. Meanwhile the WO identifies ways to overcome weaknesses in UMKM management, namely the separation of financial management between businesses and households and encourage products to be exported. WT strategies announced a defensive plan to better convince the community that the government was eager to conquer environmental law.

4. Conclusion

This study presents an assessment of sustainable development strategies using SWOT. The main issue is used the use of SWOT analysis to get the best strategy in sustainable in the MSME sectors. From the analysis it is known that sustainable development strategies for MSMEs' identification of its their own potentials. Special intensive tax provision for the friendly environmentally MSME products and is able to penetrate the export market. To streamline production costs, the strategy of recruiting rural workers can be taken into consideration and separates the company's finances from family finances. And the government's assertiveness in the enforcement of environmental violators is an important factor driving the sustainability of MSMEs in the future. Thus, this article provides an important and valuable technique in the use of SWOT analysis in investigating sustainable

development stability for MSMEs in a region. These results can help MSME owners in the observed areas to identify sustainable development in those areas

References

[1] E.O. Brien, and I. Hamburg, 2014, Supporting Sustainable Strategies for SMEs through Training, Cooperation and Mentoring, *Higher Education Studies*; Vol. 4, No. 2.

[2] D. Colyer, 2003, "Environmental regulations and agricultural competitiveness ". *The Esty Centre Journal of International Law and Trade Policy*, Vol. 5, No. 1, pp. 70-90.

[3] J. Elkington, 1994, "Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development", *California Management Review*, Vol. 36, Issue 2.

[4] L. Greenan, P. Humphreys, & R. McIvor, 1997. "The Green Initiative: Improving Quality and Competitiveness for European SMEs", *European Business Review*, Vol. 97, No. 5, pp. 208-214.

[5] C. Hill, (2016, June 27), Why a sustainability strategy is the key to SME success (*Online*), available https://altusimpact.com/sustainability-strategy-key-sme-success/.

Environmental Quality and Economic Growth in Indonesia: Vector Autoregressive Approach

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Abstract

The paper investigates the relationship between environmental quality and economic growth in Nigeria using a Vector Autoregressive analysis over the period 2000-2016. It seeks to examine the effect of growth on environmental performance by controlling for the role of institutional quality, trade openness and population density. The paper found that early stages of development in Indonesia accentuate the level of environmental degradation. It also finds that weak institutions and unrestricted trade openness increase the extent of environmental degradation due to environmental dumping. Finally, the paper shows that a larger population density enhances the promptness of environmental abatement measures and consciousness for cleaner environment. The study, however, failed to attain a reasonable turning point and hence a non-existence of EKC in Indonesia. The paper recommends the need to restrict the importation of emission intensive products, check the activities of multinationals which invest in producing high CO2 emitting goods in LDCs and exports to home countries. Finally, there is need to strengthen institutional quality to ensure adoption of clean technologies as income rises.

Keywords: Vector Autoregressive, Institutional quality, Environmental

1. Introduction

Debates in the relationship between environment and economic growth when observed and very large increases in living standards in the past decades have not come at no cost. Air pollution (smoke and noise), municipal waste problems, loss of forest areas, habitat destruction, threats to biodiversity, depletion of resources, and global greenhouse problems related to economic growth. When the growth process continues, a critical collapse of the world economy due to environmental problems becomes evident. This is a situation where successful growth leads to its own destruction and produces adverse effects on the economy (Kemp-Bendict, 2003; Smulders, 2000); especially in economies with weak institutional quality.

Increased   growth   increases economic productivity and allows it to access more advanced levels of technological knowledge. This increases productivity per unit of natural resources used so as to allow greater production volumes at lower levels of environmental degradation. Progress in technological progress coupled with increased economic growth will create opportunities and resources to finance investment in new technologies that are environmentally friendly, to solve waste problems and reduce material and resource use. Poor quality institutions, weak legal rules, lack of accountability and high levels of corruption have been responsible for increasing levels of environmental degradation (Simulders, 2000).

EKC originally came from an inverted U income distribution from Simon Kuznets, known as the Kuznets Curve. The Kuznets Curve hypothesis argues that at lower levels of per capita income, the distribution of income tends towards a higher level of income which implies that high inequality but when income rises, slope decreases (Yandle et al., 2004). In 1991, the Kuznets hypothesis took a new dimension. This is a view to illustrate where the

income-pollution relationship, environmental quality (such as the concentration of sulfur dioxide emissions) is related to per capita income. Kuznets shows evidence of a U-shaped inverse relationship between the degree of environmental degradation for some pollutants and per capita income.

Lakshmi and Sahn (2012, p. 2) said that "EKC's statistical relationship shows that as industrialization progresses and advances, environmental damage increases due to greater use of natural resources, more pollutant emissions, less efficient and relatively dirty technology operations, high priority to increase material output and pay less attention to the environmental consequences of growth ". When the rate of economic growth increases, life expectancy is increased; improved quality and cleaner habitat becomes more valuable. When the economy reaches the post-industrial stage, clean technology switches to information and service-based activities and a willingness to improve environmental quality to improve environmental quality - which is the realization of EKC (Lindmark, 2002).

Several similar studies have found bell-shaped relationships between levels of environmental quality such as concentrations of sulfur dioxide emissions, and per capita income (Azomahou and Van plus 2006; Stern, 2004; Kemande 2010; Yi et al. 2008). Therefore, it is important to investigate the impact of growth on environmental degradation and estimate the feasibility of EKC in the face of small or zero reductions (Ecological footprint Atlas, 2010).

Due to Kuznets' original observations from EKC, several studies have examined various types of pollutants in estimating the EKC pattern depending on the nature of pollutants. Research has shown that local externalities that produce pollution tend to gradually disappear even at low income levels, that is, pollution increases even at lower incomes. For some local externalities such as water particles (Fecal Coliform) and indoor pollution in the room, pollution tends to continue to decline with economic growth without a turning point. This is not contrary to EKC because pollution must have increased at some point to decrease with increasing income. Some empirical investigations show that pollution involving highly dispersed externalities tends to have a turning point in the highest income or no turning point at all, as pollution seems to continue to increase with income. An example is carbon emissions where the improved technology to reduce these emissions is capital intensive. This is not a sufficient condition for EKC rejection because the turning point for such pollutants might come at a higher level of per capita income than in today's richest economy (Arik, 2007).

Brock and Tylor (2005) look at EKC relationships from three different perspectives: scale, composition and technique. Growing the scale of all economic activities proportionally increases pollution along with economic growth. If the growth is disproportionate but accompanied by changes in the composition of the goods produced, pollution can decrease or increase with income. Similarly, when rich countries are involved in the production of goods that are less pollution intensive, due to changes in tastes or varied trade composition; the resulting effect will reduce pollution caused by growth. The increasing use of less pollution intensive production techniques will ultimately increase growth and produce a decreased level of pollution.

Beyond some EKC decomposition and assumptions where Kuznets' inverted U-shape pollution patterns can be realized, Stokey (1998) argues that many economies show angular solutions at first. This implies that residents of poor countries are willing to trade environmental quality for income at a rate faster than imagined using technology or available resources (for example the case of local gold miners in Ghana). Levinson (1970, p. 2) argues that "as the economy becomes more prosperous and their environment gets dirty, the utility of marginal income decreases and marginal disutility of pollution increases, to the point

where people choose a cost reduction mechanism. After that, the economy is in an interior solution where marginal reduction costs equal the marginal rate of substitution between environmental quality and income, and pollution decreases with income. The conclusions of the EKC examination coincided with the main findings of Grossman and Krueger (1995) who found no evidence that economic growth did not endanger the inevitable natural habitat.

The EKC Hypothesis describes the long-term relationship between the level of pollution concentration - the flow of emissions and the depletion of resources and economic growth. This study attempts to postulate whether there is a U-shaped curve between emissions and economic development (Kemande, 2010). The EKC hypothesis postulates a U-shaped inverse hypothesis that exists between income and environmental quality. The EKC hypothesis shows that with increasing income levels, pollution increases and environmental quality deteriorates; beyond some turning points of pollution reduction and environmental quality increases with income (Yi et al., 2008; Yandle et al., 2002).

2. Methods

The type of data used in this study is secondary data in the form of annual time series data which is periodic reports by the World Bank in the period of research. The time span of the research that will be used in this research is in the period 2002-2014 with the object of Indonesian research.

The method in this study uses Vector Autoregressive (VAR) method which is a dynamic model estimation method that does not refer to a structural model that is a model based on theoretical concepts, but a model that uses a minimum of basic assumptions from economic theory means that this model is more of a model which adjusts the economic phenomena that occur. The special nature of the VAR model developed by the variables in the VAR model is no longer distinguished from the endogenous variables and the exogenous variables are all applied equally (Gujarati, 2004; Nachrowi; 2006). The basic VAR model is described as follows:

$$X_t = \beta_0 + \beta_n X_{t-n} + e_t \tag{1}$$

Where β_0 is a constant vector $n \times 1$. β_n is the coefficient of X_t whereas n is lag length. e_t is a vector of shock to each variable.

The influence between variables can be seen from the VAR analysis derived into the following equation by adopting the model used by Alege and Agundipe (2013) as follows:

$$CO2_t = \alpha_0 + \alpha_1 Y_t + \alpha_2 Y_t^2 + \alpha_3 Y_t^3 + X_t + e_t \tag{2}$$

Then the model is derived into the following equation that will be used in this study:

$$CO2_t = \alpha_0 + \alpha_1 GDP_t + \alpha_2 FDI_t^2 + \alpha_3 TOPN_t^3 + PD_t + \alpha_4 CC_t + e_t \tag{3}$$

Where CO_2 is the dependent variable and the dependent variable includes GDP as a proxy of economic growth, Foreign Direct Investment (FDI), Trade Openes (TOPN), and Control of Corruption (CC) as a proxy of institutional quality in Indonesia.

3. Findings and Argument

Estimation of panel VAR Test Result

1. Data Stationary Test

   The stationary data test or unit root test is the initial stage before estimating the model. The root test unit is a test to see the consistency of data on each variable used in the study. In this study, the data stationary test was carried out using the Augmented Dicky Fuller (ADF) unit root test. This test is done by comparing the probability value with alpha (α). If the probability value is smaller than α then the data is stationary. The stationary data test results are described in the following table:

Table 1. Data Results of Augmented Dickey-Fuller Stationary Test

Level	CO2	GDP	FDI	TOPN	CC
Level	0.2994	0.9994	0.9299	0.1001	0.2971
First differences	0.1918	0.1274	0.0496**	0.0746**	0.0004**
Second differences	0.0004***	0.0002***	0.0017***	0.0018***	0.0000***

Source: Data Processed, 2018

Table 1 describes that the data stationary test results using the ADF test all variables in this study include: CO2, GDP, FDI, TOPN and CC studied in Indonesia stationary at the second difference level as indicated by the ADF probability value smaller than α where each - each variable has a probability value of 0.0004 for the variable CO2, variable GDP of 0.0002, 0.0017 for the FDI variable, 0.0018 for the TOPN and CC variables of 0.0000.

2. Cointegration Test

   After the data stationary test, the next step is cointegration testing to determine the use of the model whether to use the VAR or Vector Error Connection Model (VECM) panel. Cointegration tests are carried out to eliminate confined regression. Time series data regression tends to produce smooth regression because the time series data has a root unit or is not stationary so that e_t will contain the root unit as well. In addition, this cointegration test is used to analyze the long-term relationship of the model variables. Cointegrated data shows that the data has a long-term relationship. The stationary data test results in this study show stationary results at the level of first difference, then the analysis model used is VAR. This study uses Johansen cointegration test. The results of cointegration tests of financial deepening and financial inclusion models in Indonesia are illustrated in the following table:

Table 2. Cointegration Test Result

Hypothesized	Trace	0.05		
No. of CE(s)	Statistic	Critical Value	Prob.**	Cointegrating
None *	96.41397	69.81889	0.0001	
At most 1 *	56.46878	47.85613	0.0063	Cointegrating
At most 2 *	34.23594	29.79707	0.0144	Cointegrating
At most 3	15.33326	15.49471	0.0529	Not Cointegrating
At most 4 *	4.469700	3.841466	0.0345	Cointegrating

Source: Data Processed, 2018

Based on Table 2 shows that in the research model conducted on average proved to provide an overview of the occurrence of cointegration except in at most 3 there is no cointegration. This is indicated by a smaller critical value compared to the value of trace statistics. Based on these results, it can be said that there is a long-term relationship between the independent variables on the dependent variable in Indonesia.

3. Optimum Lag Test
Optimum lag test is used to get the best VAR model in this study. Determining the optimum optimum value of lag will free the model from autocorrelation and heteroscedasticity problems (Gujarati and Porter, 2009). Determination of this optimum lag aims to find out the vulnerable time period of influence on the previous period variables and other endogenous variables. The optimum value of lag is determined by using Akaike Information Criterion (AIC) because it will provide additional variable intervals to reduce the degree of freedom. According to Wardhono et al. (2015) says that the optimal interval will be found in the model specification which gives the minimum AIC value.

**Table 3. Optimum Lag Test Result**

Lag	AIC
0	57.90556
1	41.57589
2	38.36319*
3	38.54283
4	38.57281

Source: Data Processed, 2018

Based on Table 3, shows that in this research model the minimum AIC value is in the second lag with an AIC value of 38.36319.

4. Impulse Response Function Test
The impulse response function (IRF) test is one of the steps in the VAR panel analysis that describes the response of the dependent variable due to the influence of shock or shock from the independent variables contained in the model both in the short and long run. The IRF results in this study illustrate the interrelationships between the independent variables and the dependent variable. The results of the IRF analysis are shown in Figure 1 as follows:
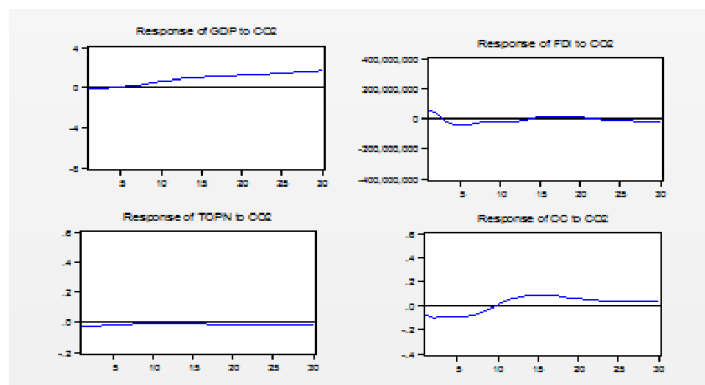
Figure 1. Impulse Response Function Test Result
Source: Data Processed, 2018

Figure 1 shows the response indicators of CO_2, GDP, FDI, TOPN and CC to the GDP variable in Indonesia. Response indicators of independent variables on economic growth indicate shocks from the beginning to the end of the period. But in the response of the variables FDI, TOPN and CC to shocks on the GDP variable, find the equilibrium point at the end of the period. While the GDP variable until the end of the period does not return to the steady state position (or the balance point).

5. Variance Decomposition Test

The last stage in the VAR panel estimation is the variance decomposition (VD) test. This test is used to see the magnitude of the shock contribution variables of GDP, FDI, TOPN and CC to the CO_2 variables in Indonesia. The VD test results are shown in the following table:

Table 4. Variance Decomposition Test Result

Variance Decomposition of CO_2:						
Periods	S.E.	CO2	GDP	FDI	TOPN	CC
1	0.017848	100.0000	0.000000	0.000000	0.000000	0.000000
2	0.031769	99.21277	0.319963	0.362249	0.017340	0.087681
3	0.042481	96.56864	1.228959	1.690208	0.161038	0.351151
4	0.050146	92.30501	2.384697	3.820418	0.540052	0.949828
5	0.055371	87.47849	3.155429	6.046167	1.149469	2.170450
10	0.067489	65.27588	4.399278	8.614945	3.438060	18.27184
15	0.071244	58.61691	5.716202	7.906096	3.944502	23.81629
20	0.072999	56.01324	6.699404	8.039570	5.830279	23.41751
25	0.075160	52.92413	7.303368	7.810791	7.554086	24.40762
30	0.077193	50.43000	7.214095	7.412815	8.347054	26.59603

Source: Data Processed, 2018

In table 4 shows the results of the Variance Decomposition Test in this research model. In the second period the variable CO_2 provides the largest contribution to CO_2 itself in Indonesia with a value of 99.21%. The second largest contribution to CO_2 is the control of corruption (CC) variable, which is 26.59% in the 30th period. While the variables of GDP, FDI and TOPN to CO_2 have a contribution of 7.21%; 7.41% and 8.34% of Indonesia's economic growth during the 30th period.

Discussion

In general, attention to environmental problems stems from the perception that the carrying capacity of resources on earth is limited (Todaro, 2006). The theory that links environmental degradation with a country's per capita income level is known as the Environmental Kuznets Curve (EKC). This hypothesis suggests that when a country's income is still relatively low, the country's attention will be focused on ways to increase state revenues, both through production, investments that encourage an increase in income by ignoring environmental quality issues. Income growth will be accompanied by an increase in pollution levels, and then decline again with the condition of steady income growth. This theory is based on the demand for environmental quality that increases social supervision and government regulation so that the community will be more prosperous (Mason and Swanson, 2003).

Indonesia is in the category of Developing Countries (NSB) which is seen from average wealth, equity, quality of life, environmental quality, social justice and sustainability. During

the New Order era, Indonesia's economic structure began to experience changes from the agricultural sector to the industrial sector. Changes in Indonesia's economic structure make economic growth increase while reducing environmental quality.

Economic growth also has a negative impact on the environment, because the acceleration of economic growth is usually followed by an increase in the industrial sector. The increase in the industrial sector will be followed by an increase in the level of pollution to the environment due to the waste of the production process so that it causes pollution for water, soil, and also air. Other additional indicators play an important role in the dynamics of carbon emissions in Indonesia. Institutional quality, especially control of corruption has been considered a necessity in the economy. The degree of openness of trade helps to reduce the disposal of the environment or shelter pollution from globalization and large population densities help raise awareness for cleaner environmental hygiene and pollution reduction measures. The introduction of fractional cointegration in examining the relationship of income and pollution and the inclusion of institutional indicators are the main contributions in this study.

The decline in environmental quality in the industrial sector is caused by air pollution due to the smoke released resulting in global warming and various health problems; water pollution as well as land around the industry by unprocessed industrial waste; sound pollution resulting from the use of production machines; reduced forest area due to illegal logging without reforestation.

Based on the background of the findings above, policy drivers are advised to initiate policies that limit the import of carbon intensive products and examine the activities of multi-national companies that produce carbon-dense goods in poor countries for use in their home countries. Likewise, institutions need to be strengthened to ensure appropriate reduction measures and adoption of cleaner technologies to mitigate the increase in emissions associated with the initial stages of development..

4. Conclusion

Growth indicators such as institutional quality, investment, trade openness play an important role in the dynamics of carbon emissions in Indonesia. Institutional quality, especially in controlling corruption, has been considered a necessity in the economy. Based on the background of the findings above, policy drivers are advised to initiate policies that limit the import of carbon intensive products and examine the activities of multi-national companies that produce carbon-dense goods in poor countries for use in their home countries. Likewise, institutions need to be strengthened to ensure appropriate reduction measures and adoption of cleaner technologies to mitigate the increase in emissions associated with the initial stages of development.

References

[1] Akbostanci, E., Turut-Asik, S. and Ipek-Tune, G. (2009), "The Relationship Between Income and Environment in Turkey: Is there an Environmental Kuznet Curve?" *Energy Policy* Vol. 37 No. 3, pp. 861-867.

[2] Arik, L. (2007), "Environmental Kuznets Curve", *New Palgrave Dictionary of Economics* 2nd edition.

[3] Bello, A.K. and Abimbola, O.M. (2010), "Does the Level of Economic Growth Influence Environmental Quality in Nigeria: A Test of Environmental Kuznets Curve (EKC) Hypothesis?", *Pakistan Journal of Social Sciences* Vol. 7 No. 4, pp. 325-329.

[4] Omojolaibi, J.A. (2010), "Environmental quality and economic growth in some selected west Africa countries - A panel data assessment of the environmental Kuznets curve", *Journal of sustainable development in Africa*, vol. 12 No. 8.

[5] Panayotou, T. (1993), "Empirical Tests and Policy Analysis of Environmental Degradation at Different Stages of Economic Development", In Technology, Environment, and Employment, Geneva: International Labour Office.

[6] Panayotou, T. (2003), "Economic Growth and the Environment", *CID Working Paper* No. 56, forthcoming in K.

[7] G Maler and J. Vincent (eds.), *Handbook of Environmental Economics*, Amsterdam: North-Holland.

[8] Schmalensee, R., Stoker, T.M. and Judson, R.A. (1998), "World Carbon Dioxide Emissions: 1950-2050", *Review of Economic and Statistics*, LXXX, pp.15-27.

[9] Selden, T.M. and Song, D. (1994), "Environmental Quality and Development: Is There a Kuznets Curve for Air Pollution Emissions, *Journal of Environmental Economics and Management*, Vol. 27, pp. 147-162.

