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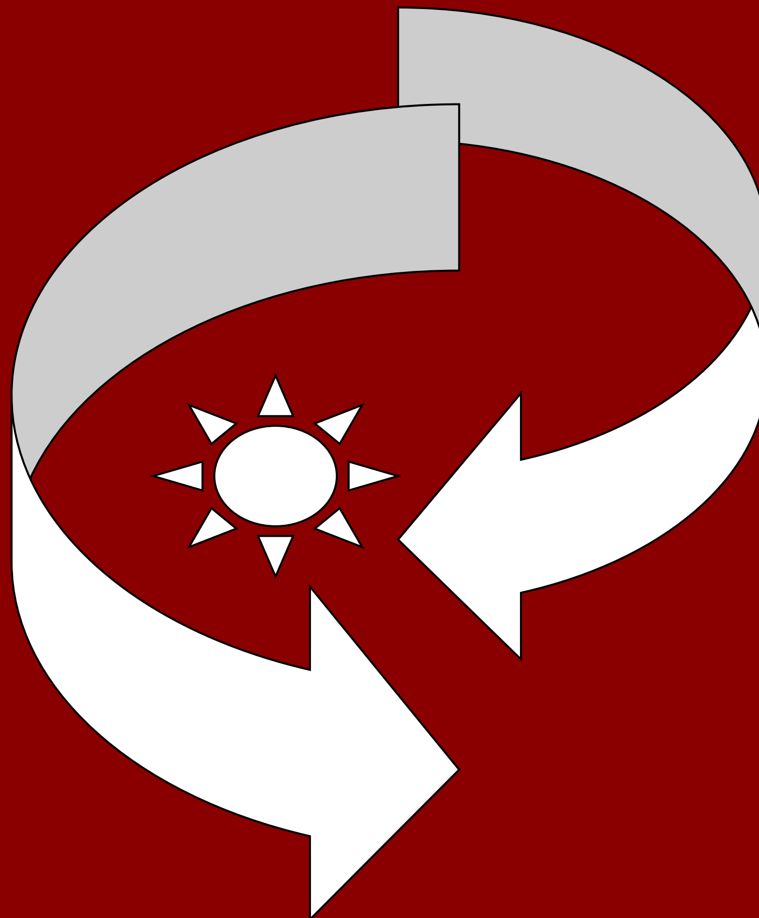

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Jurnal
Perspektif Pembiayaan dan Pembangunan Daerah

(Journal of Perspectives of Financing and Regional Development)

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Editor's Note

On its sixth year (Volume. 6, Number. 1), the Journal of Perspectives on Financing and Regional Development has two fundamental changes. First, this journal was originally published four times a year, and now has been published six times a year. This is based on consideration of the increasing interest of researchers / authors to publish their articles on this journal. Second, the journal has been nationally accredited with SINTA (Science and Technology Index) score of S4 which is valid from 9 July 2018 – 8 July 2023 based on the Decree of the Director General of Development and Research Enhancement, Ministry of Research, Technology & Higher Education of the Republic of Indonesia, Number 21/E/KTP/2018 concerning the Ranking of Scientific Journal.

In Vol. 6 number 4, 2018 is presented twelve articles that come from Universitas Jambi (Indonesia), Universitas Gadjah Mada (Indonesia), Universitas Sumatera Utara (Indonesia), Universitas Mulawarman (Indonesia), University of Huddersfield (United Kingdom), Victor Slăvescu" Centre for Financial and Monetary Research of The Romanian Academy (Romania), University of Kigali (Rwanda), Botho University (Botswana), Academic City College (Ghana), CASS Europe Institute of Management (Ghana), Federal University Oye-Ekiti (Nigeria), Universidad de Guadalajara (México)

Hopefully in the next issue can be presented articles with issues and from more diverse circles.

Happy joy reading

Editorial

Policy recommendations for current relationship between electronic commerce and Mexican SMEs: Theoretical analysis under the vision based on the industry

José G. Vargas-Hernández*; David Iván Pérez Rosas

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Abstract
The objective of this essay is to present a different approach on the Porter's five forces model and to make the reader aware of the topic of industrial competence and e-commerce in Mexico. In this essay, the method used is the analytic descriptive. First, the current situation in which SMEs in Mexico are related to e-commerce is exposed, since this last one provides a significant opportunity for the improvement of business results for this class of companies. In addition, a review of the empirical literature is provided in which models that allow measuring the degree of adoption of e-commerce by SMEs are exposed, as well as to understand the behavior of these economic agents with the e-commerce worldwide as in territory Mexican. Finally, as a result, an analysis is carried out under the model of the Porter pyramid in relation to Mexican SMEs and e-commerce.

Keywords: *e-commerce, SMEs, Mexico*

JEL Classification: L81, O32, M31.

INTRODUCTION

Information and communication technologies have allowed many new activities for society, both for those individuals who consume and those who produce and market through these tools, leading to generate new consumption habits, production and new distribution channels. E-commerce is not new, it has been in Mexico for a long time and with very attractive annual growth percentages. It is known that micro and small businesses employ the largest number of the economically active population, and its importance in the domestic economy is not questioned. Based on this, it is important to know how they operate, their performance and the areas of opportunity that could be used by entrepreneurs to have better results in the market.

One of those opportunities that any company, regardless of its size and budget, can access is electronic commerce, since this resource can be a viable strategy for that performance improvement that competitive organizations seek since, considering the intense competition environment. In free market economies, smaller companies have to find a way to compete with their peers and remain in the market. In the case of Mexico, the National Institute of Statistics and Geography (INEGI) in its last census (2014), provides relevant information about companies that take advantage of technological and digital resources for the commercialization of goods and services. The organization shows that the participation of small and medium enterprises (SMEs) is low, especially the

participation of the smallest, making clear the great opportunity they have to exploit this form of purchase and sale.

E-commerce is not a disruptive innovation, but a successful way to do business today, and if a small company takes advantage of what technology and the market offers and demands. It can promote solutions that meet the needs of its target market, much more efficient and effective, allowing to potentiate performance and become more competitive in the market.

In general terms, e-commerce in Mexican territory has a considerable growth, which has allowed it to gradually take on importance both among businessmen and consumers and in the guild of researchers in aspects of strategic management. Therefore, the purpose of this research work is focused on the analysis and evaluation of the influence of the e-commerce strategy on the performance of SMEs under the question of the ways in which this strategy can lead to an improvement in the performance of SMEs.