[10] Smulders, S. (2000), "Economic Growth and Environmental Quality. *Principles of environmental and Resources Economics*", Henk Folmer and Landis Gabel (eds), Edward Elgar.

[11] Stern, D.I., Common, M.S. and Barbier, E.B. (1996), "Economic Growth and Environmental Degradation: The Environmental Kuznets Curve and Sustainable Development", *World Development*, Vol. 24, pp. 1151-1160.

[12] Suri, V. and Chapman, D. (1998), *Economic Growth, Trade and Energy: Implications for the Environmental.*

[13] Kuznets Curve, Ecological Economics, Vol. 25, pp. 195-208. Taskin, F. and Zaim, O. (2000), "Searching for a Kuznets Curve in Environmental Efficiency Using Kernel Estimation", *Economics Letters*, Vol. 68, pp. 217-223.

[14] Verbeke, T. and Clercq, M.D. (2002), "Environmental Quality and Economic Growth", Universiteit Gent, Faculteit Economic Enbedrijfskunde Working Paper.

[15] Yandle, B., Bhattarai, M. and Vijayaraghavan, M. (2004), "Environmental Kuznets Curves: A Review of Findings, Methods, and Policy Implications", *PERC Research Study*, No. 021.

Fiscal Policy, Urbanization and Education: Analysis of EKC Porvince in Indonesia

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Abstract

This study investigated the EKC hypothesis for Total Suspensed Solid (TSS) and Fecal Coli (FCOLI) pollutants in Indonesia with a quadratic model and several control variables (fiscal policy for natural resources revenue sharing, foreign investment, urbanization and education). Using a pool data of 33 provinces in 2011-2014. The results of the study support the EKC hypothesis significantly for TSS pollutants and not significant for FCOLI pollutants. Foreign investment, urbanization and education tend to increase pollutants even though they are not significant. Fiscal policy is significant for reducing TSS pollutants but does not apply to FCOLI pollutants. The government must increase inclusive green growth and environmental competencies in education.

Keywords: TSS, FCOLI, Urbanization and Education, Fiskal, EKC

1. Introduction

Environmental degradation is difficult to avoid in line with development progress, especially in developing countries. Colole et al. (1997). Nature as one of the factors of strategic production, has not been calculated proportionally or is considered external cost, so its availability decreases. This condition is in line with Asici (2013) finding that the current paradigm of economic growth is not sustainable, especially in middle-income countries. Therefore, one of the important agenda of the 2030 Suitanable Development Goal (SDG's) is to preserve the environment and UNDP (2016) asserts that water resources have economic, social and ecological strategic significance.

Classical economists are pessimistic that long-term economic growth will be stationary along with the limitations of natural resources. The World Bank (1992) reports that the pattern of relationships between development and environmental degradation (air pollutants) follows an inverted U pattern. That is, degradation increases at the beginning of growth to a certain point, then decreases in tune with the increase in income. This statement is supported by the findings of Cropper and Griffith (1994) for deforestation in Africa, Latin America and Asia. This relationship model was later popularly known as EKC (Environmental Kuznet Curve)

The Indonesian government is very committed to improving the environment and has scheduled in the Medium Term Development Plan (RPJMD, 2015-2019). As an effort to realize sustainable development, through the Ministry of Environment and Forestry is programmed, that the final environmental quality index of the RPJMD will reach the intermediate level.

Indonesia's economic growth in 2011-2014 is relatively high (5.7%/year). This condition is related to the contribution of the industrial sector that continues to grow on average (21.30%). The strategy of developing capital-intensive industrial sectors has become a prima donna, because it is able to provide large and fast added value compared to the relatively traditional and less productive agricultural sector.

Changes in economic structure to industrial sectors located in urban areas, causing

the population to continue to increase. The city becomes an attraction for the workforce, because it not only provides employment, but social status, lifestyle and opportunities.

Unbalanced increase in facilities and infrastructure has driven urban areas to become less healthy, because Total Suspensed Solid (TSS) solid waste caused by industrial activities and Fecal Coli (Fcoli) parasite waste from households continues to increase, causing a decrease in water quality and can threaten human life.

As an institution that is obliged to preserve the environment, the government has formulated regulations in a fiscal manner, so that environmental costs become a mandatory part of the production process. Strict requirements for foreign investment, reducing business and improving education are policies that are expected to improve the environment.

Environmental degradation is not only related to economic growth, but many factors so that the pattern of inverse U relations between degradation and development is very diverse (Roka et al. 2001). Therefore the contribution of this research is:

First, investigating the pattern of TSS and Fcoli reverse U relationships which are two water pollutants causing silting and sources of various diseases. The model used is the square that is added by several control variables. Secondly, investigating the impact of the policy of migration in the field of fiscal, foreign investment, urbanization and education as an instrument to reduce environmental degradation.

Some studies use quadratic models with several control variables such as: Cropper and Griffith (1994), Antle (1995), Andreoni and Levinson (2001). This study was arranged in a format, section 2 contains a literature review, section 3 methodology, section 4 Analysis and discussion and final conclusions and recommendations.

2. Literature Review

Economic Growth.

Economic growth is a necessary condition for development. In terms of production, economic growth illustrates the increase in GNP. Some factors that cause growth according to Samuelson and Nordahus (2005) summarize into 4 factors, namely: 1. Human resouce, 2. Natural Resource, 3. Capital formation, 4. Technological. Whereas Mankiw (2007) summarizes into: physical capital, human capital, natural resource and technological knowledge, as a system to produce output.

Barro (1996) explains, economic growth in 100 countries in 1960-1990 was caused by factors of education, life expectancy, government consumption, legal improvement and inflation and trade. Capolupo (2009) economic growth is caused by a combination of institutional, geographic, socio-cultural factors. The role of technology in the production process, making growth can take place continuously and the complexity of variable relations to produce output, indicates that degradation is not only caused by growth.

Sustainable Development and EKC

Sutainable Development was first introduced by the Brundtland commission in 1987. World Bank (1992) explains, Sustainable development is a development activity to meet the needs of the present generation without sacrificing the interests of future generations. These concerns are reasonable because some environmental indicators are deteriorating (degradation) along with the increase in output in developing countries and the world.

Environmental degradation can be reduced, if the government applies consistent environmental policies. Therefore Dinda (2004) asserted, a green growth strategy is a prerequisite for sustainable development, namely growth by taking into account the reduction of pollution, waste, greenhouse gases, depletion of natural resources, energy

efficiency, protection of biodiversity and local ecosystems.

The relationship between environmental degradation and per capita income is known as the EKC (Environmental Kuznet Kurve) hypothesis. That is, at the beginning of the degradation development tends to increase along with the increase in income to a certain point (peak point), then decreases along with the increase in income or resembles an inverted U letter. This pattern is like the Kuznet hypothesis, about the relationship between income and inequality (Kuznet, 1955), so EKC is the analogy. (Taguchi, 2012), (Kasman and Duman, 2015).

Asici (2013) the relationship between income and natural pressure (CO2) is stronger, in the middle and low income groups, than in the group of high income countries. Uchiyama (2016) the EKC pattern is naturally in accordance with the level of economic growth of each country, there is no consensus on the level of turning point for environmental improvement. Cole et al. (1997) the relationship between per capita income and environmental quality cannot be avoided. Lim (1997) some pollutants deteriorated and then improved with economic growth.

The study of the relationship between economic growth and environmental pollution generally investigates several problems: Does EKC really exist, what factors other than income, the relevance of cross-country data statistics, the implications of damage and the role of environmental policy (Panayotou, 2003). Dasgupta et al. (2002) the inverse U relationship only applies to some pollutants and regulation is the dominant factor to reduce pollution, Kasman and Duman (2015). Divide the relationship pattern to 3. First, the EKC pattern. Second, income and energy. Third, the combination of both and focus on emissions, energy consumption and income.

The basic model of the relationship between income and environmental degradation by Shafik and Bandyopadhyay (1992) is divided into 3, namely: linear, square and cubic log. Kijima et al. (2010) EKC models in the form of: dynamic and static; macroeconomics and microeconomics; short and long term and deterministic and stochastic. Uchiyama (2016) First, country-based. Second, data-based and estimation methods. This study uses a static quadratic model with several control variables and adopts the Kahuthu (2006) research pattern. Estimation method uses Fixed Effect and Random Effect.

3. Research and Methodology

Types and sources of data

The data in this study uses secondary data, in the form of a combination of time and cross (pool data), covering 33 provinces throughout Indonesia, within the period 2011-2014 and sourced from the Ministry of Environment and Forestry and the Central Statistics Agency (BPS).

Empirical Model

The analysis model used is:

Ln (TSS)   *= βo + β1 ln (GRDP) + β2 (ln (GRDP2)2 + β3 ln (INVAS)*
    + β4 ln (FISCAL) + β5 (EDU) ....*(1)*

Ln (FCOLI)   *= βo + β1 ln (GRDP) + β2 ln (GRDP2)2 + ln β3 (URBAN)*
    + β4 (ULITERA) + β5 ln (FISCAL) .... *(2)*

Theoritically, the EKC hypothesis Inverted U accurs when:
$\beta 1 > 0$, $\beta 2 < 0$ and, the peak point will be obtained for $- \beta 1 / 2 \beta 2$, Taguchi (2012).
(*, **, ***, significant, 10%, 5%, 1%)

Table 1. Definition and Expectations of Variable Relations

No.	Name Variable	Notation	Units	Expected
1	Polutan TSS	TSS	Mg/l	Dependent var.
2	Polutan Fecal Coli	FCOLI	Num/100ml	Dependent var.
3	GRDP per Capita	GRDP	million Rp	+
4	GRDP per capita quadrat	GRDP2	million Rp	-
5	Foreign Investment	INVAS	million $	-
6	Funds for sharing natural resources	FISCAL	million Rp	-
7	Population of City	URBAN	person	+
8	School Enrollmen Ratio (19-240	EDU	Percen %	-
9	Number of Illiterates (15-44)	ULITERA	Percen %	+

4. Results and Discussion

The results of the regression analysis of TSS and FCOLI are presented in Tables 2 and 3.

Table 2. Results of TSS Regression Analysis

Variabel	Fixed	Prob	Random	Prob
Constanta*	-35.17094	0.0284	-6.252580	0.0912
GRDP**	20.48937	0.0209	4.981642	0.0163
GRDP2**	-2.507127	0.0441	-0.602311	0.0270
INVAS	-0.111277	0.2933	0.057356	0.3695
FISCAL**	-0.018806	0.8959	-0.128071	0.0482
EDU	-0.002806	0.9446	0.021710	0.1007
R Square	0.629328		0.096070	
F	3.670921	0.00000	2.380674	0.0430

Table 3. Results of FCOLI regression analysis

Variabel	Fixed	Prob	Random	Prob
Constanta**	-399.8095	0.0338	13.29337	0.2686
GRDP	24.07729	0.2372	-14.87915	0.0214
GRDP2	-3.800769	0.1812	1.948275	0.0233
URBAN	25.17642	0.0519	0.995926	0.0049
ULITERA	0.101121	0.8531	-0.180180	0.0166
FISCAL	0,466726	0.1557	0.223072	0.2375
R Square	0.858999		0.156570	
F	12.34899	0.0000	3.972573	0.0024

The results of TSS pollutant regression analysis in Table 3 and FCOLI in Table 4, explain that the reverse U curve does occur both with the Fixed Effect and Random Effect methods because the value of the positive GRDP coefficient and the GRDP2 coefficient is negative, Taguchi (2012). FCOLI is only significant with the Random method. These results have answered Panayotou (2003) question of the existence of an inverse U-shaped relationship between degradation and growth.

Based on the Redundant test the Chi-Square value is 5% significant, while Haousman is not significant, so the TSS model that is feasible to use is REM, Juanda and Junaidi (2001). Whereas for FCOLI pollutants using the FEM method because of the Redundant and Housman tests both are significant at the 5% level.

Research that supported U inverted patterns were significantly like: Shaw et al. (2010) for SO2 pollutants and Particle Deposite, Cole et al (1997), Taguchi (2012), Kahuthu (2006), Shahbaz (2013), Kasman and Duman (2015), Andreoni and Levinson (2001), Liu et al (2007) pollutants in the Dasha river, Xuemi et al (2011) for ESD pollutants (Supphur Dioxide and ES (Soot) but not for EWW and EISW pollutants, Wu (1998) for WE (Water Examination) pollutants

The foreign investment coefficient (INVAS) is positive and insignificant, meaning that an increase in foreign investment will increase the amount of TSS pollutants in an unrealistic manner, this positive sign supports the research of Hakimi and Hamdi (2016) for Co2 pollutants, Halkos and Paizanos (2013), but does not support Wheeler (2000), Dasgupta et al (2002) and Cole et al (1997). Foreign investment is widely used in the industrial sector and tends to produce pollutants that cause sedimentation, such as solids from coal washing and red mud from aluminum industries.

The school enrollmen ratio coefficient (EDU) is positive and not significant, meaning that an increase in the educated population will increase TSS pollutants not significantly. This result supports the Orubu and Omotor research (2011) for OWP pollutants (Organic Water Pollutants) and does not support Wu's research (1998) and Asici (2013), Orubu and Omotor (2011) for SPM (Suspended Particulate Matter) pollutants. The educated workforce generally migrates to urban areas and works in industrial sectors. So that the increase will increase the city population and increase the contribution of the industrial sector which will eventually add pollutants.

The fiscal policy coefficient (FISCAL) has a negative and significant sign, which means that the increase in funds for sharing natural resource can reduce TSS pollutants significantly. These results support the research of Cole et all (1997) Pollution will be reduced in response to policy, (Asici, 2013) Institutionally negative and significant impact on environmental pressure. Dasgupta et al. (2002) Regulation is the dominant factor for reducing pollution, but does not support Taguchi's research (2012) for Asian countries, including Japan. Shafik (1994) most of the environmental costs are external so the pollutants that cause degradation continue to grow.

The population of city coefficient (URBAN) and the number of illiterates (ULITERA) is positive, and not significant, meaning that the increase of city population and illiterate population will increase the number of FCOLI pollutants not significant (unrealistically). This condition illustrates that urbanization and lack of education are still a source of pollution due to limited sanitation and ignorance about a healthy environment. The population of city coefficient (URBAN) results support the research of Mohaputra and Giri (2009) for NO2 pollutants and do not support SO2 and SPM pollutants, while (ULITERA) supports the research of Torras and Boyce (1998) for Sanitation and Fecal Coli and do not support Sulfur Dioxide and Heavy pollutants. particles.

The fiscal policy coefficient (FISCAL) is positive and insignificant, meaning that fiscal policy in the form of an increase in the funds for sharing natural resources can increase in FCOLI pollutants. The results are in line with Taguchi research (2012) for Asian countries, including Japan. Shafik (1994) most of the environmental costs are external so the pollutants that cause degradation continue to grow

5. Conclusions and Recommendations

Conclusions

Based on the analysis and discussion, some conclusions are formulated: First, The EKC hypothesis for TSS and FCOLI pollutants occurs in Indonesia, because the GRDP co-efficient is positive and the negative GRDP2 is eligible to produce a significantly inverted U curve for TSS and not for FCOLI.Second, The education variables and foreign investment increase TSS pollutants are not significantly.Third, City population and illiterate variables increase FCOLI pollutants are not significantly. Fourth, Fiscal policy significant impact on reducing TSS pollutants, but does not apply to FCOLI pollutants.Finally, Education cannot yet be a reliable instrument for reducing environmental degradation.

Recommendation

This research has several recomendation as follows: First, improve education competency for the environment. Second, implement strict rules and supervision on the realization of foreign investment. Third, increase allocation and distribution for environmental improvement. Finally,strive for economic growth that remains green and inclusive

References

[1] Antle, J. M., Heiderbrink, G. (1995). *Environment and Development: Theory and International Evidence.* The University of Chicago, pp. 605-622.

[2] Andreoni, J., Levinson, A .(2001). The simple analysis of the environmental Kuznet curve. *Journal of Public Economic*, vol 80, pp. 269-286.

[3] Asici, A. A (2013). Economic growth and its impact on environment: A panel data analysis. *Ecological Indicators*, vol 24, pp.324-333.

[4] Badan Pusat Statistik. (2016). *Statistical yearbook of Indonesia*. Jakarta.

[5] Barro, R. (1996). Determinant of Economic Growth A Cross-Country Empirical Study. *Working Paper 5698*, National Bureu of Economic Research, Cambride.

[6] Capolupo, R .(2009). The New Growth Theories and Their Empirics after Twenty Years. *Economics*, vol 3,pp. 53-56.

[7] Cole, M.A., Rayner, A.J., Bates, J.M. (1997). The environmental Kuznet curve: an empirical analysis. *Environment and Development Economics*, vol.2,pp. 401-416.

[8] Cropper, M., Griffitths, C. (1994). The Interaction of Population Growth and Environmental Quality. *The American Economic Review*, vol. 84. no. 2, pp. 250-254

[9] Dasgupta, S., Laplante, B., Wang, H., Wheeler, D. (2002). Confronting the Environmental Kuznet Curve. *Journal of Economic Perspectives*, vol.16,no.1,pp.147-168

[10] Dinda, S. (2004). Environmental Kuznet Curve Hypothesisi: A Survey. *Ecological Economics*, vol.49,pp. 431-455.

[11] Hakimi, A., Hamdi, H. (2016). Trade liberation FDI inflow, environmental quality and economic growth: A comparative analysis between Tunisia and Marocco. *Renewable and Sustainable Energy Reviews*, vol.58, pp.1445-1456.

[12] Halkos, G., Paizanos, E A. (2013). The effect of goverment expediture on the environment: An empirical investigation. *Ecological Economics*, vol.91,pp. 48-56.

[13] Juanda,B., Junaidi (2005). *Ekonometrika Deret Waktu*, IPB Press.

[14] Kahuthu, A. (2006). Economic Growth and Environmental Degradation in a Global Contex. *Environment, Development and Sustainability*, vol.8,pp. 55-68.

[15] Kasman, A., Duman, Y.S. (2015). CO2 Emission, economic growth, energy consumption, trade, and urbanization in new EU member and candidate countries: a Panel data analysis. *Economi Modeling*, vol.44,pp. 97-103.

[16] Kijima, M., Nishide, K., Ohyama, A. (2010). Economic models for the environmental Kuznet cirve: Survey. *Journal of Economic Dynamics & Control*, vol.34,pp. 1187-1201.

[17] Kementrian Lingkungan Hidup dan Kehutanan. (2015). *Statistical yearbook of Ministry of Environment and Forestry*. Jakarta. Central of Data and Information, Ministry of Environment and Forestry.

[18] Kuznet, S., 1955. Economic Growth and Income inequality. *The American Economic Review* vol.45,no.1,pp. 1-28.

[19] Lim, J.(1997). *Economic Growth and Environment: Some Empirical Evidences from South Korea*. School of Economics, Australia: University of New South Wales Sydney.

[20] Liu, X., Heilig, G.K., Chen, J., Heino, M. (2007). Interactions between economic growth and environmental quality in Shenzhen, China's first special economic zone. *Ecological Economics*, vol 62,pp. 559-570.

[21] Mankiw, G. N. (2007). *Principle of Economics*. Fourth Edition, the Thomson Corporation: Thomson South-Western.

[22] Mohapatra, G., Giri, A.K. (2009). Economic Development and environmental quality : an econometric study in India. *Management of Environmental Quality: An International Journal*, vol.20,no. 2,pp.175-191.

[23] Orubu, O .,Omotor, D G. (2011). Environmental quality and economic growth: searching for environmental Kuznet curve for air and water pollutan in Afrika. *Energy Policy 39*, 4178-4188.

[24] Panayotou, T., 2003. *Economic Growth and The Environment*. Genewa, United Nation Economic Commission for Europe.

[25] Samuelson, P.A., Nordhaus, W.D., (2005). *Economics*. Mc Graw-Hill. Companies, Inc.

[26] Shahbaz, M., 2013.Does financial instability increase environmental degradation? Fresh evidence from Pakistan. *Economic Modeling,* 33, 537-544.

[27] Shafik, N., & Bandyopadhyay, S.(1992). Economic Growth and environmental Quality: Time series and Cross-Country Evidence. W*orking Paper*, World Bank.

[28] Shafik, N. (1994). Economic Development and Environmental Quality: An Econometric Analysis. *Oxford Economic Paper*, vol 46, pp. 757-773

[29] Taguchi, H. (2012). The Environmental Kuznet Curve in Asia: The Case of Sulphur and Carbon Emissions. *Asia-Pacific Development Journal*, vol.19, no.2, pp.77-92.

[30] Torras, M., Boyce, J.K. (1998). Income, inequality, and Pollution: reassessment of the environmental Kuznet Curve. *Ecological Economic*, vol.25, pp. 147-160.

[31] Uchiyama, K. (2016). *Environmental Kuznets Curve Hypothesis*. Development Bank of Japan Research Series, DOI 10.1007/978-4-431-55921-4-2.