Since the sale and consumption of goods and services through the Internet and electronic commerce has not stopped being an object of interest for companies, regardless of their economic activity, size and target market. As this distribution channel, supported by information and communication technologies (ICTs), continues to be considered and used by society as a whole, that is, by consumers and government, as well as by companies, more confidence and relevance will be around.

In the Mexican scenario the circumstance between electronic commerce and SMEs is good, but it could be significantly improved since the National Institute of Statistics and Geography (INEGI) in the "2014 Economic Census" (Table 1), provided the information based on a sample of 4,211,231 companies of all economic activities in Mexico of which 794,234 (18.86%) have Internet service, and of that amount only 19% bought or sold goods or services online.

Table 1. Percentages of the purchase and sale of companies by size in relation to total companies

Size of the economic unit (Denomination)	Economic units	Counting with internet service		Selling-buying of products and services		Percentage of business that buy and sell services and products by size (%)
		Absolute	percentage (%)	Absolute	percentage (%)	
1 to 10 persons	4,020,022	635,442	15.81	111,459	17.54	73.84
11 to 50 persons	150,821	121,570	80.61	28,308	23.29	18.75
51 to 250 persons	32,649	29,920	91.64	8,773	29.32	5.81
251 and more persons	7,739	7,302	94.35	2,398	32.84	1.59

Source: Own elaboration based on the "2014 Economic Census" of INEGI.

The companies that stand out in the transactions through the internet in a positive way are the medium ones (51 to 250 employees) and the large ones (251 or more workers) with 29.32% and 32.84% respectively. Considering this, medium-sized companies represent 5.81% and large companies only 1.59% of the 150,938 companies that made online purchase-sale, while micro companies (1 to 10 employees) and small businesses (11 to 50 employees) that also performed such transactions represent 73.84% and 18.75% respectively. These numbers show a positive relationship in terms of the number of employees and marketing through the Internet, that is, the larger the company in terms of employees, the more likely they are to market through the Internet and vice versa. great opportunity for smaller companies to adapt and take advantage of the opportunities that electronic commerce can provide.

The Internet Association (2017) states in its annual study that in 2015 to 2016 there was an increase of 28.3% in relation to the market value of electronic commerce, that is, in 2015 the market was worth $ 257.09 billion and in 2016 it was worth $ 329.85 one billion. Currently, 64% of companies that sell online have a physical store, and it is through this channel that 74% of their sales come from on average and only 13% intend to close them and the three states of Mexico with the most online buyers are Mexico City, State of Mexico and State of Jalisco with. 22%, 13% and 9%, respectively.

The large number of small and medium enterprises that exist in Mexico, can consider electronic commerce as an important opportunity for growth and as a competitive marketing strategy valuable (Ibarra 2014). Electronic commerce has opened a door of new opportunities for SMEs to access international markets through exports, find new sources of demand, investment and innovation options, product diversification and greater sales and growth, all through of strategies based on information and communication technologies. Beyond this optimistic image, there are challenges, especially for SMEs in developing countries like Mexico.

SMEs, due to the competitive environment in which they find themselves, do not perform sufficiently well to meet their objectives, such as growth, innovation, good salaries for their workers, as well as barriers to establishing an international online presence and internationalization of the company, often limit companies to settle with the domestic market. This is important to consider, because electronic commerce offers a great potential for multiple opportunities for companies, since these tools are accessible and can be appropriate to any budget is bulky or limited.

However, there are companies that do not use electronic commerce as a means of commercialization. One of the main causes being the lack of knowledge that entrepreneurs have about the benefits they can obtain with its implementation, including having the necessary technological infrastructure such as computation, software and Internet connection, tools and resources on which electronic commerce is developed. There is a barrier of distrust towards its benefits, in addition to the lack of trained personnel and the rejection of collaboration with other companies. That is, e-commerce is a distribution strategy that is not appreciated or exploited as a factor of potentization, despite the fact that companies have a digital presence such as having a website, making purchases and sales via the Internet, advertising, as well as using banking electronics.

E-commerce is not a trend to the future or a disruptive innovation, not even a fad. It is a way in which successful businesses are made today, and companies that still do not adapt to this strategy and that this can be very useful for their business and competitiveness goals, they need to adapt it to their needs and capabilities.

REVIEW OF THE EMPIRICAL LITERATURE

E-commerce and SMEs in the world

Since the sale and consumption of goods and services through the Internet, electronic commerce has not stopped being an object of interest for companies, regardless of their economic activity, size and target market. As this distribution channel, supported by information and communication technologies, continues to be considered and used by society as a whole, that is, both by consumers and government, as well as by companies, more confidence and relevance will be around it.

The importance for companies in improving performance has allowed electronic commerce to be a viable option to achieve considerable results such as reducing costs, having greater commercial participation in the domestic market and internationalization

through export to cross-border markets, i.e., higher sales, product diversification, investment and growth.

Much has been said about the role of competitive advantage in companies as a fundamental factor in the development and growth of companies. However, with the great steps that have been taken and achieved with information technologies in terms of process optimization, reduction of transaction and information costs, to mention just a few examples, through these tools, large successful businesses, and competitive strengths for companies that adapt and take advantage of ICTs, and innovative solutions for the consumer.

Not all companies take advantage of these technological options to achieve better business results or do not take advantage of them as they should. Hassen and Svensson, (2014) addressed this issue and it was in relation to the level of adoption of ICTs and electronic commerce by small businesses in Ethiopia and how these aspects relate to their growth emphasizing on the direct relationship between the size of the company and the use of electronic commerce as a strategic resource for growth. These two authors, based on two models, the model presented by Taylor & Murphy (2004) adoption ladder model adapted from Cisco-led Information Edge Partnership that can be seen in Figure 1 and the transport model of Levy & Powell (2002) to understand the degrees of adoption and increase. An example of this last model is seen in Figure 2. These models show different aspects of the use of ICTs by companies.