[32] UNDP. (2016). *Sustainable Management of Water and Sanitation*. New York: UNDP

[33] Wheeler, D. (2000). *Racing to the Bottom? Foreign Invesment and Quality in Developing Countries*. USA: Development Research Group, World Bank.

[34] World Bank. (1992). *Development and the Environment*, World Development Report.

[35] Wu, P.I.,1998. Economic Develement and Environmental Quality : Eviden from Taiwan. *Asian Economic Journal*, vol.12,no.4,pp. 395-413.

[36] Xuemi, H., & Mingliang, Z., Su, L. (2011). Research on the relationship of economic growth and environmental pollutan in Shandong province based on enviromental Kuznet curve. *Energi Procedia* vol.5,pp.508-512.

Existence of Actors Authority in Migrant Labour Problems

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Abstract

The paper provide general condition under which principal agent problems, that are optimal existence of actors mechanisms in migrant labour. The research has a crucial to analyses the existence of actors cause for disfunction authority. Case study in east java, Indonesia. This mechanism appears theoretically coherent with the principal agent theory. The paper allow multi dependent actions and authority, as well as an existence of actors. Consequently, the optimal mechanisms are optimal authority for migran labour.

Key Words : Actor Authority, Migrant Labour, Principal Agent Problem

1. Introduction

This study aims to describe the findings on the problems of Indonesian Workers which focused on the issue of protection. That portrait of the relationship between actors/agencies in the protection mechanism will be obtained. Institutional design in the implementation of protection schemes (insurance for Indonesian migrants labour) shows governance by involving roles, powers and authority through the delegation of actors. This happens because the government is unable to do it alone in a regulation (Ljungholma, 2014). In implementing regulations, it is needed information, costs and resources. It caused partnerships with the private sector are needed (Minkoff, 2013). The consequence of this relationship is the granting of power and authority to the partners (private) to jointly provide services. It is occurred because of the involvement of the private sector in the service is intended to be a reason for budgeting and seeking service innovation through the relationship (Roehrich et al, 2014).

This delegation can be regarded as an important tool for attracting resource development (Medda et al, 2013). When there are many resource developments, it will provide benefits which lead to efficiency (Otčenášková et al, 2014), and it will bring the consequences of combining the resources which used for serving the community (Zhang & Shu Chen, 2013). The goal of delegation is actually a form of innovation in finding solutions (Felina & Todd R.Z, 2014), which is used in public services. It has aimed to distribute public infrastructure in various sectors (Brinkerhoff & Brinkerhoff, J.M., 2011). Thus, Indonesian migrant labour and the government as principals who have given their power to the insurance consortium (agents) have the right to benefit from the relationship. The consequence of the relationship is Indonesian migrant labour obtain services as needed.

The real benefits of the principal-agent relationship depend on the institutional environment, capacity, needs, traditions for the creation and building coordination (Mahalingam et al, 2011). Each party (principal and agent) can contribute and be able to explain its behaviour in an agreed institutional design (Elsig, 2011). Institutional relation shows that the principal-agent relationship, where the actor coordinate and play a role in a different realm even though the agent should be the arm of the principal. Thus, the agent is trusted to manage public goods/services. But this principal-agent relationship is born in a different environment and in different power that it has different interests. These differences are possible to bring conflict, and conflict will reduce the effectiveness of policies (Elias

& Mohammad, 2011). Thus, the accuracy of the selection of mechanisms (the division of authority patterns) becomes important for achieving policy success.

The choice of institutional mechanism depends on the institutional environment (relating to property rights, contracts, credibility, judiciary, norms, customs, etc.) which can lead the changes in comparative costs, hybrid hierarchical and organizational relationships (companies and bureaucracy) (Williamson, in Suli, 2013). The institutional environment is related to the rules of the game in a community. This environment regulates the interaction of the community. If there are errors in the community in using the power related to the environment without regard to ethics and norms, then this indicates a weak control of control and rules of the game in a social service (Greer, 2010).

Governance mechanisms (principal-agents) can be through patterns of collaboration, collaboration, interaction, and contractual/negotiating relationships. Relational and contractual mechanisms are the complete form of government and private governance (Lewis, 2002). The mechanism contains factors which are related to governance which depends on the characteristics of each actor (Abdi, 2014). Then, the provision of authority is carried out through the provision of institutional infrastructure. This is the main characteristic of private government partnerships (Engel et al, 2013). As in the mechanism of Indonesian migrant worker protection management (insurance), there are also interactions, collaboration or even negotiations. Considering that there is a division of roles and responsibilities in the implementation, each actor who plays a role should participate in each other to create changes in the service system. That is, there are actions to prioritize the interests of members who are partnering, who should not "hand off" when there are problems in practice. Thus, the mechanism of institutional governance illustrates how the roles of each actor work in the mechanism which has been agreed upon. The superior mechanism which becomes ideal is each actor plays a role in the working mechanism who competes to be the best (N. Balasubramanian & Rejie George, 2012).

2. Methods

This study used a phenomenological qualitative approach, with interpretive methods. The purpose of the analysis is proven by the specific meanings which occurred in the results of the analysis. That is, the institution which responsible for Indonesian labour migrants (East Java Indonesian labour migrant), analyzed by the principal theory of agency approach. Furthermore, it is describing the domains found and mapped. Then explaining the relationships between these domains. This analysis produces a meaningful relationship between structures in a particular phenomenon. The study was conducted in 2013-2016. This disorder was the main rule but it did not occur in the phenomenon of migrant workers which is still an important requirement for Indonesian labour migrants. Data were collected through interviews with Indonesian migrant workers, former migrant workers from East Java, parties who make policy for East Java TKI (UPT. P3TKI of East Java), representatives of the consortium, and representatives of recruitment agencies or implementing private placement of Indonesian migrants labour.

3. Findings and Argument

The power relations between principals and agents illustrates the pattern of the actor authority. Born from dependency which is identical to the ability of actors to play an unbalanced role with actor played by other parties. The occurrence of this dependency pattern is due to an imbalance in the bargaining position of each actor in making decisions and in using the authority it has in charge (principal and agent). There are two types of elements contained in institutional relations in the social security protection of Indonesian

migrants labour in this study, namely principal and agent. The principal and the agents are actors who have power and who has an interest. Thus, in the relationship between the principal and the agent, there is a power and interest relationship. Thus, when the actor controls all sources which are interesting and profitable for him, then he will exercise his authority by means of fulfilling his profits. Efforts to carry out this power are carried out through certain transactions and carried out in a certain design.

It is same for Indonesian migrants labour as the principal who gives authority over the premium paid to the insurance company to manage the premium cost and the right to receive what is their right in accordance with their interests. The government as the principal who plays the regulator and gives its authority to the insurance consortium to manage the guarantee of Indonesian migrants labour as social security for Indonesian migrants labour. An insurance consortium which acts as an agent who is authorized to manage Indonesian migrants labour insurance also has its power and interests, and the role of the recruitment agencies in facilitating migrant workers as well as partnering with a consortium related to the management of migrant workers.

The role of each actor is dependent. This dependency pattern occurs because of the limited resources and assets owned by each actor. Indonesian migrants labour is very limited in financial and information. They depend on the role of the recruitment agencies or implementing private placement of Indonesian migrant labour. Independent Indonesian migrants labours also have financial limitations, they also depend on other parties (banks), or if the prospective independent Indonesian migrants labours have some money and are able without asking for help from other actors, Indonesian migrants labour does not have the dependence on other institutions. While the implementing private placement of Indonesian migrant labour plays a role in facilitating meetings/interactions between Indonesian labour migrants and the insurance consortium. An insurance consortium which has the authority to manage insurance depends on the role of the recruitment agencies and the government. Likewise with the government, in its authority as a regulator is strongly influenced by the insurance consortium and Indonesian migrants labour. This dependency relationship is mutually binding that there is a limited authority over actors due to the authority of other actors. That is, to cover the limitations of this authority, actors really need the authority of other actors.

There is a Great Wall Obstructing Governmental Authority on Foreign Affairs

The government as a regulator has limited in making decision, as there are strong and large restrictions which prevent them from playing a role in certain matters. Such as, differences in working areas, existing powers and limited interests make the government have no effort if there are problems. Limited resources and asset management which limits the authority that the authority of the government (Manpower and Transmigration office) is only limited to the country, if the problem occurs at the time of placement, then it is no longer the authority. This dependence is made and supported also by the framework and institutional protection of Indonesian migrant labour or citizens who are abroad. As, Indonesia has established services in foreign missions which focus on protecting migrant labour (Farbenblum, 2013). The embassy protection division in the embassy is a division whose duty is to protect and assist all Indonesian citizens who are abroad. In article 78 of Law No. 39 of 2004 states that Indonesia's foreign mission is responsible for the protection of migrant workers. Even in the President's instruction in 2006, the policy of reforming the placement and protection system of Indonesian labor migrants considered the role of embassy protection. After the President's instructions, the Minister of Foreign Affairs adopted regulations on citizen services, guidelines on services and protection of Indonesian citizens abroad. The Minister of Manpower and transmigration also adopted a regulation in 2011 to

place his own staff at the embassy as labour attachés to carry out labour-related activities. The office has a protective function for Indonesian labor migrants, that is; facilitating and mediating the settlement of disputes or disputes between Indonesian labor migrants and users in the country of placement, and facilitating the advocacy of Indonesian labor migrants based on the law and the provisions of legislation in the country of placement, and international customs.

In fact, government regulation No. 3 of 2013 that this regulation underlines that the Indonesian government is responsible for the protection of migrant labour during their overseas placement, and Indonesian representatives (embassies and consulates) are assigned to provide this protection in line with international standards and law in the destination country. And in this regulation requires that recruitment agencies in Indonesia must assist Indonesian representatives in providing protection and legal assistance to migrant workers if necessary during the placement period. However, the regulation does not include provisions for aid assistance or sanctions if the employment agency does not help/play a role in protection.

Advantageous Insurance Consortium In Insurance Management

The limited authority of the government in supervising the work of insurance companies (agents) is shown by claiming a right to the management of limited resources and assets. Also with insurance companies as agents who claim that the full right to manage resources and assets is the insurance consortium. Therefore, based on the full management rights of the consortium, it can be said that if someone claims the right to take certain actions, but the other party does not recognize the right (for its limitations), then he or she does not have the right to take any decisions regarding that matter. If the government as a principal does not have an interest in the consequences of managing the most resources and assets owned by the insurance consortium, it is possible that the government as a principal insists on having power in using limited resources and assets. This is a moral obligation that the government also has the right to know about the management of the resources and assets of Indonesian migrants labour insurance management, and can be done through an informal decision making.

As same as the decision making on the management of resources and insurance assets of Indonesian migrant workers, in accordance with Law No. 39 of 2004 also states that those who manage Indonesian migrants labour insurance are the consortium of Indonesian migrants labour insurance. The limitations of decision making illustrate the existence of strong authority. This authority is the right to decide, direct other parties to take action, or carry out tasks in terms of achieving goals (Preameaux, in Stainland, 2003). The authority which occurs between the division of the role of government work, and also related to the management of insurance for migrant workers in this insurance consortium can be interpreted as having a classification of certain actors in terms of their use of rights (decision making). Thus, the existence of this authority has an impact on the need for coordination, communication and supervision. This is intended to maintain the integration of interaction in achieving common goals. According to Jones (in Stainland, 2003), integration of interaction as a coordination process in the execution of tasks, the function of the role of division and division of labour to achieve common goals.

Indonesian Migrants Labour Can not Register For Insurance Other Than Inuarnce Consortiums

The provision of insurance management facilities received by the insurance consortium has the consequence that everything done by the actor with one purpose is to

increase the realization of the interests of each actor, and this depends on the power and authority he has. The authority of the government as a principal describes the power over resources which are of interest and which they control, in order to fulfil their interests based on the provisions of laws and other regulations. However, on the other hand, the insurance consortium has broader authority, where decision making will tend to be able to control the resources and assets of the insurance management of migrant workers and for this. It is very interesting and powerful. The process of managing resources and insurance assets of Indonesian migrant workers will be based on the power and interests of each actor. And the process will follow all the objectives of each actor's interests. It is assumed that the insurance consortium will allow itself to realize whatever interests it has in respect of the resources and assets it controls. Likewise, for Indonesian labour migrants, the magnitude of their dependence on the role of the consortium causes no other option to not participate in insurance as an obligation to carry out the law. Thus, the decision-making authority is entirely in the agent (insurance consortium).

The consortium together with its partners (recruitment agencies or implementing private placement of Indonesian migrants labour) who have an interest in managing Indonesian migrants labour insurance, even though the recruitment agencies or implementing private placement of Indonesian migrants labour has an interest only to provide information to Indonesian migrants labour and register Indonesian migrants labour to the insurance consortium. There are certain interests in this information. The impact is that migrant labour as principals do not have the effort to make decisions related to insurance for Indonesian migrants labour. This is what makes the dependence of Indonesian migrants labour on the consortium because Indonesian migrants labour admit that participation in insurance is an obligation.

Indonesian Migrants Labour Resign To Private Labour Placement Decisions (PPTKIS)

The dependence of migrant workers on recruitment agencies when registering insurance brings the consequences of Indonesian migrants labour having no power over important events/incidents. Even though Indonesian labour migrants will lose power over the right to make decisions which are in accordance with their interests. This condition will make migrant labour only have partial power, meaning that there are other important parts in their interests that they cannot afford to do alone, highly dependent on the Private labour Placement Decisions, even there is an authority in decision making. This implies that Indonesian labour migrants do not have the power to make decisions related to Indonesian migrants labour insurance, which should have full authority over decision making because this is related to itself. Especially, later the insurance contract applies between them and the insurance consortium. However, the Indonesian migrant labour surrender the right to control their decisions to the Private labour Placement Decisions that those who control the information on insurance are in the hands of the Private labour Placement Decisions and the decision authority is also at the Private labour Placement Decisions, not the Indonesian migrant labour. Although in reality, the decision to register for this insurance, only when registering. It means that the Indonesian migrant labour only gives power to the decision to choose the consortium when registering, does not give full authority on all information and power attached to the registration process. This can be observed that Indonesian migrants labour has "surrendered the right to control", even "surrender control" to Private labour Placement Decisions for all events and decisions related to the process of registering insurance. Unless the Indonesian migrant labour independently registers.

Indonesian Migrants Labour Is Forced to Follow The Decision of The Recruitment Agency

In fact, in the process of "giving up control" there is complete compulsion. This happens because the Indonesian migrants labour has no other choice and does not have the amount of money to pay for the insurance. The insurance registration arrangement and related to the process is borne in advance by the Private labour Placement Decisions. Indonesian migrants labour will pay it with debt or deduct the salary later. The compulsion experienced by Indonesian migrants labour has the effect that the recruitment agency has full power over the decisions of Indonesian labor migrants who should not only give full authority to the process but the right to control the action. This compulsion is an opportunity for Private labour Placement Decisions to master the right to choose insurance for migrant labour. Indonesian migrants labour will also lose their right to control every act of the recruitment agency when registering insurance because the migrant labour does not have the effort and opportunity to sort out which insurance company to choose. Private labour Placement Decisions holds full rights that the Indonesian migrants labour can no longer disagree (Indonesian migrants labour automatically agrees/is forced to agree), and if Indonesian migrants labour agrees then that right becomes fully controlled by the Private labour Placement Decisions. Such as, migrant labour do not have power over other resources, even providing relevant ideas/ suggestions or opinions related to insurance for Indonesian migrants labour. Indonesian migrants labour has never been present in the process of "choosing" and "deciding" related to insurance for Indonesian migrants labour, even when Indonesian migrants labour participate in government recruitment programs.

The granting of authority to the recruitment agency or Private labour Placement Decisions by Indonesian migrants labour began when registering as prospective Indonesian migrants labour. It does not happen when registering insurance. The right to vote and the power of migrant workers was never presented by the recruitment agency or Private labour Placement Decisions. It is clear that when prospective Indonesian migrants labour comes to see the recruitment agency or Private labour Placement Decisions. Then all of his power is indirectly given to the recruitment agency or Private labour Placement Decisions. Thus, Indonesian migrants labour has given recruitment agency or Private labour Placement Decisions to control all actions which should be the power of Indonesian migrants labour, meaning that recruitment agency or Private labour Placement Decisions has treated its right to control the actions of Indonesian migrants labour as a resource. Even though it is in the process that migrant labour issue all costs during the process of becoming Indonesian migrants labour. The transfer of the right of control over decisions and actions taken by Indonesian migrants labour to recruitment agencies is carried out by compulsion and inability to make decisions.

If the pattern of authority to manage the protection of Indonesian migrants labour is agreed with the management format as reflected in Law No. 39 of 2004 and Permenakertrans No. 7 of 2010 along with the amendments No. 1 of 2012. Then the next question arises, can the Law and Regulations guarantee the sovereignty of the institutional independence of each actor?. Even the principal with the agent's partner. In the end, the traps have the potential to create conflicts and the existing rules are very binding/highly dependent among actors. Especially, the government and insurance consortiums. Meanwhile, the interaction of the conflict between Indonesian migrants labour and recruitment agency or Private labour Placement Decisions is due to the helplessness of Indonesian migrants labour to be financial and decision-making. Based on this reality, policy attainment among conflicts can be overcome if there is a high level of achievement or minimizing low risk or failure (despite conflicts) through a cost approach, profit sharing, or risk sharing (Nugroho, 2011). Justifying Nugroho's opinion, it can be said indirectly that the policy will still be achieved by

its objectives and will succeed. Even though the policy direction will be determined based on the many possibilities that will be accepted by all actors. That is, the government and migrant workers as principals can issue a certain amount of money (costs) as a consequence of conflicts caused by resource powerlessness (financially for Indonesian migrants labour, and information for the government), or there is a clear profit sharing among actors. Thus, the success of the Indonesian migrants labour insurance policy as the implementation of social security for Indonesian migrants labour is very much determined by the design of the agreement, even though in the implementation of the design there will be the conflict between actors.

The power that describes Law No. 39 of 2004 actually provides a trap for the mastery of certain actors in the management of Indonesian migrants labour insurance. In the description of previous identification, it was found that the insurance consortium is a strong actor because of its full authority, and recruitment agency or Private labour Placement Decisions has full power over the information it has. Meanwhile, the government has limitations in information resources and authority which result in decision making. As well as prospective migrant labour who are powerless to give full power to the recruitment agency for the use of their voting rights and various related matters. Although Indonesian migrants labour has the individual right to choose a consortium based on his/her own choice, because of his/her limitations and incapacity, they remain with those who are not in power. Even though the actual cooperation relationship in terms of Indonesian migrants labour insurance is very individual. It can be concluded that insurance consortium actors and recruitment agencies have the power to pressure migrant labour and the government. Due to their powerlessness. The power centre is in the agent (insurance consortium) and recruitment agency or Private labour Placement Decisions as the power of mouth for Indonesian migrants labour (recruitment agency or Private labour Placement Decisions is also a consortium partner). This picture of power has an impact on the rationality of decisions made by each actor. Because each actor will continue to act in accordance with their respective interests which is to maximize their respective utility (Holmstrom B & Milgrom R, 1991). Whereas, Indonesian migrants labour and the government cannot raise the position of power. Law No. 39 of 2004 and other regulations have positioned it that certain designs are needed to balance/benefit many parties.

4. Conclusion

Based on the findings and analysis carried out, it can be concluded that the pattern of the existence of actors involved in the issue of protection of Indonesian migrants labour forms a pattern of power between principals and agents. The division of authority carries certain consequences that the government is unable to regulate it independently. Thus, it chooses to partner with insurance consortiums and recruitment agencies. The pattern of authority in the relationship forms a pattern of dependence between actors (principals and agents). Another consequence is that Indonesian migrants labour is powerless in choosing (forced) protection needed. This study has limitations on the approach used by using institutional analysis which is focused on principal-agent theory. The depth of analysis is only able to photograph the phenomenon of authority patterns between principals and agents, not in the whole institutional pattern.

The implication of the research on the theory is that it is able to present employment issues. Especially, the problem of migrant labour with the principal agent's institutional theory approach that the findings are able to contribute to the theoretical development. The principal-agent theory is able to present in answering labor policy issues, which have been resolved with policy theory. The principal-agent theory which has developed so far is

a micro approach. While the research findings are able to develop results on the macro-institutional theory approach (policy environment). Meanwhile, the practical implications of the findings of this study are able to provide an overview of the management of protection policies for Indonesian migrants labour who have never been completed. Thus, the findings of this study will be able to provide recommendations for changes in policy management. Especially, in the protection of East Java migrant labour.

The recommendation which can be given based on the findings is that the government is the actor who is fully responsible for the protection of Indonesian migrants labour. The failure of protection services has the consequence of changing the rules of the game. The Ministry of Manpower as a representative of the government must design a standard agreement as a formal game rule regarding the protection of Indonesian migrant labour.