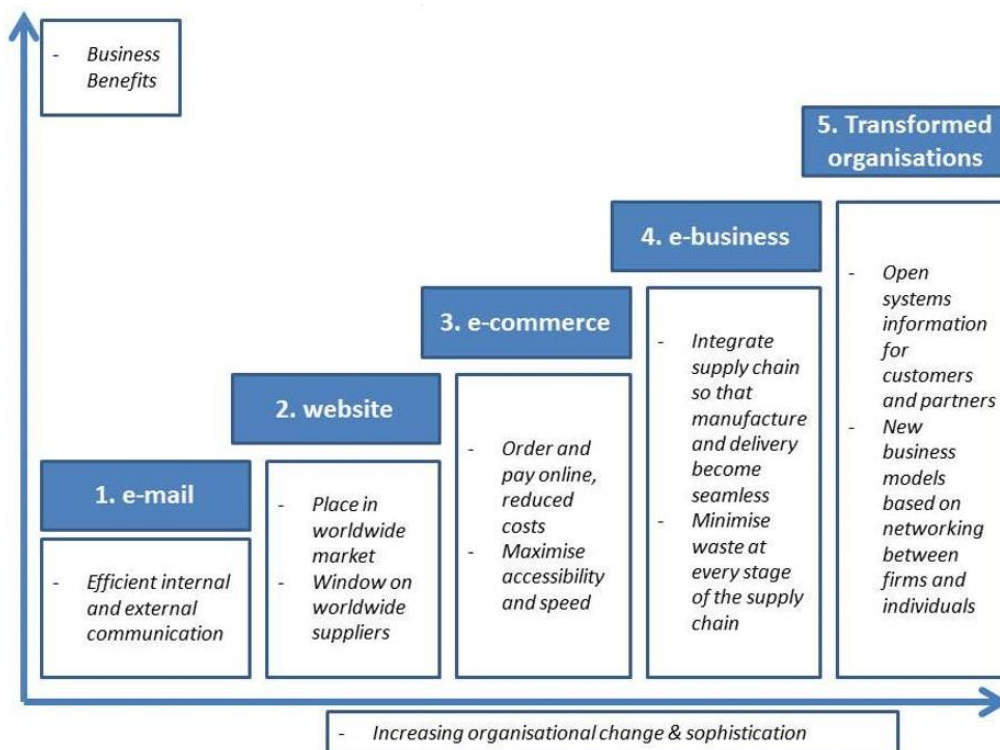

Figure 1. The adoption ladder
Source: Taylor & Murphy (2004, p.283)

The adoption ladder model has been used to analyze the use and role of ICT, focusing on electronic commerce, and the transporter model has been used to analyze the commercial value of ICTs, especially the business value of commerce. In the Taylor & Murphy presented model, the adoption ladder model, as shown in Figure 1, describes the evolution of business organizations in the use of e-commerce and the Internet as a means

to achieve their business development objective and the maximization of benefits by presenting the level of acceptance as a ladder through which organizations could grow.

According to the model, it generally begins with the use of the Internet only for communication purposes through e-mail and then to develop the website to be used as an introductory "window" to the global market; Then, as the level of use grows up the electronic commerce ladder, the real transactions of taking orders, buying, selling and paying through the Internet arrive. See figure 1 below.

The second model is transporter, the model of Levy & Powell (2002). In this it is perceived the adoption of small businesses to the Internet based on the value of their owners for the use of the Internet and their plans for business growth. It represents this in a two-by-two matrix, where the combination of higher and lower levels of owner business values on the one hand and the planning or not of business growth on the other hand to give four categories of acceptance levels.

Business Value of the Internet		Not Planed	Planed
	High	**Business Opportunity** • Some perceived benefits • Owner has knowledge of IT value to the business • Some competitive pressure	**Business Development** • High perceived benefits • Good Knowledge of IT opportunities • High competitive pressure
	Low	• No perceived benefit • Little or no knowledge of IT value to the business • No competitive pressure **Brochureware**	• Some perceived benefits • Owner has knowledge of IT value to the business • No Competitive pressure **Business Support**
		Business Growth	

Figure 2. Patterns of Internet adoption segmented in SMEs.
Source: Levy & Powell (2002, p. 519)

Hassen and Svensson (2014) used the models previously explained to answer their doubts and concluded that there is a minimum correlation between the actual level reached of the use of electronic commerce of the companies evaluated by the ladder model; and business growth and value in relation to the planning proven by the carrier model. This is because there was hardly an association between the level of achievement in the use of electronic commerce and the plans of the owners based on the growth and value of the business.

However, the shortage of an infrastructure and qualified personnel together with limitations to be able to carry out the strategy due to the government policy plus changes in the rules of the game in the banking sector, is the basis of why electronic commerce in a less developed country does not It is something serious. However, entrepreneurs are certain of the opportunities that electronic commerce could provide to their business objectives.

The adaptability of ICTs is accessible to any budget, whether bulky or limited, but that does not lead to small companies adopting them and benefiting from their scope and advantages. The lag, distrust, conformism, ignorance or lack of skills on the part of some entrepreneurs in relation to the strategy and the use of the technologies on which it is based, can significantly damage their market positioning and the development of

competitive advantage. But, there may also be alien aspects that limit the opportunities that electronic commerce can provide to companies which are: limited institutions, outdated, or in the worst case, obsolete, damaging the improvement of conditions and options strategies, for both consumers as well as for entrepreneurs and their companies, that is, institutional barriers that instead of encouraging the free market, harm it.

In order to have a better understanding of the aspects that lead companies to adopt electronic commerce, we turn to the work of Deltoro, et al. (2012). The researchers exposed the determinants and consequences of the adoption of electronic commerce focused on the final consumer market, i.e. business-to-consumer (B2C). The interest sought by the authors in their work was to analyze the factors that influence the strategic decision to create virtual stores as an alternative to the physical store and its impact on business results among the main retailers in the United Kingdom, France and Spain. The conclusion was that the adoption of electronic commerce by the retailer is affected by the size of the company, the type of good sold and the country where the establishment is located.

However, it is important to point out that the adoption of this strategy is very influenced by the size of the companies as the authors mention it, but also the disparity in relation to the benefits and profitability on the part of those who use electronic commerce compared to those who have not done so is significant, since the simple fact of having a web page opens the doors to be able to market in the domestic market, that is, in other states, or in a foreign one depending on the capabilities and resources of the company. The adoption of electronic commerce as an alternative of distribution to the usual methods is a complex phenomenon that is influenced by different interrelated factors.

Therefore, the competitive environment, the type of product distributed and the size of the organization, as mentioned above, condition the activity of the companies. In the case of the work of Del Toro, et al. (2012) to retailers, and can significantly influence their decision to adopt the Internet and ICTs as tools for a distribution channel different from the traditional ones.