5. Acknowledgments

References

[1] Brinkerhoff, D.W., Brinkerhoff, J.M., 2011. Public-Private Partnerships: Perspectives on Purposes, Publicness, and Good Governance. *Public Administration Development*. Vol. 31. Pp. 2-14.

[2] Elías, María Verónica and Mohamad G. Alkadry. 2011. Constructive Conflict, Participation, and Shared Governance. *Administration & Society*. Vol. 43(8). Pp. 869–895.

[3] Elsig, Manfred. 2011. Principal–Agent Theory and The World Trade Organization: Complex Agency and 'Missing Delegation. *European Journal of International Relations*. Vol. 17(3). Pp. 495–517.

[4] Engel, E., Fischer, R., and Galetovic, A., 2013. The Basic Public Finance of Public-Private Partnerships. *Journal Europe Economic Association*. Vol. 11, Pp. 83-111.

[5] Farbenblum, Bassina, Eleanor Taylor Nicholson, Sarah Paoletti. 2013. *Migrant Workers' Acces To Justice Series. Akses Buruh Migran Terhadap Keadilan di Negara Asal: Studi Kasus Indonesia*. Open Society Foundations. New York.

[6] Felina, Teppo and Todd R. Zenger. 2014. Closed or Open Innovation? Problem Solving and The Governance Choice. *Research Policy*. Vol.43. Pp. 914–925.

[7] Greer, Scott L. 2010. How Does Decentralisation Affect the Welfare State? Territorial Politics and the Welfare State in the UK and US. *Journal Social Policy*. Vol. 39 (2). Pp.181-201. Cambridge University Press.

[8] Holmström B, Milgrom R.1991. Multitask Principal Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design. *Journal of Law, Economics & Organization*. Vol. 7. Pp. 24-52.

[9] Lewis, M.K., 2002. Risk Management in Publice Private Partnerships. *Working Paper.* School of International Business, University of South Australia.

[10] Ljungholma, Doina Popescu. 2014. Preventing Illegal Migration in Romania. *Procedia - Social and Behavioral Sciences* 149. Pp. 741 – 745.

[11] Mahalingam, Ashwin, Ganesh A. Devkar and Satyanarayana N. Kalidindi. 2011. A Comparative Analysis of Public- Private Partnership (PPP) Coordination Agencies in India: What Works and What Doesn't. *Public Works Management & Policy* 16(4). Pp. 341– 372.

[12] Medda, Francesca Romana, Gianni Carbonaro, Susan L. Davis. 2013. Public Private Partnerships in Transportation: Some Insights from The European Experience. *IATSS Research* 3. Pp. 83–87.

[13] Minkoff, Scott L. 2013. From Competition to Cooperation: A Dyadic Approach to Interlocal Developmental Agreements. *American Politics Research.* Vol. 41(2). Pp. 261–297.

[14] N. Balasubramanian , Rejie George. 2012. Corporate Governance and The Indian Institutional Context: Emerging Mechanisms and Challenges In Conversation with K.V. Kamath, Chairman, Infosys and ICICI Bank. *IIMB Management review.* Vol. 24. Pp. 215-233.

[15] Otčenášková, Tereza Karolína Kolerová, Vladimír Bureš. 2014. Sharing of Resources: Theoretical Background and a Case Study. *Procedia - Social and Behavioral Sciences*. Vol 109. Pp. 698 – 705.

[16] Roehrich, Jens K., Michael A. Lewis, Gerard George. 2014. Are Publiceprivate Partnerships a Healthy Option? A Systematic Literature Review. *Social Science & Medicine.* Vol. 113. Pp. 110-119.

[17] Stainland, Martin. 2003. *Apakah Ekonomi Politik itu? Sebuah Studi Teori Sosial dan Keterbelakangan.* PT. Raja Grafindo Persada. Jakarta.

[18] Suli, Dudi, et all. 2013. A New Institutional Economics Approach to Contracts and Cooperatives Mediterranean. *Journal of Social Science*. Vol. 4.no 9. MCSER Publishing Rome-Italy.Pp. 64-70.

[19] Zhang, Xueqing & Shu Chen. 2013. A Systematic Framework for Infrastructure Development Through Public Private Partnerships. *IATSS Research*. Vol 36. Pp. 88–97.

Culture and Bargaining Power Influence on Schooll and Working Participation of Child in East Java

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Abstract

This paper examines the influence of cultural and bargaining power on work and school participation of children in East Java. The prevalence of children aged 10-17 years who work in East Java is around 4.74%. About 28.03% of children who work are still in school. Whereas school dropouts reach 11.28%. Referring to the theory of collective model and using the method of multinomial logit regression analysis on the Intercensal Population Survey (SUPAS) data in 2015, this paper concludes that culture proxied through tlatah had a significant effect. Children who come from Arek tlatah are most likely to work. Children from the Pandalungan tlatah are the least likely to go to school. While children from Madura Island tlatah are most likely to go to school while working.. Interestingly, Children who have good Indonesian language skills will have 20.2% greater chance of going to school than those who do not have good Indonesian language skills.

Keywords: multinomial logit, collective model regression, work and school participation of children

1. Introduction

East Java is the second largest contributor to the national economy after DKI Jakarta, with a GDP share of 14.61% in 2017. In addition, East Java is also the second most populous province in Indonesia with a population of 39.29 million 2017 [1]. So that, East Java has opportunity to be a superior province in all sectors if maximizes the available resources. It also supported by the demographic bonuses experienced East Java and lasted until 2030

But with the potential they have, there is still one problem that needs to be overcome, the number of children working high enough. From BPS data (2017), around 4.67% of children aged 10-17 years in East Java are children who work in 2016.

In household decision theory, children working or not working and school or not attending school depend on household decisions. The approach in the latest household decision theory, Collective Model, assumes that husband and wife can have different preferences and bargaining power towards the welfare of their children. Will involve children working or not and going to school or not?

several empirical studies of cultural influences are proxied through ethnicity and language on work and school participation of children. McEwan & Trowbridge (2007), Vasquez & Bohara (2010), and Contreras et al. (2007) show that indigenous ethnic people are more likely to be child laborers and less likely to be schooled than non-indigenous populations. While the ability to communication with the national language as a means of communication has a significant impact on children's performance in school, dropout rates and children's income if they work Patrinos & Psacharopoulos (1995).

According to the typical values and products of the culture, Sutarto (2004) divides East Java into ten cultural areas (Tlatah). Four largest tlatah include: tlatah Arek, Mataraman, Madura Island, and Pandalungan. Each tlatah has uniquely behavior characteristics of its people, including work and school participation of children in East Java.

As far as the author's knowledge, there is not previous research about the influence of culture on work and school participation of children in East Java. So this study was conducted to examine the effect of cultural and the other determinants on work and school participation of children in East Java using data of SUPAS 2015.

Collective Theory Model: Work And School Participation Of Children

The theory of work and school participation of children is developed from the concepts of Ahmed & Ray (2011) and Basu & Ray (2002) who adhere to the Collective Model concept. Where parents can have different preferences about their children's school.

Consider a household consisting of father ($j = f$) and mother ($j = m$) and a number of K children at a certain point in time. Fertility is assumed to be exogenous. Every parent cares about their own consumption and the quality (achievement) of their children's education. All decisions made by parents are altruistic, and children are treated as recipients.

Assume each parent has a different utility function and household maximizes the average weight of these two functions by $\theta \in [0,1]$ that showing the balance of the strength of the parent's partner in the household.

$$max\ U_i = \{\theta[U_m\ (C_m,\ C_h,\ S,\ Z)] + (1\text{-}\theta)[U_f(C_f,\ C_h,\ S,\ Z)]\} \qquad (1)$$

with $j = m.f.$

Where C_j is the total personal consumption goods of each parent, C_b is shared consumption goods of all household members (exclude children's school fees and C_j), S is the educational achievement of children, and Z is a vector of individual and household characteristics and exogenous. Whereas θ is a function that depends on other variables contained in Z and is also exogenous.

In contrast to the concept of Ahmed & Ray (2011) who only cares about individual consumption goods of each parent. In this study, consumption goods are distinguished between personal consumption items of parents and shared consumption goods of all household members (other than children's school fees).

Parents allocate the total amount of time children (T) between the child's school time (S) and working time (L). Therefore, maximizing the utility function above is subject to the following time limits:

$$T= S +L \qquad (2)$$

Consider household income, Y is a function of non-working income (symbolized by Aj) from parents and work income of parents (symbolized wjLwj). Because household income Y and children's income if working must meet household needs and school fees for children. Then the budget limit can be written as follows:

$$C_t = Y(Z,\ A_i\ w_i\ Lw_i) - p_sS + wL_w \qquad (3)$$

Where $C_j + C^b$ is the combined consumption goods price, which is Ci which is normalized to 1 and shows the school fees. Therefore, the problem of optimization of parents can be written as follows:

$$max\ U_i = \{\theta[U_m\ (C_m,\ C_b,\ S,\ Z)] + (1\text{-}\theta)[U_f\ (C_f,\ C_b,\ S,\ Z)]\} \qquad (4)$$

That is subject to limitations:
$$C_t = Y(Z,\ A_i\ w_i\ Lw_i) - p_sS + wL_w$$
and $T= S +L$

Where according to Basu & Ray (2002), the solution in solving the above boundary equation by forming the following equation:

$$C_t{}^* = C_t(\theta, A_i, w_i, Lw_i) - p_s S + wL_w$$

The problem of limited maximization results a system of equality of demand for children attending school, namely:

$$S_i{}^* = f(Z, L_i, \Omega, \theta_i), \ i = 1,...,K \tag{5}$$

Where Ω shows the total household income.

According to Basu & Ray (2002), L_i that a function of Ω_j, θ_j, is

$$L_i{}^* = f(\Omega_j, \theta_j), \ i = 1,...,K$$

So as to eliminate the endogenous effect of Li in equation (5), the $S_i{}^*$ equation becomes:

$$S_i{}^* = f(Z, \Omega_j, \theta_j), \ i = 1,...,K \tag{6}$$

Then the child labor supply equation can be expressed as:

$$L_i{}^* = f(Z, \Omega_j, \theta_j), \ i = 1,...,K \tag{7}$$

So that from equations (6) and (7), the equation for working children and schools can be expressed as a function of:

$$SL_i{}^* = f(Z, \Omega_j, \theta_j), \ i = 1,...,K \tag{8}$$

Where SL_i is a function of children going to school or work that is influenced by the characteristics of children and households (social), household income (economy), as well as differences in the bargaining power of both parents.

By referring to some empirical evidence about the influence of culture on work and school participation of children, equation (8) above can be written into:

$$SL_i{}^* = f(Z, \Omega_j, \theta_j, \sigma), \ i = 1,...,K \tag{9}$$

Where σ is a cultural factor that is proxied by tlatah and ability to communication in Indonesian language.

2. Methods

We analyzed the influence of culture and bargaining power on child labor and school participation using multinomial logistic regression. This study uses secondary data cross section derived from the Intercensal Population Survey data (SUPAS2015) at 2015 in 38 cities of East Java by BPS.

The dependent variable (Y_i) is the status of working and school children divided into four categories, namely: 0 = children who schooling only, 1 = children who working only, 2 = children who go to school while working, and 3 = children who neither working nor schooling. the status of working and school children, is based on the activities of working the last week of observation time interval.

While the independent variables include several characteristics of children & households and culture such as tlatah, Indonesian language skills, bargaining power, gender, age, area of residence, education, cooking fuel, type of work, employment status

The marginal effects are presented to make it informative and to directly compare within different categories.

3. Findings and Argument

Data Description

The number of observations in this study were 34,928 children aged 10-17 in East Java. From the characteristics of children, there were 17,970 boys and 16,958 girls.

The prevalence of working children is 4.74%. While children who drop out of school reach 11.28%. In full, a description of the status of working and school children is shown in Table 1 below.

Viewed from the last level of education, 38.24% of children did not graduate from elementary school; 60.49% of children pass basic education; and 1.27% passed secondary education.

The prevalence of children living in rural areas reached 51.92% and those living in urban areas reached 48.08%. Of the total sample, there were 34.20% of children living in the Mataraman Tlatah area; 27.41% in the area of Arek Tlatah; 12.21% in the Madura Island Tlatah area; 20.54% in the Pandalungan Tlatah area; and the remaining 5.65% in other regions. Viewed from the ability to speak Indonesian, there are still 1.75% of children who are unable to speak Indonesian properly and correctly.

We analyzed the influence of culture and bargaining power on child labor and school participation using multinomial logistic regression. This study uses secondary data cross section derived from the Intercensal Population Survey data (SUPAS2015) at 2015 in 38 cities of East

Table 1. The Status of Working and Schooling Children in East Java, SUPAS2015

The status of working and school children		Tlatah of children					
		Madura island	Arek	Matara-man	Panda-lungan	Lainnya	Total
Schooling	Σ	3.551	8.550	10.561	6.100	1.763	30.525
	%	83,26	89,31	88,42	85,03	89,4	87,39
Working	Σ	209	273	374	269	66	1.191
	%	4,9	2,85	3,13	3,75	3,35	3,41
Schooling and Working	Σ	122	88	163	62	29	464
	%	2,86	0,92	1,36	0,86	1,47	1,33
Neither School-ing nor Working	Σ	383	662	846	743	114	2.748
	%	8,98	6,92	7,08	10,36	5,78	7,87
Total	Σ	**4.265**	**9.573**	**11.944**	**7.174**	**1.972**	**34.928**
		100	100	100	100	100	100

Source: Supas 2015 in East Java
Note: The definition of a working child is children who engage in any activity in production activities (economic) for at least one hour in the reference period. Whereas according to Law No. 13/2003, child laborers are those who work and are less than 18 years old (BPS, 2009)

Estimation Results with Marginal Effects

In this study, parents were proxied from the household head and their partner. In addition, children who only have one parent or who don't have both parents are not included in the analysis with the aim to further strengthen the results of research on bargaining power. So the number of samples after this restriction is 31,843 children aged 10-17 years.

Table 2. Multinomial Logit calculation results with Marginal effects on working and schools participation children

Independent Variables	Working		Schooling		Schooling and Working		Neither Schooling nor Working	
	M.E	P.Value	M.E	P.Value	M.E	P.Value	M.E	P.Value
Tlatah (Madura Island):								
Arek	0,011	0,002 ***	-0,019	0,004***	-0,010	0,000***	0,017	0,001***
Mataraman	-0,001	0,810	0,005	0,398	-0,007	0,003***	0,004	0,408
Pandalungan	0,003	0,342 **	-0,022	0,000***	-0,013	0,000***	0,031	0,000***
Tlatah lain	0,001	0,773	0,016	0,039**	-0,007	0,069*	-0,011	0,079*
Indonesian Languange (good)	-0,025	0,015	0,202	0,000***	0,004	0,314	-0,182	0,000***
Household head (Male)	-0,025	0,000**	0,048	0,000***	-0,012	0,001***	-0,011	0,067*
Mother Education (Not graduating from elementary school):								
Graduated from elementary school	-0,023	0,000***	0,048	0,000***	-0,002	0,220	-0,023	0,000***
Graduated from Middle School	-0,044	0,000***	0,090	0,000***	-0,006	0,021**	-0,041	0,000***
Graduated from High School	-0,032	0,000***	0,099	0,000***	-0,011	0,000***	-0,055	0,000***
Residence area (rural)	0,005	0,024**	-0,023	0,000***	0,004	0,011**	0,013	0,000***
Gender of Child (Male)	0,016	0,000***	-0,006	0,106***	0,003	0,018**	-0,013	0,000***
child's age (10)								
11	0,000	0,502	-0,005	0,167	0,001	0,605	0,004	0,244
12	0,000	0,510	-0,021	0,000***	0,005	0,007***	0,015	0,000***
13	0,007	0,000***	-0,053	0,000***	0,006	0,007***	0,041	0,000***
14	0,016	0,000***	-0,085	0,000***	0,010	0,000***	0,060	0,000***
15	0,043	0,000***	-0,148	0,000***	0,016	0,000***	0,090	0,000***
16	0,080	0,000***	-0,211	0,000***	0,019	0,000***	0,112	0,000***
17	0,145	0,000***	-0,329	0,000***	0,016	0,000***	0,168	0,000***
Child Education (Not graduating from elementary school):								
Graduated from elementary school	-0,012	0,017**	0,045	0,000***	0,004	0,042***	-0,037	0,000***
Graduated from Middle School	0,026	0,006***	-0,163	0,000***	0,001	0,860	0,137	0,000***
Main Cooking Fuel (LPG):								
Firewood	0,018	0,000***	-0,039	0,000***	0,003	0,084*	0,019	0,000***
Other	-0,004	0,484	-0,003	0,790	0,002	0,698	0,005	0,589

Independent Variable	The Status of Working and Schooling Children (dependent variable)							
	Working		Schooling		Schooling and Working		Neither Schooling nor Working	
	M.E	P.Value	M.E	P.Value	M.E	P.Value	M.E	P.Value
Employment of Household head (Agriculture):								
Industry	-0,005	0,222	0,011	0,107	0,005	0,143	-0,011	0,055*
Services	-0,015	0,000***	0,031	0,000***	0,001	0,706	-0,017	0,000***
Trade and Transportation	-0,014	0,000***	0,014	0,009***	0,003	0,139	-0,003	0,466
Other	-0,006	0,082*	0,002	0,751	0,006	0,021**	-0,002	0,684
Status in Main Work of household head (entrepreneurs):								
laborers / employees	-0,001	0,499	0,003	0,427	-0,007	0,000***	0,005	0,090*
Family Worker	0,003	0,730	0,009	0,540	0,004	0,548	-0,015	0,166
Bargain Power (father's education higher):								
Father educ.= mother educ.	0,015	0,000***	-0,022	0,000***	0,001	0,598	0,006	0,134
mother's education higher	0,024	0,000***	-0,049	0,000***	0,006	0,040***	0,019	0,001***

Source: Supas 2015 in East Java
*Note: *=Sign.at 10%, **= Sign.at 5% ***= Sign.at 1%*
The definition of a working child is children who engage in any activity in production activities (economic) for at least one hour in the reference period. Whereas according to Law No. 13/2003, child laborers are those who work and are less than 18 years old (BPS, 2009)

Culture and work and school participation of children in East Java

Culture is proxied from Tlatah Indonesian language skills. The four largest tlatah groups in East Java include: Madura Island Tlatah, Arek Tlatah, Mataraman Tlatah, Pandalungan Tlatah. Madura Island were chosen as a reference in this study, because the largest proportion of children work compared to other subjects.

From the marginal effects value on the four categories of school activities and working children, it can be concluded that children from Arek tlatah are most likely to work (ME = 0.011) compared to children from other tlatah.

Whereas children from tlatah pandalungan have the least chance of going to school (ME = -0,022) but the most likely is not going to school and not working (ME = 0,031) compared to children from other tlatah. Children who come from Madura Island tlatah most likely to go to school while working than children from other tlatah.

These findings support the role of culture in work and school participation of children (McEwan & Trowbridge ,2007; Vasquez & Bohara, 2010)

Children who have good Indonesian language skills will have 20.2% greater chance of going to school (ME = 0.202) than those who do not have good Indonesian language skills. Conversely, Children who have good Indonesian language skills will have fewer opportunities to work or not go to school and do not work.

This results support the research by Patrinos & Psacharopoulos (1995) which states that the ability to speaking the national language as a means of communication has a

significant impact on children's achievement in school, school dropout rates and children's income if working.

Parental Bargaining Power and work and school participation of children in East Java

The influence of parental bargaining power is proxied from the relative level of education of the household head and his partner. The higher father education category than mother is used as a reference for other categories of bargaining power.

When mother's education is equivalent to father or even higher than father's, the opportunity for children to work or work while attending school is greater. Conversely, the chance of children going to school actually decreases. This indicates that the level of drop out of children actually increases when the mother's bargaining power is higher than father. Interestingly, the chances of children not going to school and not working more than the opportunities for school children while working.

It support the findings of Ahmed & Ray (2011) and Basu & Ray (2002), where relative maternal education higher than fathers has a stronger marginal impact on school trade off and child labor.

Household Characteristics work and school participation of children in East Java

Several following household characteristics show significant influence on school participation and child labor.

Children with female household head are more likely to work than children with male household head (ME=-0,025). Conversely children with male household head (ME=0,048) are more likely to attend school than children with female household head. This indicates that female household heads are more likely to involve their children to work when there are job offers for their children. The assumption is that female household heads feel need is helped on the household economy (with a position still or not having a husband) by involving their children to work.

This research is different from Pratomo (2017) but is similar to Pitriyan (2006) which states that children with female household head are more likely to work than school.

The higher the level of education of the mother, the greater the chance of the child going to school. In addition, the smaller the opportunity for children to go to school while working and the less chance of children not going to school and not working. But the influence on the involvement of children working purely becomes biased because initially the level of child participation works decreases when maternal education increases to graduate high school (ME-0.044). But when maternal education has reached higher education, child labor participation has risen again (ME = -0,032).

This support findings of Edmonds (2007), Mehrotra & Biggeri (2010), and Setyari (2013). Where in their study stated that the higher the level of education of mothers the higher the likelihood that children will attend school.