In the work of Sin, et al. (2016), they addressed the influence of relative advantage and competitive pressure as key factors considered in relation to the adoption of electronic commerce by SMEs in the 4 states north of Malaysia. These authors presented in their work a literature review of similar research applied in other parts of the world such as Singapore and Brunei. In those countries, the relationship of the key factor of relative advantage and adoption was trivial or superfluous, while in countries such as Australia and Malaysia was positive and significant. In the case of the key factor of competitive pressure and adoption, the authors stated that in Taiwan there is an insignificant relationship while in Thailand and Saudi Arabia there is a very important positive relationship. In the case of Malasya, the researchers concluded that there is a significant influence between the two key variables and adoption.

In the globalized economy in which we live today, it can be seen that the free market generates intense competition pressure, as well as interdependence either between nations or companies leading to the point of creating commercial treaties as to form clusters and strategic alliances to be able to remain in the market through joint strategies and acting collaboratively. In the scenario of SMEs in a free market economy, this intense pressure of competition leads them to adopt efficient and effective business applications. These are such as electronic commerce since, considering the benefits in relation to costs, scope, communication and information that it provides.

Both the technologies in which electronic commerce is recharged and the same strategic option, have allowed the development of this way of marketing different from the usual. Savrul (2014) put SMEs in the middle of a global scenario in which they analyzed the importance and opportunities that these companies have for the economies in the world taking into account new business environments, comparisons between SMEs and large companies and the use of E-commerce, placing special emphasis on the influence of the globalization of economies on the behavior of SMEs and the limitations and opportunities of electronic commerce that SMEs face and take advantage of respectively. The author states that SMEs are adapting to ICTs and electronic commerce to be able to move forward, that is, to obtain greater benefits such as new forms of value creation, business models, models of products and services, expansion to new markets, among other things.

However, not everything is easy to carry out the implementation of the strategy because there are limitations such as logistics problems and payment methods, promotion and marketing strategies, reliability and security checks, legal aspects, as well as aspects related to biased perceptions such as ignorance and distrust of business models, accessibility and opportunities that ICTs that an SME could take advantage of. Of course, these aspects vary between countries since in some there will be adequate institutions for the development of commerce via the Internet while in others they would still be in process, just to mention an example.

As explained by Peng (2015), the same characteristics of SMEs explain the reason for the importance they have in the global economy. Being companies with less than 500 employees in the United States, or less than 250 employees in the European Union and in Mexico, according to INEGI (2014), besides generating 60% or 90% of the jobs depending on the country and representing the 95% of the existing companies in the world, it is understood the power not of market, but of relevance in the economies in the world that the PYMES own and the opportunity of the accessibility and use of the electronic trade could benefit of significant way to the domestic market as to the global.

Electronic commerce in Mexico

Within the Mexican scenario, the situation between electronic commerce and small businesses is growing and favorable, but it could be better. Something that characterizes a developing country like Mexico is that the adoptions of technological developments and innovations that arise in the world is late compared to the developed countries who are, generally, those who develop the disruptive technology and apply them in their own market.

Recently, work has been done such as those of Moheno, et al. (2011) and Figueroa et al. (2013) in relation to the use of electronic commerce and companies in Mexican territory. Both projects presented considerable cases in relation to this phenomenon of study. Moheno, et al. (2011) focused on the analysis of electronic commerce as a marketing strategy considering industrial exporting companies in the city of Villahermosa, Tabasco. They concluded that these companies do not use electronic commerce as a means of marketing, being one of the main causes the lack of knowledge that entrepreneurs have about the benefits that can be obtained with their implementation, including having the necessary technological infrastructure such as computer equipment, software and Internet connection, tools and resources on which electronic commerce is developed.

There is a barrier of distrust towards its benefits, in addition to the lack of trained personnel and the rejection of collaboration with other companies. It is not necessary to point out electronic commerce as the only alternative to export goods that can be

considered by companies so that they can increase their presence in the international market. However, it represents an opportunity that, if used properly, can generate great benefits for companies who seek to place their products in foreign markets. What must be considered is that little by little trust and consideration of ICTs and electronic commerce as tools for product placement and process optimization is strengthened in Mexican companies that are not large. In addition, little by little they are only considered as sales and communication alternatives to strategic factors for the objectives of small and medium organizations.

In the case of the work of Figueroa, et al. (2013), they analyzed in their work the degree of application of the activities and tools for the development of electronic commerce in the micro, small and medium enterprises of the commercial sector in the State of Durango, with the purpose of being able to determine if the trade electronic can be considered as a factor of success in the development of these companies. They came to the conclusion that e-commerce is little used by micro, small and medium enterprises (MIPyMES) of Durango. That is, it is a distribution strategy that is not appreciated as a growth factor by them, even though these companies already have a digital presence such as having a website, making purchases and sales via the Internet, advertising, as well as using electronic banking.

However, it should be noted that, for medium-sized companies, e-commerce is perceived as a competitive advantage, since medium-sized businesses believe that the application of technologies can make their organizations improve their processes and have better results. This shows that the bigger a company is, the more likely it is that it will apply and take advantage of new ICTs such as electronic commerce, as the "2014 economic census" of the INEGI (2014) puts it in figures and as already stated above: The larger the company in terms of employees, the more likely they are to market via the Internet and vice versa.

Current relationship between electronic commerce and Mexican SMEs.

To begin to analyze how electronic commerce could represent a viable strategy for the business objectives of SMEs, it must first be known what is called "electronic commerce". Electronic commerce, also known as e-commerce, is an interaction mechanism with a technological base and information among economic agents that allows the exchange of goods and services in an indirect and non-face-to-face manner.

The Organization for Economic Cooperation and Development (OECD) has its own definition for this strategy. For the organization, electronic commerce deals with transactions of purchase and sale of tangible and intangible products, as well as services, which is carried out through computer networks and through specific methods specially designed for the purpose of receiving or placing orders without the need for deliveries and payments to be made through this channel (OECD, 2016)?

It should be noted that there are fundamental aspects for electronic commerce to operate operationally: Internet, electronic devices and available information. This tool and strategic option for business is not new, it has been used for some time by lucrative and non-profit organizations, governments and even among people who buy and sell informally in the virtual space we know as the Internet.