Children living in rural areas have a 0.5% greater chance of working; has a 0.4% greater chance for school while working and has a 1.3% greater chance of not working and not going to school than children who live in urban areas. In addition, children living in rural areas are 2.3% less likely to attend school than children who live in urban areas.

This results support several previous studies by Edmonds (2007), Tang et al. (2016), and Mehrotra & Biggeri (2010). It is said that children living in rural areas are more susceptible to work than children who live in the urban area. In contrast, urban children are more likely to attend school than children living in rural areas.

Boys are more likely to work or school while working than girls. But the chance for a boy to work alone is greater than his chances of going to school while working or not going to school and not working. While girls more likely to not going to school and not working than boys. For the category of school children only, the gender variables of the child have no significant effect.

The results of this study are different from the findings of Edmonds (2007) but in line with the research of Contreras et al. (2007) and Pratomo (2017) which states that boys are more likely to working.

With increasing the age of the child, the chances of children working, going to school while working and not going to school and not working are getting bigger. Conversely, the chance for children to go to school is getting smaller with increasing age. This indicates that the tendency of children to work and drop out of school is greater with increasing age. The underlying assumption is that with increasing age, a sense of responsibility to help the household economy is increasing. So as to encourage children to become more involved in the world of work, even though they have to drop out of school though.

The results of this study support the findings of the research from Pratomo (2017) which shows that with increasing age, the chances of children working increasingly large. But on the contrary, the chance for children to go to school is getting smaller.

There is a bias in the influence of children's education. At first the opportunity for children to work decrease and opportunities for school children to rise when children graduate from elementary school. But the opportunity for children to work rises again and school children actually decreases when children graduate from high school.

This can be seen from the value of the marginal effects that were initially negative when the child graduated from elementary school became positive when the child graduated from high school in the category of working children.

The bias of the influence of children's education is based on the assumption that there is nine years compulsory education program and a free school program from the government that helps children to continue school at least until primary school (elementary and junior high school equivalent). Whereas after graduating from high school (equivalent high school), the tendency of children to work is very high. The assumption is that the child after graduating from high school feels obliged to ease the household economic burden. So the choice to work rather than school is normal.

But what is interesting is the tendency of children to drop out of school and not work the most among other categories of children's activities for the variable of children passing secondary education. This implies that not always after graduating from high school, children work immediately. This may be due to the unavailability of employment opportunities or are reluctant to work on an employment that is not in accordance with their educational qualifications

Children whose households use cooking fuel in the type of firewood are more likely to work, more likely to go to school while working, more likely not to go to school and not work, and less likely to attend school than children whose households use LPG gas fuel.

Children with household head working in the agricultural sector are most likely to work than children with household head working in other sectors. Children with household heads work in the trade and transportation sectors most likely to attend school compared to other sectors. As well as children with household head working in other sectors most likely to go to school while working compared to other sectors. While children with household heads work in the industrial sector and in the service sector, the least chance is not to go to school and not work.

The results of this study support the findings in the studies of Edmonds (2007) and Tang et al. (2016) which shows that the type of employment of parents (in this case the agricultural sector) has a significant effect on the involvement of children working and schooling.

Children with household head work as laborers/employees less likely to go to school while working than children with household head working as entrepreneurs. But what is worrying is the opportunity to drop out of school but unemployment is greater for children with household head working as laborers/employees.

The results of this study differ from the findings of Edmonds (2007) who suggested that there were differences in the involvement of children working in households that had a household business and did not have. In this study, it was found that there was no difference between a child and a household head working as an entrepreneur with a child whose household head worked as a worker/employee/family worker.

4. Conclusion

From the analysis above, it can be concluded that culture and bargaining power have a significant influence on school participation and child labor. Children who come from Arek tlatah are most likely to work than children from other regions. While children who come from the tlatah pandalungan have the least chance to go to school, but the greatest chance is not to go to school and not work compared to children from other schools. Children who come from Madura Island tlatah most likely to go to school while working than children from other tlatah.

Whereas when the mother's education is equivalent to the father or even higher than the father, the opportunity for children to work or work while attending school is greater. On the contrary, the chance of children going to school actually decreases. This indicates that the level of drop out of children actually increases when the mother's bargaining power is higher than that of the father.

The implication of this study is to forcefully enforce Law Number 23 of 2002 concerning Child Protection which seeks to eliminate child exploitation activities. In addition, it is necessary to establish a regional action committee that is tasked with eradicating the worst forms of employment for children and educating about the negative impacts of working children. Especially in areas where culture has an influence on the higher work participation of children and the low level of children's schooling.

5. Acknowledgements

References

[1] BPS, "No Title," 2018. [Online]. Available: https://jatim.bps.go.id/dynamictable/2018/03/08/371/jumlah-penduduk-menurut-provinsi-di-indonesia-2012---2017-ribu-jiwa-.html.

[2] BPS, *Analisis Kemiskinan Anak dan Deprivasi Hak-hak Dasar Anak di Indonesia*. Jakarta: BPS, 2017.

[3] P. J. McEwan and M. Trowbridge, "The Achievement of Indigenous Students in Guatemalan Primary Schools," *Int. J. Educ*. Dev., vol. 27, 2007.

[4] W. F. ; Vasquez and A. K. Bohara, "Household Shocks, Child Labor, And Child Schooling," *Lat. Am. Res. Rev.*, vol. 45, no. 2, 2010.

[5] D. Contreras, D. Zapata, D. Kruger, and Xx;, "Child Labor and Schooling in Bolivia: Who's Falling Behind? The Roles of Domestic Work, Gender and Ethnicity," *Society*, 2007.

[6] H. anthony Patrinos; and G. Psacharopoulos;, "Educational Performance And Child Labor In Paraguay," *Int. J. Educ. Dev.*, vol. 15, no. 1, pp. 47–60, 1995.

[7] A. Sutarto, *Pendekatan Kebudayaan dalam Pembangunan Provinsi Jawa Timur, 1st ed*. Jember: Kompyawisda, 2004.

[8] S. Ahmed and R. Ray, *"Parent's Bargaining Powers, Child Labour and Education"*, no. December, 2011.

[9] K. Basu and R. Ray, "The collective model of the household and an unexpected implication for child labor: hypothesis and an empirical test," *World Bank Policy Res. Work. Pap.* No. 2813, no. March, pp. 1–26, 2002.

[10] D. S. Pratomo, "Does Poverty Affects Child Labour and School Attendance?: Evidence from Indonesia," 3rd Int. *Indones. Forum Asian Stud*. Borderless Communities Nations with Borders Challenges Glob., 2017.

[11] P. Pitriyan, "*The Impact of Child Labor on Child's Education: The Case of Indonesia*" Bandung, 2006.

[12] E. V Edmonds, "Child Labor," *Natl. Bur. Econ. Res.*, vol. 4, pp. 1–102, 2007.

[13] S. Mehrotra and M. Biggeri, "Children in home worker households in Pakistan and Indonesia," *Int. J. Manpow.*, vol. 31, no. 2, pp. 208–231, 2010.

[14] N. P. W. Setyari, "*Distribusi Alokasi Sumber Daya Dalam Rumah Tangga di Indonesia : Anak Sekolah atau Bekerja?*" vol. IX, no. 2, pp. 59–71, 2013.

[15] C. Tang, L. Zhao, Z. Zhao, and Xx;, "Child labor in China," *China Econ. Rev.*, no. 16, 2016.

Does Human Capital Investment on Demography Bonus Promote Indonesia GDP per Capita?

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Abstract

In this article we discuss about the quantity-quality trade off theory reduction fertility would induce more human capital investment per child. In 2015 then, Indonesia is a country that ranks 4 big population in the world, with a population of about 253 million people. based on BPS data, the population of productive age is greater than the number of non productive population indicating that Indonesia has demographic bonus. Demographic bonuses will be a blessing when the productive age population has excellent education and skills. Literature review and previous studies related to government spending on educational improvements and skills are used to support the hypotheses in this article. Surveys conducted by previous researchers prove that developed countries (OECD) which are now able to achieve the high average labor productity growth, has long invested a lot of money to build its human capital. Government expenditures for human capital investment are not positively correlated with human capital productivity so the government needs to divert such expenditures to improve education or knowledge with experiential learning as well as to improve skills supported by international certification in order to compete with other productive age population of ASEAN countries.

Keywords : Human Capital Investment; Demography Bonus; Education; Skill Intensity; GDP per capita

1. Introduction

The Quantity-quality tradeoff theory gives greater access to each child in a small family setting where the number of children in a small family (Becker and Lewis, 1973). The small number of family members will encourage parents to maximize the allocation of resources they have in each child that promotes the quality of the child in the family. Human capital is an important factor in long-term economic growth (Galor and Weil, 2000; Glaeser et al., 2004). Thus, developing countries that typically have low levels of human capital and impeded economic progress can apply this quantity-quality theory to improve the quality of human capital.

Indonesia is the fourth most populous country in the world. The population of Indonesia in 2017 reached 263,991,379 inhabitants and reached 266,794,980 in 2018. Here is a table showing the ranking of countries with the largest population in the world.

Tabel 1. Populasi Penduduk berdasarkan Negara

Rank	Country	Population 2018	Population 2017	Growth Race
1	China	1.415.045.928	1.409.517.397	0.39%
2	India	1.354.051.854	1.339.180.127	1.11%
3	United States	326.766.748	324.459.463	0.71%
4	Indonesia	266.794.980	263.991.379	1.06%

source: World Population in Review

Indonesia as a developing country has a large population. Intercensal population surveys (SUPAS) conducted by the Central Bureau of Statistics showed that the dependency numbers of Indonesians reached 49.2%. This shows that every 100 residents who are included in the productive age bear 49% of the population who are included in the nonproductive age. The figures released by SUPAS show that Indonesians who are included in productive age are more than those who are nonproductive. The National Development Planning Agency (Bappenas) estimates that by 2020-2013 with a large population of productive age, Indonesia will experience demographic bonuses.

Changes in population structures where a larger population of productive age than nonproductive age populations will drive substantial per capita income growth (Cutler et al., 1990). Structural changes in these populations cause differences between population growth and growth of working age in the population (Sang Hyop Lee and Andrew Mason, 2007). Demographic bonus will certainly be very beneficial for Indonesia in improving economic growth and development due to the availability of large working capital. However, when the demographic bonus does not have a good quality of labor productivity and competitive in the global world, the demographic bonus will be a burden for Indonesia.

In relation to the Quantity-quality tradeoff theory, the abundant population of productive age should be supplemented by the quality of the population's quantity. Humans as human capital have three essential options for quality living by having a healthy and long life, acquiring knowledge and gaining access to resources to improve decent living standards (Lyakurwa, 2007). The Government of Indonesia has set various policies in realizing the welfare of the population for a decent standard of living in accordance with that proposed by Lyakurwa (2007). The emphasis on the growth of the Indonesian population has been made through the empowerment of Family Planning (KB) with two children is adequate, but not all Indonesians follow Family Planning (KB) program with two such children. The government also promotes a compulsory nine-year education program to realize the right of the population to gain knowledge and gain access to resources including science and technology.

Based on the explanation, the following questions emerged: (1) related to the efforts made by the Indonesian government in improving the productivity of human capital, it has been done maximally; (2) In addition, according to the author there are other things that need to be done and strived by the government in improving human capital productivity in addition to efforts that have been done by the government of Indonesia.

2. Methods

The method used is literature review through research journals and other literature on human capital investments, demographic bonuses and increased GDP through human capital. The literature review uses research journals and other libraries that are used to support the hypothesis compiled by the author on the basis of the phenomenon. The hypothesis that the writer tried to prove is that the demographic bonus that is expected to be owned by Indonesia and investing human capital on human capital will increase the GDP owned by Indonesia. As discussed in the above background exposure, demographic bonuses with changing age structures have an effect on income disparities between generations (Sang Hyop Lee and Andrew Mason, 2007). In addition, demographic bonuses will also enhance economic growth with a productive and competitive human capital.

3. Finding and Arguments

Xuebo Wang and Junsen Zhang (2017) in his research on population control policy and Human Capital Investment in China revealed high population growth is the cause of poverty and is considered detrimental to the developing economy so that policies for special

popoluasi control are deemed necessary and a rational choice for the government. China is the country with the largest population in the world, as well as Indonesia which has a lot of population so that policy is needed to reduce the number of population. Population-related policies in China using China's one-child policy (OCP) are able to reduce population growth in the country.

Indonesia has not issued a policy on reducing the number of residents binding to communities unlike China. The Indonesian government provides socialization and promotes Family Planning (KB) program with two children enough to the people of Indonesia in the hope that the community will reduce the birth rate. However, the fact is that the program is mostly followed by people who have better levels of knowledge, education and life if. It is true that demographic bonuses will be enjoyed by Indonesians by 2030 because the number of people of productive age is more dependent on the high birth rate, but if the government does not make serious and binding efforts in limiting birth rates, large populations will become boomerang for Indonesia. High birth rates can lead to poverty, although this relationship is ambiguous but poverty is one of the causes of high rates of birth (Dasgupta, 1995).

By reducing the birth rate is believed to increase investment in human capital. According to the quantity-quality tradeoff theory (Becker and Lewis, 1973) a family with more family members will allocate more resources to each child that will lead to an improvement in the average quality of the child. With the increase in the average quality of the child will lead to an increase in income per capita when the child is included in the workforce. In addition to helping to increase income per capita, the productivity it has also increased and encourage economic growth in the long term. The accumulation of human capital is one of the greatest fundamentals in long-term economic growth (Galor and Weil, 2000; Glaeser et al., 2004). Therefore, according to the quantity-quality tradeoff theory (Becker and Lewis, 1973) the Indonesian government can adopt population control policies to reduce family size and promote human capital investment from an early age so that human capital owned by Indonesia does not impede economic progress.

Sang-Hyop Lee and Andrew Mason (2007) in his research on demographic dividend found that population age structure and the family age structure affect per capita income. Changes in the age structure of the population relate to demographic bonuses. Demographic bonuses explain that the population of productive age is more than the nonproductive age population. Other empirical results from Sang-Hyop Lee and Andrew Mason's research (2007) show that population dependency ratios have much greater force than the family dependency ratios. This suggests the social reallocations of the gains from the fertility decline that limit the extent to which they are captured by those who have the option of having fewer children. This shows that those who enjoy demographic bonuses are those who have low birth rates and a productive and competitive human capital. So it is necessary to invest in increasing human capital.

Andrew Mason, Ronald Lee and Jennifer Xue Jiang (2016) in his research on demographic dividends, human capital and saving explain education has an influence on economic growth through cross-national regressions (assumed that the human capital in health and education) enters an aggregate production and contributes to economic growth. The regression shows a positive effect on the rate of economic growth (Lutz, Cuaresma et al., 2008). The measure of cognitive ability used as a substitute for class achievement will have a greater effect (Hanushek, 2010; Woessmann 2012).

The curriculum used in Indonesia often varies according to the minister in office. Professor of University of Indonesia Education (UPI) Prof. Dr. Nanang Fattah revealed curriculum changes are often done by the government considered ineffective, inefficient and not have much effect on the progress of education in Indonesia. Investment to education that needs to be done by the Indonesian government is to increase the competence of

teachers who become the spearhead as a provider of knowledge for students at school. In addition, the government can also improve students' cognitive abilities in the classroom which will improve their knowledge and skills, not just pace the achievement of the class. In addition, the curriculum applied in schools in Indonesia limits students' ability to further improve their skills. Not only the knowledge required but sufficient skill is also needed to improve the productivity of Indonesian human capital that can compete with other countries.

Efforts to invest in human capital that can be done by the Indonesian government is to intensify and transmit human capital that belongs to other countries more advanced, to encourage the exchange of science, information, technology that encourages the quality of the human capital. This is in line with Jones's (2014) and Lucas (2015) views. Trade and political cooperation undertaken by the Indonesian government with other countries can be utilized in terms of human capital exchange. Trade may exacerbate economic differences across countries (Bajona and Kehoe, 2010) through its impact on endogenous educational attainment. Emily Blanchard and William W. Olney (2017) in his research on Globalization and Human Capital Investment found that exporting skill-intensive goods generates important long-run benefits via an empirically demonstrated increase in human capital. Human capital investment with knowledge and skills through education will encourage return on investment knowledge which will stimulate efficiency in production method.

Bambang Suprayitno, Tejo Nurseto and Supriyanto (2017) in his research on human capital investment by the provincial government in the era of decentralization in Indonesia found that the provincial government's expenditure in human capital investment did not affect the increase of labor productivity due to the lack of quality government spending so it was not effective in increasing the growth real regional provinces. Government expenditure made more composition on personnel expenditure. Local governments should in terms of investing in human capital to make regional expenditures on public facilities that have a positive effect on labor productivity. Public facilities including schools, libraries and other public facilities are the right of the community, including labor in improving productivity.

4. Conclusion

According to The Theory Quantity-Quality Tradeoff (Becker and Lewis, 1973), reduction in fertility would induce more human capital investment per child. Greater allocation of resources is provided to improve the quality of human capital per child that will encourage an increase in economic growth (Galor and Weil, 2000; Glaeser et al., 2004). Human Capital Investment with improving knowledge, skill and opportunity to improve will stimulate the efficiency of production methods which will also encourage economic growth (Andrew Mason et al., 2016). Indonesia as the fourth most populous country in the world should begin considering binding adoption in birth arrangements such as China which applies the one-child rule in one family. Human capital investment that needs to be done by the Indonesian government in relation to the effort in preparing demographic bonus which will be enjoyed by Indonesia in 2030 is human capital investment in education by increasing the distribution of educational resources for all Indonesian citizens, increasing students' cognitive ability as human capital, improve skill and entrepreneur ability, intensify human capital exchange between Indonesia and developed countries to improve human capital productivity. The human capital investment undertaken by the government through expenditure spending is not focused on the composition of large personnel expenditure but the improvement of public facilities that can support the increase in human capital productivity.

In addition, the Indonesian government in relation to existing productive age workers should also consider the availability of employment for these workers. Providing capital for businesses with low credit interest will encourage people to open businesses that will create new jobs and increase economic growth. The need for early entrepreneurship skills training

and entrepreneurship coaching for people who are in productive age will encourage the productive age population to not think of finding a job but to create new jobs.

Finally, with the human capital investment that has been done will increase the human capital of Indonesia is more productive and quality and increase GDP. So when demographic bonuses occur, the demographic bonus is not a problem anymore because the human capital is not able to compete and the lack of employment but a bonus that really bonus, which can be enjoyed by Indonesia.

References

[1] Bajona, Claustre and Timothy J. Kehoe. 2010. "Trade, Growth and Convergence in a Dynamic Heckscher-Ohlin Model". *Review of Economic Dynamics*, 13(3): 487-513

[2] Becker, Gary and Gregg Lewis. 1973. "On the Interaction between the Quantity and Quality of Children", *Journal of Political Economy* 81(2): 279-288.

[3] Blanchard, Emily and William W. Olney. 2017. "Globalization and Human Capital Investment: Export Composition Drives Educational Attainment." *Journal of International Economics, Accepted Manuscript*.

[4] Cutler, D. M., et. al. 1990. "An Aging Society: opportunity or Challenge?" *Brookings Papers on Economic Activity*, 1990(1): 1-73.

[5] Dasgupta, Partha. 1995. "The Population Problem: Theory and Evidence," *Journal of Economic Literature* 33: 1879- 1902.

[6] Ebenstein, Avraham. 2010. "The „Missing Girls" of China and the Unintended Consequences of the One Child Policy." *Journal of Human Resources* 45(1): 87-115.

[7] Galor, Oded and David Weil. 2000. "Population, Technology, and Growth: From Malthusian Stagnation to the Demographic Transition and Beyond," *American Economic Review* 90(4): 806-828.

[8] Glaeser, Edward, Rafael Porta, Florencio Lopez-De-Silanes and Andrei Shleifer. 2004. "Do Institutions Cause Growth?" *Journal of Economic Growth* 9: 271-303.

[9] Gruberm J., & Wise, D. 2001. "An International Perspective on Policies for an Aging Society". *NBER Working Papers* W8103.

[10] Hanushek, Eric. 1992. "The Trade-Off between Child Quantity and Quality," *Journal of Political Economy* 100(1): 84-117.

[11] Jones, Benjamin F. 2014. "The Human Capital Stock: A Generalized Approach." *American Economic Review*, 104(11): 3752-3777.

[12] Lucas, Robert E. Jr. 2015. "Human Capital and Growth." *American Economic Review: Papers and Proceedings*, 105(5): 85-88.

[13] Mason, A. 2001b. "Population Change and Economic Development in East Asia: Challenge met, opportunities seized". Stanford: Stanford University Press.

[14] S.-H. Lee, A. Mason. 2007. "Who gains from the demographic dividend? Forecasting income by age", *International Journal of Forecasting*, 23:603-619.

[15] Samuelson, P. 1958. "An Exact consumption loan model of interest with or without the social contrivance of money", *Journal of Political Economy*. 66:467-482.