Considering the above, it cannot be affirmed that electronic commerce is used in a general way since, distrust and ignorance on the part of some individuals in relation to this way of buying and selling, makes those agents who do not consider electronic commerce as an option of marketing and service support, as well as a means of acquiring goods for the coverage of needs. They are in an unfavorable position in the market as a producer, trader or consumer.

When a new technology that has application in the business world emerges, the market is initially altered, but eventually it adapts to the circumstances, changing the way in which business can be done. In the case of electronic commerce, the way of marketing changed, through virtual platforms and information and communication technologies (ICTs), but also production, that is, through ICTs and electronic commerce can be elaborated intangible products and services that can be distributed through platforms and the Internet. These alterations in the market are very attractive to study under the scientific approach because in doing so, it leads to being able to understand different behaviors, performances and circumstances to the traditional organizations and generate new scientific knowledge.

The importance for companies in improving performance and the need to be more competitive, has allowed electronic commerce to be a viable option to achieve positive results such as export and entry into cross-border markets, i.e., internationalization, higher sales, diversification of products, innovation and investment options, expand positioning and promote growth in the national market. There are still companies that currently have a poor participation in the digital world and could improve their performance if they adapt e-commerce as a viable strategic option for the distribution of their goods.

While some companies such as those that produce footwear, apparel and clothing accessories (among other items as well) already sell on the internet in a normal way through virtual stores and marketplaces, there are others that are not the case, as mentioned above, in where SMEs, in general terms, are characterized by their lag in relation to electronic commerce. Due to what has already been mentioned, this lack of adaptation to electronic commerce in the distribution proposal represents an area of opportunity that you could still take advantage of.

Analysis from the point of view based on the industry

The model of the five forces of Porter (2008) provides a broad and interesting panorama about the scenario in which the companies are or where the firm of an entrepreneur will be interested in venturing into the world of business related in the electronic trade.

Rivalry between competitors

Since there are many small companies with homogeneous products, they make a market of free competition where only the most competitive or that manages adequate finances can be sustained in the market. It should be noted that each year there are more SMEs that use electronic commerce as mentioned in the study done by the Internet Association (2017), however, some use them for aspects of competitive pressure, that is, simply because others already are. Using, instead of going to the strategic of electronic commerce as a strategic option analyzed marketing.

The fact that this strategy serves some SMEs, does not mean that they work for others because everything will be a function of their target market, product, but above all of an in-depth analysis on the relative efficiency of the strategy with the company in question.

Threat of potential competitors entering the market

The fact that ICTs and e-commerce are accessible tools for any budget be it small as in the case of SMEs, or large, as in the case of multinationals, generate motivation in entrepreneurship based on the digital economy and in technology. That is, in the creation of new companies that considers electronic commerce as an indisputable factor of value proposition and the main means of marketing.

In relation to the trend of adoption by society to electronic personal devices due to the accessibility of the Internet and the increasingly competitive market of products such as smartphones and laptops, the potential that electronic commerce can generate for the Internet is clear, the development of new companies, as well as for competition through this distribution channel.

Power of negotiation with suppliers

Due to the amount of options available in the market and the economic accessibility that characterizes the tools that allow Internet commerce focused on SMEs, the bargaining power of the suppliers of these tools is not high since there is no market concentration. That is, SMEs can migrate from one supplier to another, including combining services between companies that provide different solutions in order to boost digital commerce together.

Buying power of buyers

Due to the growth trend of Mexican society to the adoption and use of the Internet and electronic devices, consumption and online sales increase, favoring greater demand for tangible and intangible goods and services by consumers and businesses. In the case of consumers, over time they have become more demanding in the sense that they tend to search between virtual sales platforms, including physical stores, products at a cheaper price and that provide them with a higher level of satisfaction. So, everything will be a function of the scarcity or level of difficulty of finding goods that are acquired via the Internet with the bargaining power of consumers.

Threat of substitutes

In a competitive market where SMEs are usually found due to their natural business characteristics, there are high levels of demand elasticity due to the fact that homogeneous goods are offered in many sectors. The creation of competitive advantage of SMEs can lead to both direct and indirect competition, that is, companies that provide substitute products, allow SMEs to be more protected and even, at best, have a market captive applying. E-commerce and SMEs provide a way to market and consume goods that are not traditional. Although e-commerce is no longer new, for many companies it is, and those that do not use this strategy could be losing customers because there will be competition with "substitute" sales channels such as e-commerce.

CONCLUSSIONS AND RECOMMENDATIONS

Conclusions

Considering the foregoing, Mexican companies that have not yet adapted to electronic commerce still has a great opportunity to take advantage of the potential that this strategic sales option can offer. However, that relative opportunity will not last forever, because the more time passes, the opportunity gap will be smaller, at the point that they have to adapt to electronic commerce undoubtedly due to competitive pressure and no longer as a possible competitive advantage.

Policy recommendations

Among other implications of the analysis of the possibilities and potentials that electronic commerce offers and that require the design and implementation of public policies, some of them are delimited.

Public policies that favor the implementation of electronic commerce in micro, small and medium enterprises and that lead to tangible growth and development opportunities must be promoted at all levels of government. The existing institutions in

Mexico offer some very general guidelines and mechanisms that encourage technology-based entrepreneurs and micro, small and medium enterprises. The support to entrepreneurs and entrepreneurs to develop effective and efficient platforms is one of the important decisions to potentiate the growth of micro, small and medium enterprises.

The new public policies on electronic commerce should be aligned to create and institutionalize mechanisms that develop specialized talent, such as the reform of plans and study programs to include digital skills and abilities, as well as their hiring to support micro, small and medium-sized companies. The institutions offer limited training programs focused on the creation of exclusive e-commerce businesses that promote an increase in the commercial flow of MSMEs to global markets.

The regulatory institutions of electronic commerce in Mexico need to define their functions so that Mexican producers and consumers can carry out commercial transactions and promote the Mexican offer. These regulations of the agencies in charge must be functional to be sufficiently attractive to foreign markets through electronic commerce mechanisms.

One of the implications in terms of public policies is to assess the impact that electronic commerce has on the creation of digital ecosystem environments as an opportunity to increase and improve quality in international interactions. It is essential to accelerate the environments of digital ecosystems by creating robust platforms at low costs that allow the development of repertoires of satisfiers, products and services with different purposes, above all the conversion into sales.

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Entrepreneurship, a determinant factor in the sustainable development of small businesses

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Abstract
Entrepreneurship has emerged from people's permanent desire to meet their own needs, namely the permanent capacity to adapt to the new technological challenges of the markets and to create new elements to meet the needs of the market. Due to their innovative nature, entrepreneurs persist in discovering new sources of documentation to continually improve their activities. For the sustainable development of small businesses, especially in rural areas, the role of entrepreneurs is determined by their knowledge capacities in terms of supply, the cost of their products and services, and the mobilization of financial resources in the development of new businesses or the expansion of existing businesses.

Keywords: *entrepreneurship, small businesses, sustainable development.*

JEL Classification: L25, L26

INTRODUCTION

In order to reflect the link between entrepreneurship and small businesses in the present paper, we can say that entrepreneurship is the process of designing, launching and exploiting a new business, which is often initially a small business launched by people with entrepreneurial spirit and having knowledge, experience and takes risks. Those who create these businesses are called entrepreneurs. Moreover, entrepreneurship has been described by specialists as being characterized by "the ability and the desire to develop, organize and manage a business together with its risks to get a profit" of the entrepreneur. Although entrepreneurship definitions typically focus on business start-ups and operations, due to the high risks involved in launching a start-up, a significant proportion of start-ups need to close due to "lack of funding, economic crisis, lack of demand from the market - or a combination of all of them.

A wider definition of the term is sometimes used, especially in the economy. In this use, an entrepreneur is an entity that has the ability to find and act on opportunities to translate inventions or technologies into new products: "The entrepreneur is able to recognize the commercial potential of the invention and to organize capital, talent and other resources which transforms an invention into a commercially viable innovation. " In this respect, the term "entrepreneurship" also captures innovative activities by established firms, in addition to similar activities by new businesses.

The term "entrepreneur" is often confused with the term "small business" or used interchangeably with this term. While most entrepreneurial businesses start as small

businesses, not all small businesses are entrepreneurs in the strict sense of the term. Many small businesses are operations with the exclusive owner - or have a small number of employees - and many of these small businesses offer an existing product, process or service and are not aimed at economic growth. Instead, entrepreneurship offers an innovative product, process or service, and the entrepreneur ordinarily has the goal of expanding the company by adding employees in search of international sales and so on, a process that is funded by capital investment risk and angel investment. In this way, the term "entrepreneur" can be more closely associated with the term "startup". Entrepreneurial entrepreneurs have the ability to lead a business in a positive direction by adequate planning, adapting to changing environments, and understanding their own strengths and weaknesses. All of the above-mentioned issues make us mention that there is a very close relationship between small businesses and entrepreneurs.

The term "entrepreneurship" derives from the French word "entreprendre", which in the context of business means "undertaking, starting a business", and among those who have defined this term, we can mention: Richard Cantillon (circa 1730): entrepreneurship is defined as a self-employment of any kind. Entrepreneurs buy at certain prices today and sell at uncertain prices in the future. The contractor is a bearer of uncertainty; Adam Smith (1776): In the book "The Wealth of Nations," Smith clearly explained that not the baker's goodwill but his own interest led him to produce bread. From the point of view of the author, entrepreneurs are economic agents that turn demand into a source of profits; John Stuart Mill (1848): Entrepreneurship is described as creating new private enterprises and incorporating risk-taking individuals, decision-makers, and those who want to get rich from managing their resources by creating a new business; Joseph Schumpeter (1934): defines entrepreneurship with emphasis on innovation and resource mix. Thus, the entrepreneur is the innovator that brings change within the markets by making new combinations.

These new combinations can take the following forms: a new product / service or quality standard; new production methods; addressing new markets; new sources of raw materials; creating new organizations in any industry; Peter Drucker (1985): Entrepreneurship is the creation of a new organization, without taking into account the organization's ability to support itself. Thus, it would be sufficient for an individual to start a new business so that he can be described as an entrepreneur.

This feature is the one that differentiates entrepreneurship from routine management tasks related to resource allocation in an already developed organization (involves risk and uncertainty).

As the general contractor, here are the definitions, namely: the entrepreneur is one who identifies a business opportunity assumes responsibility for its initiation and obtain the necessary resources to become operational; the entrepreneur is the person who takes the risks of running a business; the entrepreneur is the one who manages the resources needed to operate a business based on innovation; contractor is an authorized person or a legal entity, individually or in combination with other authorized individuals or legal entities, organized a company to carry out acts and acts of trade for profit by making goods materials, respectively services, from their sale on the market under competitive conditions. (Law 133/1999 on the stimulation of private entrepreneurs for the establishment and development of small and medium-sized enterprises). Thus, the entrepreneur is a person who initiates and carries out a set of activities characterized by risk and innovation in order to obtain material and personal satisfaction.

It should be noted that between sustainable (and growth) and entrepreneurial

development (or growth) is a direct link of resources in the same category, ie sustainable resources. The object of this study is the research of a special resource, namely the entrepreneurial activity of small businesses, which ensures the economic growth (development), namely the small entrepreneur. Studying this "small entrepreneur" resource from the perspective of sustainable development will lead us to the proposal and to the conceptual, methodological and technological development of what we will call entrepreneurship as a sustainable resource. In turn, the sustainable resource concept will generate some considerations about sustainable sources of resources, around the entrepreneurial activity being the human resource (initiator / entrepreneur), material resources and financial resources. As we grow further at the right time, human sources for sustainable development are sources of small, more sustainable development activities. This is not just a word game, but an emphasis on an extremely important idea, namely the idea that points to the depth of the sustainability feature. Because, as will be demonstrated, human resources / entrepreneur is one of the foundations of any economic process, it is natural that our attention should focus on ensuring the foundations in terms of sustainability in order to speak with some justification and trusted processes (systems) sustainable economic entrepreneurship.

METHODS

Methodology of scientific research - in order to underpin the research methodology, the classical observation and examination instruments, research methods based on the basic principles of scientific research, namely: "competence, objectivity, truth, methodical, demonstration, correlation, evaluation of results, utility and psychomoral "(Ristea and Franc, 2013). It will use procedures based on factual analysis, intensive documentation at the level of domestic and international literature, using the databases and the scientific material existing in the endowment of the libraries of specific institutes in Romania and internationally.