[16] Suprayitno, Bambang., Nurseto, Tejo Nurseto & Suprayitno. 2017. "Produktifkah Human Capital Investment oleh Pemerintah Daerah Provinsi dalam Era Desentralisasi?" *Jurnal economica* 3(1): 39-55.

[17] Xuebo, Wang., Junsen Zhang. 2018. "Beyond the Quantity-Quality Tradeoff: Population Control Policy and Human Capital Investment", *Journal of Development Economics*, 2018:1-40.

Analysis of Internal Control and Accounting Information of Sales In Alfamart Branch of East Bekasi

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Abstract

The purpose of this study to determine the application of accounting information systems sales on Alfamart and to determine the application of internal controls in accounting information systems sales. The method used in this research is qualitative method with intepretif paradigm and phenomenology approach Martin Heideger. The sample in this research is Alfamart Pondok Hijau. The results show that there are still weaknesses in internal controls that occur in Alfamart, such as lack of supervision on employees and lack of information and communication between the cashier and salesperson. must improve the system and procedures of cash sales system with adequate internal control support by adding some function or part so there is no interruption of task in carrying out its duties.

Keywords: Internal Controls, Sales Accounting Information System, Cash Sales

1. Introduction

Background

The advance change on sectors as technology and information, social and economy, has effected major half of population to realize that information is a pivotal necessity. As so an organization needs a system of information, whether it aims to seek profits or not. Therefore, to achieve its goals and maintaining its existence in the society, each organization need a satisfactory system of information. A satisfactory information is one that accessible in timely manner, useful and accountable.

The accounting information systems is one of the pivotal needs in a trading company. A system of information is a series of transaction receipts, documents, accounting records, reports, as well as tools, procedures, policies, human resources, and other resources in a company that are coordinated in achieving the company's objectives. The aim of accounting information system is to secure a company's properties/wealth, generating various information for decision makings, resulting information for external parties, and resulting information for employees' performance reviews. The accounting system also is a mean of control for a company to secure its wealth.

In a company, sales are crucial and one of the machines of the company's growth. Sales is the source of cash flow for the company. Therefore, sales activity is a pivotal activity in supporting the success of marketing a product or the services provided by a company. Therefore, the sales activity has to be well and properly managed to result a major benefit for the company.

One of the factors achieve the effectivity of sales process is by creating a proper internal controlling in a company. Knowing the importance of sales activity in a company, then the elements within the internal controlling which are the foundation for a company's effectivities has to be paid a major attention.

Granted that managing sales activity is not controlled by a well-managed controlling system, it can cause a loss for a company.

Based on the pre-research conducted by Alfamart that is located in Jatimulya, East Bekasi. Bapak Wandi as the head of the Alfamart store in Jatimulya. He stated that he had applied the computerized accounting information systems in Alfamart that's is directly connected to the head office. There was no discprepancies between the price of stocks that available on the store and the price written in the receipt in this Alfamart, which proven the controlling system has not been well-applied. The unavailability of discrepancies of prices on the store's label and on the receipts has applied a proper internal control. Below are the local franchise data:

Table 1. Local Franchise Data

Franchise Type of Micro Retails	Average Revenues per Day	Franchise Investment	Products Sold
Local Franchise Data			
Indomaret	10 million	400 – 600 millions	Laundry Soap, Food and Beverages, and others
Alfamidi	15 million	750 million	Laundry Soap, Food and Beverages, and others
Alfamart	10 million	397 – 417 millions	Laundry Soap, Food and Beverages, and others

The company's objective can be achieved accordingly to the plans; it is important to apply internal controlling. Internal controlling is established to ensure the operation system runs effectively and efficient, as well as ensuring qualified financial records. The internal controlling system will create a mean to construct, collecting information related to companies' transactions which is indirectly can be well-managed.

Focus of the Research
The availability of different price between the label and the receipt that is occurring in Alfamart, caused by the lack of internal controlling of the company, resulted the employee cannot change the price on the labels directly, while the price has been updated within the accounting information in that company.

Statements of the Problem
a. How is the accounting system of sales information being implemented at Alfamart?
b. How is the internal controlling of the accounting information systems being applied?

2. Literature Review

System of Information
According to Cenik & Hendro (2016, p.5) a system of information can be technically defined as a sequence related components to collect (and re-collect), process, save and distribute the information to sustain decision making and controlling the company.

Accounting System of Information
According to Cenik & Hendro (2016, p.5) a system of information can be technically defined as a sequence related components to collect (and re-collect), process, save and distribute the information to sustain decision making and controlling the company.

The Objectives and Benefits of System of Accounting's Information
Anastasia & Lilis (2011, p. 5) concluded the frame of accounting information systems can be explained based on the benefits produced by accounting information. The benefit or the

aim of this system are as listed below:
a. To secure company's properties/wealth
b. To create various information for decision making.

Information System of the Sales Accounting
The cycle of sales is a series of selling activities which occur repeatedly and followed by the process of data's recording and business information. The series of activities in sales' cycle initiated by receiving orders from customers, followed by deliveries/handling goods (or services), preparation of invoices, receivables claims, ended with payment receipt of customers' claims. It is called a cycle since it is started by receiving orders and ended by receiving claims, as the process is progressive and repeatedly (Cenik & Hendro, 2016 p. 127).

1. Unit/Function of the Sales Accounting Information Systems
   According to Cenik & Hendro (2016, p. 128), a cycle of business's s activity has the tendency to involve more than one unit and one person. The number of people and unit that involve can be varied, depends on: size of the company, types and characteristics, as well as the applied technology. However, if seen by the related function, generally it does not look like it depends on the size, types of the company and the applied technology.

2. Flowchart of the Accounting Information System
   The diagram of the flow of cash sales: (a) Distributor, (b) Sales, (c) Stockroom, and (d) Leader.

3. Governance
   IT Governance is a commitment, awareness, and the process of controlled organization's management to TI resource/information system that is bought expensively from the computer's sources (software, brainware, database and etc.) to the Information Technology and LAN network/internet.

   "Governance" is a derived from the word "government", which means to make the policies that are aligned with society's aspirations or constituent (Handler & Lobba, 2005). Whilst the use of governance's definition for the Information Technology (IT Governance) means the application of TI's policies within an organization so the use of TI can be directed accordingly to the organization's objectives.

4. Fraud
   Fraud consists of forms and methods, as well as many experts define the fraud. Below are the definitions of fraud according to some experts. Definition of fraud according to Tuanakotta (2013, p. 28): *"Any illegal act characterized by deceit, concealment or violation of trust. These acts are not dependent upon the application of threats of violence or physical force. Fraud are perpetrated by individuals, and organization to obtain money, property or service; to avoid payment or loss of services; or to secure personal business advantage."*

   The statement points out that fraud is each illegal activity marked by deception, concealment or violation of trust. This action relies on the acts of threat of violence or physical force. Fraud committed by individuals, and the organization in a way to obtain money, wealth or service; to avoid payment or service's loss; or to secure the benefits of the private business.

5. Internal Controlling
   Anastasia & Lilis (2011, p. 82) define the internal controlling as all organizational plans, methods and the measurement chosen by a business activity to secure its wealth, accuracy checking, and the reliability of accounting data from this activity, increasing operational efficiency, as well as supporting the complied the applied managerial policies.

The internal control is crucial because whether the company likes or dislikes, can face many threats that can be the obstacles in accomplishing the objectives of accounting information system. One of the objectives of the internal control is to produce the reliable and trusted financial information. In case that the information system that does not have the control, after an employee inputs the sales' transaction, the number in the application can be easily changed or the invoice that relates to the sales can be damaged.

a. The Model of COSO Internal Control

COSO (The Committee of Sponsoring Organizations) is a group of privates which consists of American Accounting Associations, the AICPA, the Institute of Internal Auditors, the Institute of Management Accountants, and the Financial Executives Institute. In1992, COSO developed a definition of internal control and direction member in evaluating internal control system. *"As a process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations".*

b. Control Area

According to Anastasia & Lilis (2011, p. 83-86) each organization whether it is major or minor, has to possess the stable control area. An unstable control area has the possibility to be followed by other weaknesses of the other internal control components. The control area as the first components of control, includes the factors below:

• The philosophy of management and operational system
• Commitment of the integrity and moral values.
• Auditory committee and the board of directors.
• Organization's structure
• Methods of determining the authorities and responsibilities
• Policies and the practice of human resource

c. Risks Estimation

Anastasia & Lilis (2011, p. 87-88) point out that all companies, minor or major, will surely counter both internal and external risks in the effort of accomplishing the company's objectives.

d. Control Activities

Anastasia & Lilis (2011, p. 88-90) stated that the control activities that are related to financial reports include the followings:

• A proper documents' design and possess the printed serial numbers
• Tasks divisions
• The well-managed authorization of all bossiness activities
• Protecting the properties and company's records
• Creating independent observation on the other employees' tasks.

e. Information and Communication

According to Anastasia & Lilis (2011, p. 90), information has to be identified, processed and to be communicated to the right person so then each individual within a company can run their responsibilities properly. Accounting information system has to be able to create accountable financial reports.

f. Performances' Observation

Anastasia & Lilis (2011, p. 91) mentioned the main activities in the performances' observation includes: (a) Effectively supervision, (b) Accounting responsibilities, and (c) Internal audit.

3. Research Methodology

Qualitative Research Methodology

Qualitative research is a research with the aim of understanding the phenomenon experienced by the subject of the research like behaviours, perception, motivation, acts and etc., holistically, by describing in the forms of words and language, in a natural particular context by utilizing all natural methods (Moleong, 2010 p. 6).

Researcher uses the qualitative method since this research is conducted to explore deeper about the implementation of applied accounting information system in Alfamart as this is the aim of the researcher to apply the qualitative method in the research.

Interpretive Paradigm

In the qualitative research, the researcher uses the interpretive paradigm. According to Neuman (2003, in Efferin et al 2008 p. 38) interpretive approach assumes that the understanding of social phenomenon can be gained by studying a text in detail where the text can be defined as a discussion, writing or images. This approach emphasizes more on the researcher's direct and intensively involvement in the case as his object of the study to dig the deepest meaning of a phenomenon. The aim is to result a valid comprehension, a comprehensive multidimensional of the phenomenon.

Whilst, Efferin et al. (2008, p. 38) stated that interpretive approach is a systematic analysis to a deeper action that has social meanings by direct and detailed observation of the individual or the object of the study in the natural setting, in order to obtain an understanding of how a social environment is created and works.

Phenomenology Approach

As stated in Meleong (2010, p. 14), phenomenology can be defined as subjective experience or phenomenological experience, a study about the awareness of main perspectives of an individual.

Phenomenology can be defined as studies about the phenomenon that appears form a researcher's awareness. In a broader definition, phenomenology is a study about indications or all appeared matters. Nevertheless, it has to be comprehended that a phenomenon is basically an awareness and interaction. In the context of a qualitative research, phenomenon is something that appears and shows in the researcher's awareness by utilizing particular methods.

Research Site

Research site is the most crucial component in a qualitative research since the selection of the site is expected to answer the stamen of the problems of a research (Widiastuti, 2014 p.15). In the relation to the analysis on internal control and the accounting information system in Alfamart, the researcher visited Alfamart in Bekasi Timur at Pondok Hijau. Here is the brief history of PT. Sumber Alfaria Trijaya,Tbk (Alfamart)

Alfamart was established in 1989 by Djoko Susanto and the family of PT Sumber Alfaria Trijaya Tbk (Alfamart/ Company), started its business on the trade and distribution sectors, then entered the mini market sector. The expansion exponentially started in the form of company in 2002 by acquiring 141 branches of Alfaminimart and changed the name into Alfamart. Currently, Alfamart is on the of the leading retails that serve more than 2.1 million customers daily in almost 6,000 branches spread around Indonesia. Alfamart provides daily necessities with the affordable prices, a comfort shopping area, and easy accessible spots. Supported by more than 60,000 employees makes Alfamart is one of the biggest job providers in Indonesia.

The information system that has been applied by Alfamart is the Point of Sales (POS).

By the vast growth of Alfamart's branches with more than 40 transactions monthly receipts, it can be implemented as it is supported by integrated system on each point of sales (POS) cashiers on each branch which include sales system, stocks and goods receipts, the technology in POS is designed to fulfil the development needs and future transactions.

Therefore, each cashier who works at Alfamart has been given the ID and PIN to access the system in a way to fasten the service and the convenience of shopping on the casa, Alfamart has utilized the scanning barcode system, so the payment allows satisfaction for the consumers by using BCA debit, Mandiri debit and all listed banks. Alfamart can also conduct all kinds of transactions as purchasing train tickets, electricity tokens, online transactions, even yor phone credit can also be accessed easily in Alfamart.

Research Location

Research location is where the researcher conducts the research. Determining the research location in a research is used to identify the suitability between the data and facts on field. Generally, this research will be conducted in Pondok Hijau since it occurs that the lack of internal control can appear because of the employee's negligence in changing the price of an item on the store's receipt and the price on Alfamart's receipt. This information is obtained from a customer namely Yuli. At first, she does not know that there are changes of the price in Alfamart, however after she shopped again on the next days and saw that the price on the label was around IDR 6.500, she directly purchased the item and handed to the cashier which the price later on changed into IDR 7.000. Researcher then experienced the same thing, there were few times researcher shopped in Alfamart and found there were differences between the price on the label and the ones on the receipt.

Object, Subject of the Research, and Data source

This research took some objects, subjects, and data, these are explained as follow:

1. Research Object
   The object to be studied are the objects that appear in the research. Basically, as stated above, the problems raised are the particular phenomenon as the foundations of each problem appear on the surface. The object in this research is about the discrepancy of accounting information system between the price on receipt on the shelves, and the lack of the internal control between the cashier and the saleswoman/salesman.

2. Subject of the Research
   Qualitative research that plays the role of the subject is the researcher. Researcher is a student in the Faculty of Economy and Business with the accounting as study program in the University of Pembangunan Nasional Veteran Jakarta. The specification of the researcher in conducting the study of accounting information system in Alfamart is supported by the experience in taking the subject of accounting information system. The researcher's knowledge about accounting information system is obtained through the subject of accounting information system. Hence, the researcher feels he has the competencies to study the phenomenon of accounting information system.

3. Research Data Resource
   Sugiyono (2016 p. 146) points out that in the qualitative research, the sample of data resource are chosen by purposive and using the snowball sampling. The selection of samples, is temporarily in the proposal, and will be developed after the researcher is on the field. Furthermore, it is stated that, samples as data resource or as informant is expected to fulfil the criteria: (a) Those who master or comprehend something through process of enculturation, so that it is not only to be known, but also to be understood, (b Those who are labelled as in the current process or involve within the studied activities.

Based on the above criteria, the researcher determines the informants as follow:

a. Key informant in this research is the owner of Alfamart. Since he is the one who manages all activities in Alfamart, therefore this study is conducted to observe how the accounting information system is applied in Alfamart, and how the internal control is applied in Alfamart.

b. Supporting Informants, which are: (a) The employee of Alfamart. This informant plays the role as the supporter of the application of the accounting information system, and (b) Customer in Alfamart. This informant plays the role supporter of the discrepancy of price that occurs in Alfamart.

Data Collection Technique and Data Management

Afrizal (2014 p. 20) points out that there are four techniques in data collection process: deep interview, documents collections (writings), conducting observations. This study uses the data collection techniques as follows: (a) Comprehensive Interview, and (b) Documents collection (writings), collecting written materials as news, correspondences and reports to obtain the related information.

Data Analysis Technique and Research Design

Data analysis technique and the research design will be explained as follow:

1. Data Analysis

This research adopts the Miles and Huberman's model of analysis that points out the activity in analysing qualitative data is completed interactively and progressively to the completion, until the data is saturated. The data's saturation is marked by the un-availability of the new data or information. The activity in data analysis, is data reduction, data display and conclusion drawing/verification. The steps in analysing the data are: (a) Data reduction, (b) Data display, and (c) Conclusion drawing and verification.

In this study, the researcher conducts interview in continuing pre-research data in obtaining more accurate information. The technique of examining data's reliability is conducted to identify the further process of the accurate data that has represented the studied phenomenon. Sugiyono (2016 p. 121), stated that it need s the data triangulation which is to analyse the answers from the owner of Alfamart by studying the truth with the empiric data (other data resources). The applied data's triangulation is the resources' triangulation which is comparing or re-checking the trust level obtained from different resource. As an instance, comparing the observation's result by interviewing, comparing what has been stated publicly and privately

2. Research Design

The research design used by the researcher is adjusted with the interpretive paradigm and phenomenology approach. Basically, the most crucial determination of work flow in this study itself still needs to adjust with the latest findings of the main problems that occur from this study itself. If the researcher cannot find it, then it can be stated that this study is no longer in accordance with the initial phenomenon and cannot be further processed, so compatibility is pivotal.

After we briefly knew the core of appeared phenomenon on the field in the form of pre-research, and conducted to adjust with the initial phenomenon, we can then know what are the further steps to be taken. Furthermore, the researcher verifies the problems with the natural concepts and identifying object or actor who is directly involves in the activity. The verification is conducted to assist the researcher in decision making, whether the phenomenology study will be further processed or to change the actor or another research site. If the research can be processed, then the researcher collects the actual data collection by interviewing (Yusuf, 2014 p.357).

During the data collection process, the analysis of the obtained data is progressively conducted, which means that the definitions will be given accordingly to the perspectives of studied object, not by the researcher's conclusion. The steps in data analysing are: data reduction, data display, conclusion and verification. Final step of phenomenology study is constructing the result of the study.
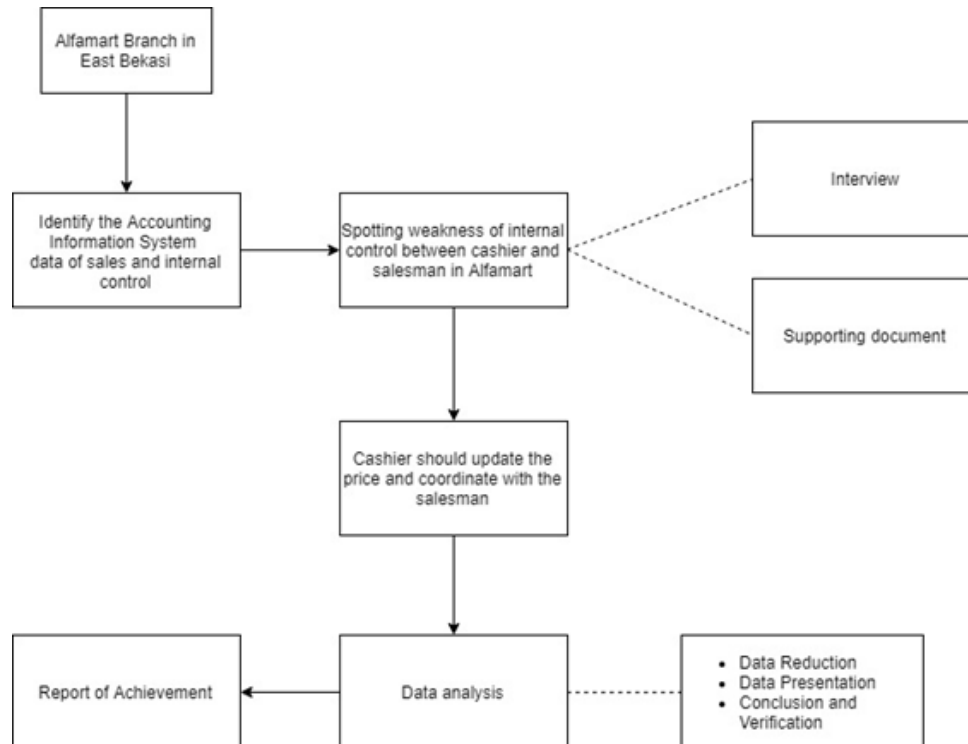
Figure 1. Research Design

4. *Finding and Discussion*

The research process that has been done is conducting initial study in Alfamart Pondok Hijau, East Bekasi by interviewing the head of the store namely Tono and two employees namely Tia Damayanti and Amri. Besides interviewing these informants, it is incomplete juts by observing directly the condition in Alfamart, so it can be concluded the initial explanation of the study is the researcher is interested to choose the topic about internal control and accounting information system of the sales. The first pre-research was conducted in February 15th, 2018. The second interview was initially aimed to observe the initial observation about the studied object.

The second interview then was conducted on 21st of February in 2018 since a particular condition where the researcher has to return to Alfamart Pondok Hijau, because the data was not sufficient yet to be analysed. The second interview was aimed to capture information about accounting information system of sales and internal control by interviewing the head of Alfamart. It is founded that in that Alfamart, there were discrepancies between the price on the receipt and the price on the store's label caused by lack of communication between cashier and saleswoman, so it interests the researcher to examine cursorily the accounting information system and internal control in Alfamart.