The methodology of the paper will have as direct instruments the collection of data and information from specialized literature and from existing practice in public and private institutions, but especially scientific articles published on specialized research networks (ResearchGate, Academia.edu, etc.), articles published in different journals, relevant books in the field of reference, legislation, analyzes and studies, official documents of various tax bodies, tax documents and interactive database of the National Bank of Romania, other relevant sources identified at the libraries: CCFM, Academia Romanian, INCE, IEN, BNR, National Library, INS, etc. Moreover, in the methodology we will analyze the documents using the comparative, analytical, descriptive method, the nonparticipative and participatory observation, the use of a set of information sources, the collection of financial data in the established databases. It will also be based on annual reports, publications, consolidated statistical data provided by the European Commission, OECD, published annually, data to be processed in order to be able to provide a general and analytical picture of the most important changes taking place in the European Union as a whole, but also globally - considered to be representative of the understanding of the phenomena studied, and especially in Romania.

Information support for research will be provided by monographs, books, scientific papers, materials of scientific conferences, the balance sheets of SMEs in 2008-2017, as well as other materials, which are presented in scientific papers and publications on the official pages of national and international research institutes, international financial institutions (research centers), etc.

RESULTS AND DISCUSSION

"Small business, innovation and entrepreneurship" by *Jean-Michel Sahut and Marta Peris-Ortiz* are the special characteristics of entrepreneurship, namely small businesses, innovation and entrepreneurship, and show that although these three concepts have their own specificities and can be treated independently, but they are closely linked and interconnected. From Schumpeter to the present, a flow of literature combines the concept of entrepreneurship with its ability to make new combinations of appropriate factors and innovations in processes and products; Similarly, in a large flow of literature, the most characteristic dimension of entrepreneurship is closely linked to small businesses. Small and large companies have different advantages and disadvantages than innovation, but small businesses provide the most environmentally-friendly environment for entrepreneurship and innovation, which are not necessarily supported by the know-how and resources characteristic of large-scale production but require commitment and close cooperation between company members.

In this introduction, we present how the three topics converge into four articles on microenterprises and innovation, institutional factors of entrepreneurship and the determinants of individual entrepreneurs' characteristics. Relationships between entrepreneurship, innovation and enterprises are present right from the start of the entrepreneurial literature in Schumpeter's (1934, 1950) According to *Schumpeter* (1934: 66-68), as entrepreneurs make new combinations of factors "and the new combinations appear discontinuously", innovation and economic development can be carried out by "the same people who control the productive or commercial process (in the enterprise)" or by "the new (innovator people)" that generally, in a new venture or start-up small enterprise, achieve new combinations or innovations. *Shane* (2012: 17-18) implicitly includes innovation as an essential characteristic of entrepreneurship and claims that "[e]ntrepreneurship involves more than the (...) process of discovering opportunities for profit. It also involves coming up with a business idea about how to recombine resources to exploit those opportunities".

In addition, the field of economic entrepreneurship research (*Shane and Venkataraman*, 2000: 218) has been established as "the study of opportunities sources, the processes of discovery, evaluation and exploitation of opportunities, and the set of people who discover, evaluate and exploit them "(*Shane and Venkataraman*, 2000: 218). These authors refer to entrepreneurial opportunities as "those situations in which new goods, services, raw materials and organizational methods can be introduced and sold more than their cost of production" (Ibid: 220); and situations that are formed by "objective forces in influencing the existence, identification and exploitation of opportunities" (*Shane*, 2012: 16).

These objective forces correspond to the economic environment and the institutional environment mentioned below. The second part of the definition of "discovery, evaluation and exploitation of opportunities" implies the individual aspects (personality traits and psychological characteristics) of entrepreneurs that can explain their capacity to discover opportunities and exploit them successfully *(Baum and Bird*, 2010; *Baron*, 2004; *Nga and Shamuganathan*, 2010). The aspects of the corporate entrepreneur, such as the exploitation of opportunity, must be organized by the appropriate combination of factors (*Hayton*, 2005, 2006; *Zotto and Gustafsson*, 2008), with reference to the enterprise. This second dimension of corporate entrepreneurship can also reverse the relationship of recognition and exploitation of opportunity. Opportunity, in some relevant cases, can be created through the process by which new combinations

of factors are created. Thus, the article about choice and career options in this particular issue helps us to understand how some people become entrepreneurs.

Finally, the third part of the definition emphasizes the importance of the individual as a driver of entrepreneurial action: *"the main idea that entrepreneurship is a process that depends on both opportunities and individuals"* (*Shane*, 2012: 18). This aspect, which is implicit in the first part of the definition, clearly distinguishes entrepreneurship from that of strategic management, although classical authors' contributions to strategic management such as Andrews (1971) are useful in both areas. However, there is an institutional dimension to the question of the opportunities entrepreneurs have to discover and use, which must be included. It's not just the economic environment that conditions the opportunities, Shane points out (2012). In addition to the economic environment, the existence of informal and formal institutional conditions (culture and legal framework) (North, 1990, 2005) is a context that largely explains the interpretation of different economic agents about their future, their objectives and their behavior. In addition, the field of economic entrepreneurship research (*Shane and Venkataraman*, 2000: 218) has been established as "the study of opportunities sources, the processes of discovery, evaluation and exploitation of opportunities, and the set of people who discover, evaluate and exploit them "(*Shane and Venkataraman*, 2000: 218). The above-mentioned authors refer to entrepreneurial opportunities as "those situations in which new goods, services, raw materials and organizational methods can be introduced and sold higher than their cost of production" (Ibid: 220); and situations that are formed by "objective forces in influencing the existence, identification and exploitation of opportunities" (Shane, 2012: 16). These objective forces correspond to the economic environment and the institutional environment mentioned below. The second part of the definition of "discovery, evaluation and exploitation of opportunities" implies the individual aspects (personality traits and psychological characteristics) of entrepreneurs that can explain their capacity to discover opportunities and exploit them successfully (Baum and Bird, 2010; Baron, 2004; Nga and Shamuganathan, 2010). The aspects of the corporate entrepreneur, such as the exploitation of opportunity, must be organized by the appropriate combination of factors (Hayton, 2005, 2006; Zotto and Gustafsson, 2008), with reference to the enterprise. This second dimension of corporate entrepreneurship can also reverse the relationship of recognition and exploitation of opportunity.