Point of Sales System

In the business world, Point of Sales(POS) app can be defined as check-out counter with the cash register. In accordance to its name, POS is the check-out point where trans-

action can be marked as complete. This is where buyer and seller conduct payment of received goods/service. In POS, the seller will count the total of price purchased by buyer and give the options for the buyer to make payment, and also printing the transaction's receipt which called as receipt. Below is the description of POS app:

Based on the statement from Avin Kurniansyah, POS is a system that is utilized to make retail's sales transaction, to fasten the service and comfort of shopping at the cashier only, the payment now is also create satisfaction for the consumer. The same statement given by Tono that POS is a software that enables user to find the desirable item faster and also it saves time to browse the category of the item. Impacted on the check-out process which is faster and a better shopping experience.

Nevertheless, there was a different opinion from Tia Damayanti who stated that POS that's is initially applied to fasten the service and the satisfaction of shopping in Alfamart can be also causing the rareness of giving the shopping bon since the machine works slower sometimes. The similar statement came from Amri, who stated that the system can also get error, as well as the shopping receipt is rarely given to the customers due to slower work of the machine.

Flowchart of the Accounting Information System in Alfamart

Below is the explanation of the sales accounting information system's flowchart in Alfamart:
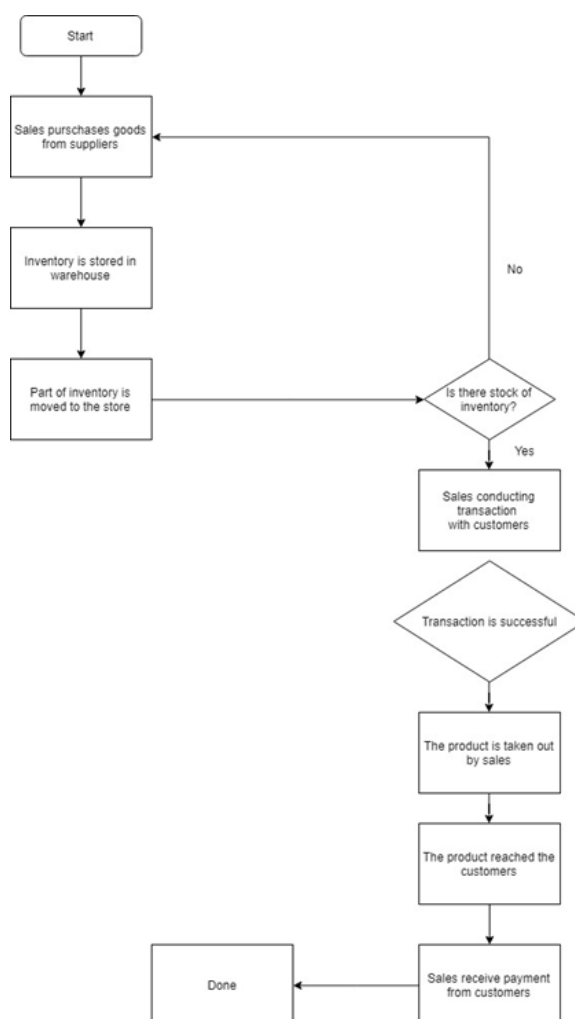
Figure 2. Flowchart of Accounting System in Alfamart

Seller purchases the product from supplier like food product, drinks, soaps, and etc. After that, these products are stored in the main warehouse of Alfamart. After they are stored, some of the products are distributed to the Alfamart's branches. If the stocks are available, the seller makes the sales transaction with consumers. After transacting, the products are handed to consumers and cashier receive payment from consumer.

Commitment to the Integrity and Moral Values

It is essential for management party to create a structured organizational that emphasizes integrity and moral values. A company can legalize integrity as basic foundation in operating, by actively teaching and practicing it. All fraud behaviours have to be fully investigated, and those who are conflicted has to be released. A dishonest employee has also to be charged to ensure all employees are aware of this kind of behaviour is forbidden.

According to Avin Kurniansyah and Tono, if the fraud is occurring, employees are obligated to report to the supervisor so that those who conduct fraud can be charged with the sanction. Nonetheless, Tia Damayanti and Amri stated that if there is someone conducts the violation, the employees are obligated to report to supervisor, and still they are not directly being given the sanction.

Commitment to the Competency

To reach the entity objective, personal of each level within the organization has to possess the knowledge and skills needed to run their tasks effectively. Avin Kurniansyah pointed out that knowledge and particular skill are needed to finish the tasks given to individual. Prior to the allocation of staff, employees are given the training.

Organizational Structure

Avin Kurniansyah stated that management of controlling assigned tasks and responsibilities of each level of company is marked by the accomplishment of tasks and responsibilities properly accordingly to company's organizational structure.

However, a different statement came from Tono, each management controls assigned tasks and responsibilities on each level of a company. Nevertheless, the assistant of the store's head also plays the role of administrative function since Alfamart does not hire more employees. Here is the organizational structure in Alfamart Pondok Hijau:
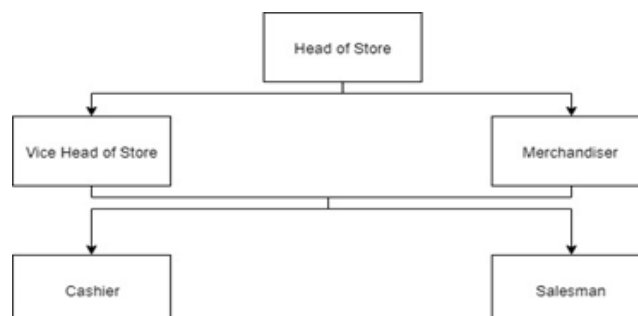
Figure 3. Organizational Structure in Alfamart Pondok Hijau

Policy and Human Resource Practice

An effective internal control is crucial that the policy and procedure of allocating human resource will ensure that personal entity possesses integrity, moral values and expected competency.

According to Avin Kurniansyah, performance review itself is aimed to measure each

employee's performance in the effort of developing ad boosting qualified work, in a way to reach an effective act.

Control Activity

The activities that have been established through policies and procedures in ensuring that management's instructions to reduce the risks of accomplishing the objectives. Control activity is completed in all level of entity, in all stages of business process and to the technology environment. Tono stated that control activity has several goals and applied in all acts and organization's function.

Information and Communication

Information is pivotal to all entities to complete internal control's responsibilities in order to sustain the accomplishment of the objectives. Information is obtained or resulted through communication process between internal or external parties, progressively repeated and shared. Most organizations build an information system to fulfil the need of reliable, relevant and timely manner information. Identification, obtaining and exchanging information in a format and allocated time which allow people to do their tasks.

Based on Tono's statement, the lack of information from employees, especially between cashier and saleswoman/man. Cashier does not communicate directly with saleswoman/man if changes on the price has been updated. So, the price on the store's label are not updated yet.

Performance Review

The process of establishing the measurement of performance and actions taken to support expected achievement is hoped to be in accordance with the predetermined performance. According to Avin Kurniansyah and Tono, in Alfamart, each head of divisions is responsible to conduct review on their own division. A cashier is supervised by the supervisor, whilst saleswoman/man is supervised by the assistant chief of store.

Nonetheless, Tia Damayanti gave a statement that the supervision for the cashier is also part of the tasks of a supervisor. However, the supervisor is rarely conducting supervision to the cashier.

Whilst, Amri stated that if supervision for saleswoman/man is conducting only through CCTV, while some store does not have CCTV. Hence, stealing is often occur in this Alfamart and the employee has to compensate for the missing item.

The Crappy Service

Ideally as the seller, Alfamart party should treat consumers properly. Nonetheless, there is a crappy service in this Alfamart. As an example, if someone wants to purchase "Chicken Nugget", the available stock is massive and has no price on it. Consumer then tried to ask the saleswoman/man who was in charged, it is unfortunate that he/she answered "to check the price, please ask the cashier by yourself." It can be concluded that the saleswoman/man did not serve the consumer improperly.

Prices have never been Updated/ Incompatibility of the goods' price

The price on store's label in Alfamart has never been updated whilst the price on receipts are always updated. The price on the store's label has significant discrepancy with the price on the receipt. Consumers found fraud on this price's discrepancy few times evry time they shopped in Alfamart.

Figure 4. The price on the label and the price on the receipt

The Negligence of Cashier in Counting the Price of Goods

Since fraud is often occurring, consumers paid detailed attention when cashier counted the items. It is found that one of the purchased items was double counted whilst the item was only one. This incident is not supposedly happening, since it is potential to embarrass the consumer. Since if the item's price is doubled until hundreds of thousand Rupiah, while the consumer has already prepared sufficient amount of money.

The Negligence of Cashier in Counting the Price of Goods

For some people, receipts are important. To check the price, to compare the price (whether expensive or cheap), or if it is had to be claimed in their office. Consumer noticed that within a month, receipts got unclear and almost unreadable since the ink has vanished. Below is the image of unclear receipt from a consumer:
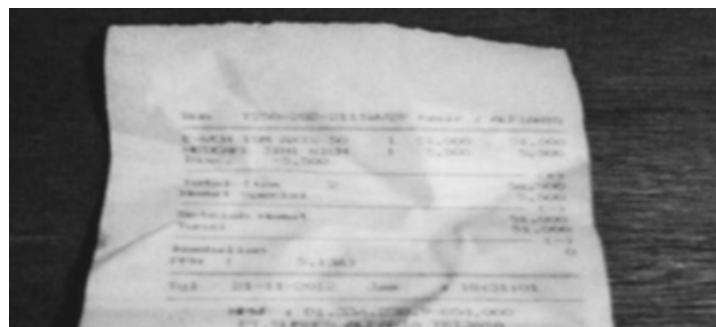

Figure 5. Unclear Receipt

Point of Sales System

Davis et.al (1989) developed Technology Acceptance Model (TAM) to study determinant factors of the implementation of information system from the user. The result of the study indicated that information system is till influenced by intention of utilization of information system, where this intention is shaped by perceived technology usefulness and perceived ease of use. TAM is aimed and estimate the users' acceptance to a technology within an organization. TAM details the causality between trust (of the benefits of a system of information and the accessibility for the usefulness) and behaviours, objectives/needs, actual utilization from a user of information system.

Alfamart applied the POS app where according to the employee is yet effectively. Since, POS can only enable vast the service and ensuring shopping comfortability in the

casa, yet the system of receipts is rarely distributed due to the delay. So, this incident is contradictive with the Tam theory where users are still experiencing difficulties in utilizing POS.
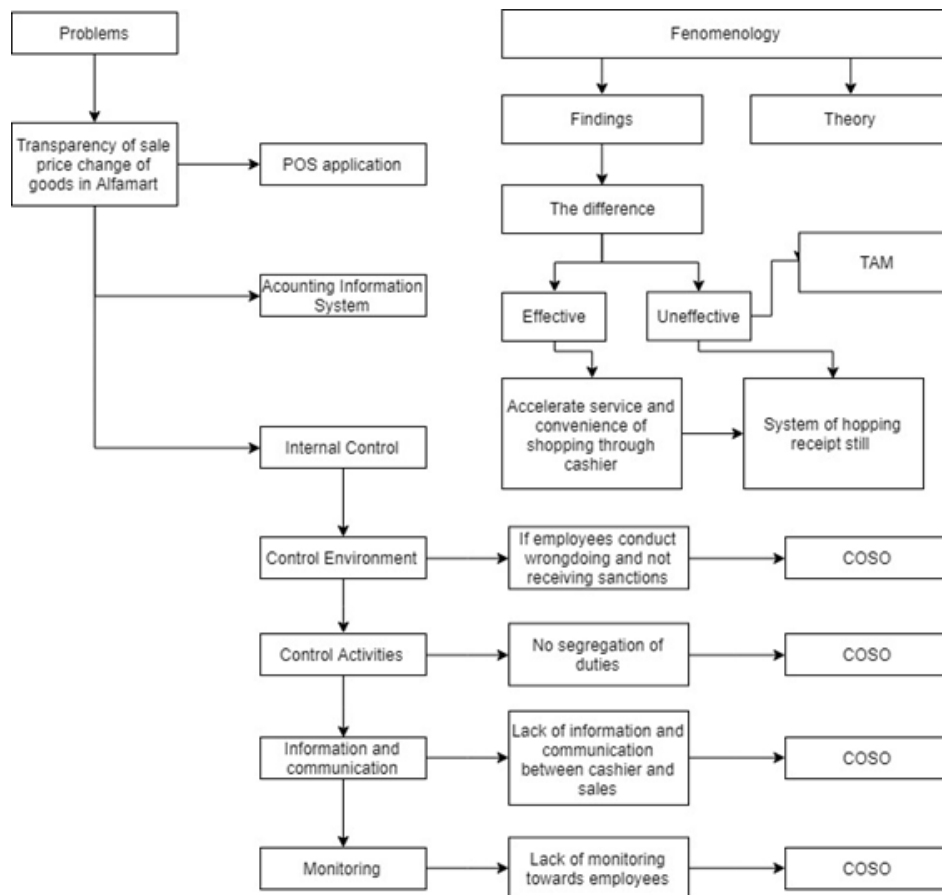
Figure 6. Technology Acceptance Model (TAM)

Commitment to the Integrity and Moral Values

Integrity and moral values are the products of ethic standard and entity behaviours, as well as how the standard is communicated and coordinated in practices. It is important for the management to create an organization's culture that emphasizes integrity and moral values. Ethical and unethical behaviours can generate a massive implication to the internal control. These behaviours can also shape the validity of financial reports.

Every company must hold ethical behaviours to array management's acts, both supervisor and employee. The management has to take pro-active actions in assuring that all employees are fully-aware of standardized behaviours. Besides that, the management must perform good examples in daily behaviours. The decision of management to hold the principles of moral values, although it faces tough decision, will serve as a positive message for all employees. The management has to sustain the long term objectives.

This is contradicting with the head of Alfamart' store if an employee committed mistake, he/she did not get the sanction, as an instance supervisor does not uphold the discipline in working nuance, maintain the honesty, facts, justice and collaboration among employees. Supposedly, the supervisor has to be given sanction through reprimand or an official warning letter.

Commitment to Competence

The Commitment to competence is the required knowledge and skill to complete tasks as: management's consideration towards level of competencies of particular tasks and how this level transforms into required knowledge and skill.

A company must recruit competent and trusted employees to elevate creativity and initiative in countering current dynamic condition. Therefore, it is essential for the HR to fill in the job vacancy with individuals who possess the knowledge and skills as expected.

Alfamart is very attentive to employees' skills they are recruiting. A skilful individual accordingly to each job description is suitable in shaping his/her productivities and resulting a qualified performance. Alfamart often select its employees to be further involved within trainings. Alfamart also allocates employee based on the skills and knowledge they possess.

Philosophy and Management Operational Style

The philosophy and management operational style is a character of a management whether it is risk taker or risk avoider. The manager has to be pro-active as the example of ethical worker by behaving accordingly personal ethical codes. The manager also responsible to construct company's code of conducts, and treat each employee fairly and respectfully. Manager holds the responsible to emphases the importance of internal control.

The philosophy of management occurs in Alfamart is to ease the daily goods' supply of consumers and provides the best service. It is accomplished in order to meet consumer's satisfaction. In a well-managed relationship within a company, an excellent collaboration among employees must be sustained to provide best service for consumers and in the consideration of suggestion or an idea. As an instance, consumer asks a question to one of the employee and the employee does not answer the question.

Organizational Structure

A company's organizational structure describes the authorities' and responsibilities' division in meeting the objectives. This organizational structure has to be presented explicitly in graphic formats in order to provide clear information of the responsible person. The organizational structure of a unit within a company, limits the existed responsibilities and authorities. This is also connecting the line of communication.

Alfamart has applied an organizational structure which describes a connection between related sections. There is no proper job's separation. Nevertheless, in the current organizational structure, the written characterization of authorities and responsibility are still unavailable. Also, the assistant of the head's store plays the role as the person in charge for administrative matters, as Alfamart does not hire more employee for this specific role.

Policy and Human Resource Practice

The policy and human resource practice which includes staffing's management system to produce competent and trusted employee in a way to contribute an effective control, the methods of recruiting them, evaluate and paid. Human resource practice includes employees' recruitment, orientation, training, motivating employees, evaluating, promoting, compensating, counselling, protection for the employees and releasing them.

A proper human resource practice will enable the company to meet efficiently operation system and preserving data's integrity. Alfamart has its own policies in recruiting new employees. This selection process is aimed to pull qualified employees as well as being committed in running tasks and responsibilities.

Control Activity

Within a company, the job's separation as the function of authority is unavailable. Authorisation is carried out by each head of divisions in order to be monitored in the transaction process. Alfamart has not applied the separation of sales, finance and accounting yet.

Alfamart has provides fitting authorization accordingly to each level ad activities within the company. One of them is the authorization of discount proposed by the existed branch. This needs to be authorized in order to avoid the discrepancies of counting in branches.

Information and Communication

Information is essential for each entity to perform internal control's responsibilities in supporting the accomplishment of the goals. Information required by management are relevant information both external and internal in sustaining the function of other components of internal control.

The obtained or resulted information through communication process between both internal and external parties are accomplished continuously and repeatedly, also all information and communication are considered as identification, and exchanging information in a form and time that enables individuals to perform their responsibilities.

Alfamart has conducted the identification process and its activities' records properly, shown by records of transaction of the sorted stocks from their storage. The lack of communication between cashier and saleswoman/man causing discrepancy of prices on the store's label and receipt is still un-updated.

Monitoring

Monitoring includes process of reviewing performances of the internal control all the time, and ensuring whether it has been properly run as expected, also whether it has been updated with the current updates. Monitoring should be accomplished by an assigned individual, whether it is on design stage or operating the control in timely manner, in order to determine whether the internal control has been adjusted with the dynamic changes.

The lack of performances' monitoring between employees in Alfamart has caused frauds conducted by some employees. The monitoring in Alfamart usually conducted by progressive activities and enabling the determination of qualities and internal control. Internal control of this monitoring has to be reported to the head of store according to the facts on field. Data possessed by company as in documents about sales transactions applied by Alfamart are as cash registration, cash deposit reports, sales reports of each cashier, and other supporting documents. Data obtained from the company shows that the company has handed the procedural data that is applied in Alfamart.

Consumers' opinions about Alfamart

In a world of retail's industry, specifically in countering current competition, consumers' satisfactory is one of the keys of success of a business. By satisfying the consumers, an organization can elevate its profit and resulting a wider market (Barsky,1992).

So it can be stated that, consumers' satisfaction is a feeling, hope, or emotional judgement to the use of service or product. There are three assessments of satisfaction; better performance from expectation, performance is equal to the expectation, and lower performance as expected. Consumers' satisfaction assessment (Kotler,1994) can be measured by asking directly to the consumers by using range. The other method is by asking consumers to create the suggested lists for improvement.

Consumers' opinions for Alfamart has indicated that Alfamart has lower performance as expected by them, since the employee serves consumer in a poor way, prices have never

been updated, negligence of cashier in calculating stocks' prices, the ink on the receipt is unclear. These contradict to the theory of consumers' satisfaction since the employee's performance is lower than consumer's expectations.

5. Conclusion, Limitation, and Suggestion
Conclusion

The conclusion of this thesis entitled analysis of internal control and sales accounting information system in Alfamart is the discrepancy of the prices on the store's label and the receipt indicated the weakness in internal control in the cashier and saleswoman/man, where it is required for these individuals to collaborate, cashier must updating the price periodically on each day, then there will be no discrepancies between prices on the store's label and receipt, since the change of selling price can be changed from the headquarter.

Dual functions between assistant of the head store and administrative division, which implicated the person cannot run automatic checking of employees' accuracy, also potentially creating frauds and mistakes. Therefore, it is suggested that the dualism has to be separated, assistant of head's store will fully concentrate to his/her responsibilities which is to control employees and producing sales reports.

Cash deposit in where the assistant of head's store, head of the store entrusts goods' deliveries through driver along with the stores' receipt, can be seen as the lack of effectiveness and less secure from security point of view. It is recommended that the assistant of the head's store deposits the sale through the bank, which is safer and more effectively. It does not have to wait for the deliveries conducted by driver, and also to avoid a massive amount of money stored in the store's safe. If there are extra money after the deposit, it is recommended that Alfamart should create petty records in a book by using the fluctuation method to replace the lack of cash caused by mistakes or frauds.

Suggestion

1. Theoretical Suggestion
   For the future researcher who desires to conduct further research about internal control and accounting information system of sales in Alfamart, it is recommended that adding the sales by utilization of credit card.
2. Practical Suggestion
   • It is recommended to have firmness and clarity in running all cash sales activities, and the internal control of carrying out obligations.
   • Sumber Alfaria Trijaya, Tbk. must improve the system and procedure of cash sales system with the full support proper of internal control by adding some functions or divisions to avoid dualism in carrying out tasks.
   • PT. Sumber Alfaria Trijaya, Tbk must shaping more perfect organizational structure by applying separating the function of assistant of the head's store and administrative tasks or merchandiser that is currently also acts as head of the storage since Alfamart does not hire more staff. Therefore, each division's tasks can be identified clearly.

Limitations
Limitation is one of the obstacles in conducting this research. The researcher is aware of the limitations in conducting this study in Alfamart Pondok Hijau East Bekasi as written below:
1. The inability of interviewing the supervisor and head of the storage that cause the researcher could not dig deeper in relation to the internal control of the cashier.
2. Limited time with the informants which causing lack of information about analysis of internal control and accounting information system of sales in Alfamart, East Bekasi.

References

[1] Afrizal. (2014). *Metode Penelitian Kualitatif Sebuah Upaya Mendukung Penggunaan Penelitian Kualitatif dalam Berbagai Disiplin Ilmu*, Jakarta: Rajawali Pers.

[2] Agung, M. (2015). Internal Control Part of Fraud Prevention in Accounting Information System, *International Journal of Economics, Commerce and Management*, Volume III, issue. 12.

[3] Ardana, C., dan Hendro, L. (2016). *Sistem Informasi Akuntansi*, Jakarta: Mitra Wacana Media.

[4] Darmawan, R., Mahsina., dan Widya, S. (2017). Analisis Penerapan Sistem Informasi Akuntansi Penjualan Dalam Rangka Meningkatkan Pengendalian Intern Dan Efektivitas Penjualan Pada PT. Sumber Alfaria Trijaya, Tbk (Alfamart KH. Mansyur No. 242 Surabaya), *E-Journal Ekonomi Ubhara*, Volume 3, issue 2.

[5] Diana, A., dan Lilis, S. (2011). *Sistem Informasi Akuntansi Perancangan, Proses, dan Penerapan*. Yogyakarta: CV Andi Offset.

[6] Efferin, S., Darmadji, S., Tan, Y., (2009). *Metode Penelitian Akuntansi Mengungkap Fenomena Dengan Pendekatan Kuantitatif dan Kualitatif*. Jakarta: Graha Ilmu.

[7] Moleong, L. (2010). *Metode Penelitian Kualitatif*. Bandung: PT Remaja Rosdakarya.

[8] Muflikhah, N., Kertahadi., dan Nila, F. (2014). The Evaluation of Internal Control On Sales and Cash Receipt Accounting System: Case Study at PT PG Candi Baru Sidoarjo, *Jurnal Administrasi Bisnis*, Volume 8 No 2.

[9] Mulyana, D. (2010). *Metodologi Penelitian Kualitatif Paradigma Baru Ilmu Komunikasi dan Ilmu Sosial Lainnya*. Bandung: PT Remaja Rosdakarya.

[10] Sugiyono. (2016). *Memahami Penelitian Kualitatif*, Bandung; Alfabeta.

[11] Voets, O., Jullie J., dan Anneke, W. (2016). Analisis Sistem Informasi Akuntansi Penjualan dan Penerimaan Kas Untuk Meningkatkan Pengendalian Intern Pada PT. Sumber Alfaria Trijaya, Tbk (Alfamart), *Jurnal Berkala Ilmiah Efisiensi*, Volume 16 No. 04.

[12] Wicaksono, A. (2012). Perancangan Sistem Akuntansi Penjualan Tunai Terkomputerisasi Pada Al Ishba Karpet, *Jurnal Nominal*, Volume I.

[13] Yusuf, M. (2014). *Metode Penelitian: Kuantitatif, Kualitatif, dan Penelitian Gabungan*. Jakarta: Prenadmedia Group.

Porter's Value Chain Analysis in the Flat Stone Industry as the Determination of Efficiency Strategy

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Abstract

The flat stone is a natural stone product commonly used as a complementary material to beautify the building. The flat stone is a natural stone product typically from Jember that digged from dune (small hill). The existence of 437 dune Becomes a potential resource that should be developed. But most of the new companies that run in the flat stone industry have a tendency not to last long. Many new companies go bankrupt in just one year. The problem is being expected comes from the inefficiency of company activities. Therefore, there needs an analysis of the company's activities to enable the company to operate and efficiently. Value chain analysis is analytical tools that Identifies the primary and secondary activities of the company that aims to calculate how much value added in each chain of company activity from upstream to downstream.

Keyword: Value Chain Analysis; Porter's Value Chain; Efficiency; Flat Stone

1. Introduction

The existence of dunes will be a great potential to be developed for Jember, supported the statement of the results of the study noted that the number 379 is still untapped dune [1], Gumuk (dunes) is a place of raw material flat stone (also known as stone plates)[2], The existence of flat stone (the next we will use stone plates) are used as an ingredient in dishes stone handicraft industry Jember (complementary materials of houses and buildings). When you see the potential dune Jember plate stone handicrafts industry is possible to develop well. However, problems always arise from the production and absorption of market demand resulted in activity is always decreased. In addition to the stone plates substitute products, the emergence of other Performance Management which has a strong bargaining created a situation which is detrimental to the stone plate industry handicraft activities Jember. The concept of Competitive Advantage in the sphere of small companies is an important factor to consider would provide a wide range of financial influence on industrial activity such as refund and compensation [3], [4]found competitive advantage is the heart of a company, the concept of competitive advantage can be seen in several as follows: 1) New Entrant; 2) Supplier Bargaining; 3) Buyer; 4) Substitute 5) and Intensity of Rivalry. Unisex jam it important enough other factors to consider such as knowing the strategy of competition between other companies. Bargaining (bargaining) among suppliers with buyers such as, in determining the price as it has been known when more complete information, the more stringent the bargain price of raw materials and intermediate products supplier (supplier) with the company and the company with the buyer (buyer). In addition the needs of buyers who are relatively well be the thing to note, Consumers who are competent are usually trying to compare similar products among enterprises of the company before making a transaction. The growth rate is generally influenced by the purchase of interrelationship of three elements such as industrial growth, growth in major market segments, as well as changes in industry and market share in its main segments.

In addition to explaining the concept of competition [4]also suggested a concept of Value Chain as a supporter of a good competitive strategy formulation. Value Chain

of the value chain is a series of activities by the company in processing the input into output[5]ie the entire value added activities ranging from suppliers, manufacturers, up to the hands of the end consumer (buyer). The inputs used can be goods, time, equipment, skill, knowledge and system services that will be processed by adding utility value so as to produce output worth more to consumers / customers. The concept of dividing the company/industry into two parts. The first is the primary activity that consists of Inbound Logistics, Operations (operations management), Outbound Logistics, Marketing and Sales, and Service. The second is supporting activities that consist of Procurement (procurement), Technology Development, Human Resource Management (HRM), and Firm Infrastructure. Furthermore[6] also theorized that the structure of an industry it is necessary to create a good strategy which focuses on the analysis contained in the introduction of the industry structure underlying characteristics of an industry which form the arena where strategies can be developed. [7]stated that the concentration consists in two types, namely the concentration of industry (market concentration) and the concentration of aggregate, industry concentration reflects the role of several large companies in a market or industry while aggregate concentration reflects how important number of major companies in the overall economy. While the industry concentration can be expressed in a variety of factors such as good luck (the company's first-to- market), technical factors (level of the breadth of the product market), economies of scale enterprise, the scarcity of economic resources, technological advances, increasing of product markets, as well as the number of firms there are in the industry (newcomers), policy and regulatory factors.

2. Methods

This research use descriptive qualitative approach. The focus of the study is to formulate a new strategy for industrial enterprises Jember stone handicrafts plate according to the indicators obtained from literature and previous research. This study using snowball sampling techniques and there are four categories of the population and the sample on the research conducted, which consists of the entire population of industrial enterprises plate stone handicrafts and marble industry Jember Regency Tulungagung, suppliers and buyers for the stone industry handicraft plate Jember. Data collected by observation and semi-structured interviews. Test the validity of test data using triangulation. Triangulation is a data checking interviews to different sources and compare the suitability of the answer. As for the data analysis techniques are:

1. Determining the structure of the industrial market through the concentration ratio of four largest companies in East Java (CR4). And identify the structure through a characteristic stone corporation handicraft plate.
2. Data identifying the internal and external activities of the companies belonging to the industry and in accordance with the samples was determined using the method of interview
3. Analyzing the value added at each of the company's activities
4. Sort and identify the factors that are less optimal and less efficient in the company through the analysis of the activities that have been found (sorting unnecessary activities and reduce costs to a minimum on a stone plate handicraft company Jember)
5. Determining a good competitive position and strategic steps in the stone industry Jember handicraft plate so as to create a good strategy

3. Findings and Argumetnt

Market Structure Analysis

Judging from the common characteristics that include the large number of small and medium scale industries (SMEs) than large-scale industry as well as by the many types

of natural stone industry in accordance with the types of natural stone in each the natural stone industry is a fragmented industry. Based on CR4 value is equal to 0, then it can be identified that the structure of the stone plate industrial market is perfectly competitive market. However, when seen from the characteristics and features of the company in the form of a large entry barriers in terms of capital, labor and experience, then the stone plate industry has a monopolistic market structure where there is a high barrier to entry however free to exit. So the company out of the market do not affect prices.

**Table 1. Concentration Ratio of Flat Stone Industry**

2014 (in Tons)	
mineral Fuel 1,011,169,270.00 Share **Category**	Flat Stone 1,800.00 0.00000178 **low**

Judging from the common characteristics that include the large number of small and medium scale industries (SMEs) than large-scale industry as well as by the many types of natural stone industry in accordance with the types of natural stone in each the natural stone industry is a fragmented industry. Based on CR4 value is equal to 0, then it can be identified that the structure of the stone plate industrial market is perfectly competitive market. However, when seen from the characteristics and features of the company in the form of a large entry barriers in terms of capital, labor and experience, then the stone plate industry has a monopolistic market structure where there is a high barrier to entry however free to exit. So the company out of the market do not affect prices.

Value Chain Analysis

Identification of activities in the value chain activities are divided into two categories namely primary activities and support activities. The main activities in the value chain analysis consists of inbound logistics, operations, outbound logistics, sales, and service. While supporting activities consist of the company's infrastructure, human resources, technology development and supply of raw materials.

In the process of identifying existing activities on the CV Grace, the author divides into several categories as the main activity starting from the process of obtaining raw materials, processing of raw materials to finished goods, the sales process, as well as the distribution of products and services to customers. While the category of supporting activities in the company CV Rahmat includes the company's infrastructure development, human resource management, to the provision of raw materials and production equipment. While Marble Industries has almost the same activities.
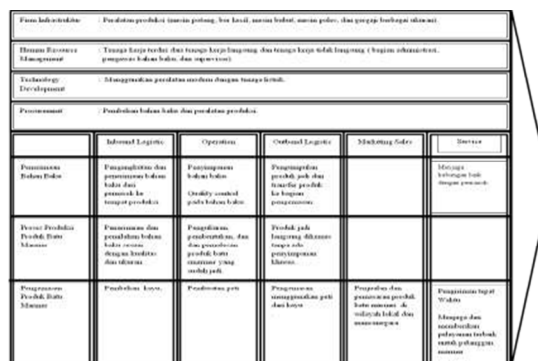
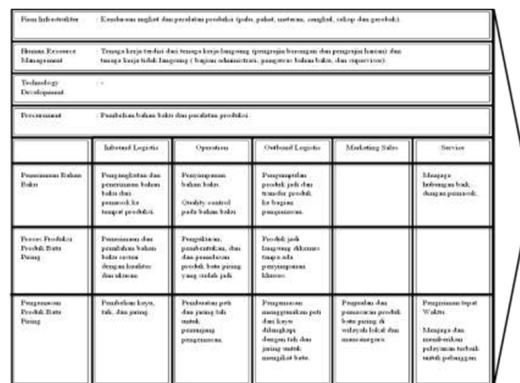**Figure 1. Value Chain Structure of Flat Stone Industry**

Figure 2. Value Chain Structure of Marble Stone

Table 2. Cost Composition on Each Value Activity in Flat Stone Industry

No.	Subject	Cost per 285 meter (Rp)
	Primary Activities	
1	Inbound Logistics Checking Material Cost	150,000
2	Operation packaging Cost Case packaging Net string	 3,000,000 3,500,000 1,000,000
3	outbound Logistics fuel Cost Shipping Cost Jember- FOB shipping Surabaya Surabaya-Japan	 2,000,000 - 12,000,000 9,450,000
4	Marketing and Sales Fee Informal Promoters (5%)	2,483,561
5	Services Consumer Service Cost	2,700,000
Total Cost		**36,283,561**
	Secondary Activities	
1	Procurement equipment Cost	500,000
2	Technology Development	-
3	Human Resource Management Secretary Wage Manager Wage Craftsman Wage (10,000 / meter2) consumption Support Health and Safety Support	 500,000 1,250,000 2,850,000 1,400,000 325,000
4	Firm Infrastructure Disposal Tax (1%) Depreciation Cost of Vehicle	 496.712 833.333
Total Cost		**8,155,045**

Source: Rahmat CV 2018, processed by journalist

Table 3. Cost Driver on Each Value Activity in Production 285 m^2

No.	Activity	Cost drivers	Value
1	Freight-in material	Number of material	7,000,000
2	Controlling	Working hours	50,000
3	Material sorting	Working hours	100,000
4	Stock holding cost	Number of stock	-
5	Selling	Number of orders	49,671,225
6	Packaging	Number of shipping	6,500,000
7	Shipping	Number of shipping	12,000,000
8	Processing order	Number of orders	-
9	Complain handling service	Number of consumer complaints	2,700,000
10	Informal promotion	Number of new consumer	2,483,561
11	Controlling the quality product	Checking hours	150,000

Source: Rahmat CV 2018, processed by journalist

Table 4. Activity Classification

No.	Activity	RVA	BVA	NVA
1	Freight-in material		7,000,000	
2	Controlling		50,000	
3	Material sorting	100,000		
4	Stock holding cost			-
5	Selling	49,671,225		
6	Packaging	6,500,000		
7	Shipping	12,000,000		
8	Processing order	-		
9	Complain handling service	2,700,000		
10	Informal promotion	2,483,561		
11	Controlling the quality product			150,000
Total Percentage		**73,454,786 (91%)**	**7,050,000 (9%)**	**150,000 (0%)**

Source: Rahmat CV 2018, processed by journalist

Activities on the CV Rahmat every 285 square meters of production of stone plates asymmetry is 91% including the activities of the Real Value Added, ie activities that provide added value to customers, amounting to 9% including the activities of Bussiness Value Added, the activity that adds value to the production process and 0 % including non-value added activities, ie activities that do not give added value for customers and the company. Through the analysis of the classification of the activity, it can be concluded that the activities undertaken Rahmat CV has been effective and efficient because it does not have the Non Value Added activities.

Table 5. Cost Composition on Each Value Activity in Marble Stone Industry

No.	Subject	Production cost per 300 meters
**Primary activities**		
1	Inbound logistics Checking material cost	-
2	Operation Packaging cost	9,000,000
3	Outbound logistics Holding cost Fuel cost Shipping cost Tulungagung - jakarta expedition Fob jakarta - europe	1,000,000 1,250,000 1,750,000 -
4	Marketing and sales Fee informal promoters (5%)	-
5	Services Complaint handling service	-
Total cost		**13,000,000**
**Secondary activities**		
1	Procurement Equipment cost	26 Million
2	Technology development	-
3	Human resource management secretary wage Manager wage **Craftsman wage (per day rp 90.000, -)** **Support cost**	 350,000 900,000 2,700,000 2,300,000
4	Firm infrastructure disposal Tax (1%) depreciation cost of machine Depreciation cost of vehicle	 496,712 2,000,000 883,333
Total cost		**11,890,045**

Source: Home Industry Tulunggagung 2018, processed by journalist

Table 6. Cost Driver on Each Value Activities in Production 300 m²

No.	Activity	Cost drivers	Value
1	Freight-in material	Number of material	24,000,000
2	Controlling	Working hours	-
3	Material sorting	Working hours	-
4	Stock holding cost	Number of stock	1,000,000
5	Selling	Number of orders	90,000,000
6	Packaging	Number of shipping	9,000,000
7	Shipping	Number of shipping	3,000,000
8	Processing order	Number of orders	-

No.	Activity	Cost drivers	Value
9	Complain handling service	Number of consumer complaints	-
10	Informal promotion	Number of new consumer	-
11	Controlling the quality product	Checking hours	-

Source: Home Industry Tulunggagung 2018, processed by journalist

Table 7. Activity Classification

No.	Activity	RVA	BVA	NVA
1	Freight-in material		24,000,000	
2	Controlling		-	
3	Material sorting	-		
4	Stock holding cost			1,000,000
5	Selling	90,000,000		
6	Packaging	9,000,000		
7	Shipping	3,000,000		
8	Processing order	-		
9	Complain handling service	-		
10	Informal promotion	-		
11	Controlling the quality product			-
Total Percentage		**103 million (80%)**	**24,000,000 (19%)**	**1,000,000 (1%)**

Source: Rahmat CV 2018, processed by journalist

Activities at Home Industry Tulungagung to 300 square meters production of marble stone is 80% including the activities of the Real Value Added, ie activities that provide added value to the customer, at 19%, including the activity of Business Value Added, the activity that adds value to the production process and 1 % including non-value added activities, ie activities that do not add value for the customer and the company. Through the analysis of the classification of the activity, it can be concluded that the activities undertaken Home Industry Tulungagung yet effective and efficient because it has a 1% Non Value Added activities.

Based on the above analysis, the authors formulate a strategy based on two main categories that is based on the strategy of structural and generic strategy. If seen from industry structure, plate stone industry has fragmented monopolistic market structures. So that the structural strategy that can be done is to act cooperatively with the natural stone industry in collaboration with others to form a new product innovation and minimize fragmentation of the market. Examples of product innovation that can be done is to make the tiles or wall hangings with several combinations of different rock types such as a mixture of stone and marble plates. Other suitable strategy applied to the monopolistic structure is to determine the target marketing is focused on the middle and upper class consumers and foreign community.

Based on the results of the analysis of the generic strategy is to focus on customer service differentiation of services to build a good image of the company, retain old customers (customers) and to support promotional activities engineering word of mouth through the customer testimonials to potential new customers. The action is also applied in the

selection of the focus of market segmentation is the burgeoning middle class society and the international market have bid a higher price. Event services differentiation consumers will reduce the need for a low cost position.

When costumers have added value is dominant, it is important to make the selection of buyers and implementing purchasing strategies, the most important point in the selection of the buyer is to improve services and good relations with customers to reduce the bargaining power of buyers and expand the marketing area for collect new customers. While purchasing strategy includes the purchase of raw materials at different suppliers and implement standardization of raw materials to avoid switching costs and reduce the bargaining power of suppliers.

4. Conclusion

Decreased productivity Jember stone handicrafts plate caused by the decline in domestic and international demand. The drop in demand caused by inefficient production activities as well as the lack of ability to compete, resulting in many new companies went bankrupt. Productivity can be increased again through the implementation of competitive strategies are formulated based on the analysis of Value Chain. The strategy takes the company a handicraft Jember plate is divided into 2 formulation of strategies: (1) structural strategy that determines the position of the company in the market in which the market is monopolistic fragmented stone plate so cooperative strategies can be utilized for this type of market then, (2) the generic strategy is the company's internal strategy includes cost advantage, differentiation and focus on value added activities of consumers where the most appropriate strategy is to add activities that can increase the value added from the consumer side.

Then the strategy of the buyers covering the buyer selection strategy through targeted marketing in order to eficiency promotion costs and reduce the bargaining power of customers and through purchasing strategies to reduce the bargaining suppliers. Of the existing overall strategy, in cooperation with similar companies to acquire innovative new products and increase customer service activities aimed to strengthen the differentiation and increase range of promotional products. differentiation and focus on value added activities of consumers where the most appropriate strategy is to add activities that can increase the value added from the consumer side.

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References

[1] LT Astutik, "*Mapping the Distribution Pattern Gumuk Method Using Geographic Information Systems in Jember,*" Jember, 2015.

[2] HA Wibowo, Suhartono and S. Wahyu, "*Natural Stone Product Innovation in Sales Volume Increasing Effort In Jember Eternal Superindo Cv (Innovation Products of Natural Stone in an Effort To Increase Sales Volume at CV Superindo Eternal Jember),*" vol. 1, 2013.

[3] I. Kritzinger, E. Lotze and M. Jooste, "Stone hardening and broken stones in Japanese plums (Prunus salicina Lindl.) Evaluated by means of computed tomography scans," *Scientia Horticulturae*, pp. 1-9, 2016.

[4] ME Porter, *Competitive Advantage: Creating and Sustaining Superior Performance*, New York: The Free Press, 1985.

[5] O. Wisdaningrum, "Value Chain Analysis (Value Chain) in the Corporate Internal Environment," in *ANALYSIS*, 2013, p. 40-48.

[6] ME Porter, *Competitive Strategy: Techniques Analyzing Industries and Competitors*, Jakarta: Erland, 1980.

[7] L. Arsyad and SE Kusuma, "*Industrial Economics Structural Approaches, Behavior, and Performance,*" in UPP STIM YKPN, Yogyakarta, 2014.

[8] BK Jember, "*Jember Regency in number in 2015*," Jember, Jember BPS, 2016.