Opportunity, in some relevant cases, can be created through the process by which new combinations of factors are created. Thus, aspects of will and career options in this particular issue help us to understand how some people become entrepreneurs. Finally, the third part of the definition emphasizes the importance of the individual as a driver of entrepreneurial action: "*the main idea that entrepreneurship is a process that depends on both opportunities and individuals"* (*Shane*, 2012: 18). This aspect, which is implicit in the first part of the definition, clearly distinguishes entrepreneurship from that of strategic management, although classical authors' contributions to strategic management such as Andrews (1971) are useful in both areas. However, there is an institutional dimension to the question of the opportunities entrepreneurs have to discover and use, which must be included. It's not just the economic environment that conditions the opportunities, Shane points out (2012). In addition to the economic environment, the existence of informal and formal institutional conditions (culture and legal framework) (North, 1990, 2005) is a context that largely explains the interpretation of different economic agents about their future, their objectives and their behavior. In this necessarily complementary approach to entrepreneurship, one of its pillars is perfectly explicit and regulatory, ie the Law and the

rules of the game (North, 1990, Scott, 2007). The second pillar refers to values and rules that correspond to those values that are rooted in social, organizational or individual needs and habits (*Bruton, Ahlstrom and Li*, 2010, *March and Olsen*, 1989, Scott, 2007). And the third pillar, moving away from explicit knowledge (the cognitive pillar), corresponds to the deeper beliefs and values that lead the behavior of any agent or entrepreneur without being fully aware of their influence (*Bandura*, 1986; *Bruton et al. Carroll*, 1964, *Scott*, 2007). Thus, the institutional dimension of entrepreneurship, approached, allows understanding of the conditions from which opportunities are discovered or created. As regards the relationship between entrepreneurship approaches and innovation, although some research proposals may require the separation of these concepts in different areas, separation limits the usefulness of both approaches to multiple aspects of management and the economy (Baum et al., 2001; Lassen, Gertsen and Riis, 2006). The link between entrepreneurship and innovation is dominant in literature; to quote Shane (2012: 15), the concept of entrepreneurship incorporates the notion of Schumpeterian (...)

It should be noted that the importance of the individual as a driver of entrepreneurial action: "the main idea that entrepreneurship is a process that depends on both opportunities and individuals" (Shane, 2012: 18). This aspect, which is implicit in the first part of the definition, clearly distinguishes entrepreneurship from that of strategic management, although classical authors' contributions to strategic management such as Andrews (1971) are useful in both areas. However, there is an institutional dimension to the question of the opportunities entrepreneurs have to discover and use, which must be included. It's not just the economic environment that conditions the opportunities, Shane points out (2012). In addition to the economic environment, the existence of informal and formal institutional conditions (culture and legal framework) (North, 1990, 2005) is a context that largely explains the interpretation of different economic agents about their future, their objectives and their behavior. In this necessarily complementary approach to entrepreneurship, one of its pillars is perfectly explicit and regulatory, ie the Law and the rules of the game (North, 1990, Scott, 2007). The second pillar refers to values and rules that correspond to those values that are rooted in social, organizational or individual needs and habits (Bruton, Ahlstrom and Li, 2010, March and Olsen, 1989, Scott, 2007). And the third pillar, moving away from explicit knowledge (the cognitive pillar), corresponds to the deeper beliefs and values that lead the behavior of any agent or entrepreneur without being fully aware of their influence (Bandura, 1986; Bruton et al. Carroll, 1964, Scott, 2007).

Thus, the institutional dimension of entrepreneurship, addressed by two articles of this particular issue, allows understanding of the conditions from which opportunities are discovered or created. As regards the relationship between entrepreneurship approaches and innovation, although some research proposals may require the separation of these concepts in different areas, separation limits the usefulness of both approaches to multiple aspects of management and the economy (Baum et al., 2001; Lassen, Gertsen and Riis, 2006). The link between entrepreneurship and innovation is dominant in literature; to quote Shane (2012: 15), the concept of entrepreneurship incorporates the notion of Schumpeterian (...)

A form of entrepreneurship is a form of social entrepreneurship. Gary McPherson, Executive Director of the Canadian Center for Social Entrepreneurship, defines social entrepreneurship as "Combining business essence with that of the community through individual creativity." Another definition would be: the work done by the social entrepreneur who uses entrepreneurship principles to solve a problem in order to organize

and manage the production of a social change. Among the specific features of social entrepreneurship we mention the following: the area where the private sector meets the non-profit (eg: social shelters that pay for professional racism training and offers jobs); the founders of these businesses combine social consciousness with commercial abilities; some charitable associations can operate in a pronounced entrepreneurial way, while social entrepreneurship can have as their object of activity and charity; a charitable association operates on traditionally philanthropic principles, while social entrepreneurship applies business principles to solve social problems, creating support and a development infrastructure; social entrepreneurs create social value through a process of innovation and capitalizing on new opportunities, putting the benefit of society at the expense of its own benefit first.

Among the specific features of social entrepreneurship, we can mention the main benefits of this, namely: increasing the number of employed persons; innovation and the creation of new goods and services for social needs that are not provided by society (drug abuse, AIDS, people with disabilities); creates social capital to meet sustainable development; promotes social equity by addressing the needs of disadvantaged people; demonstrates a sense of responsibility towards the people they serve and the consequences of the actions taken.

For *small businesses of a social nature*, the role of the entrepreneur is given by: adopting a mission to create and sustain the social value (not only the private one); identifying new opportunities to accomplish this mission; engaging in a continuous process of innovation, adaptation and learning; acting in a bold manner, irrespective of the resources they have; is different from the business entrepreneur or even from a socially responsible company through the social mission he / she assumes; making profit and serving the needs of the consumer are among its goals, but only as ways to reach the social goal, to achieve social services.

The result of the entrepreneur's activity is given by the establishment of the social enterprise. These enterprises, which generally create jobs for low income or in difficulty, generate the bulk of their income from the production and sale of goods and services, usually at prices that the beneficiaries can afford allow. Especially in the rural areas, where the number of these social enterprises is growing at European level, we meet a certain typology of them after mission orientation, namely: mission-centered (self-financing, disabled people or microfinance institutions); missions associated with the mission (integrated model - social activities overlap with those generating profits); without the tangency with the mission (profit generating activities finance and support social programs). The sectors of activity of social enterprises are: economic development; environmental conservation; social welfare and human resources development; preservation of artistic and cultural values; health; agriculture; education.

The main programs of social enterprises can be: focused on creating economic opportunities, fairly remunerated jobs; community development (for raising living standards, reducing unemployment); the development of a market (facilitating certain goods and services for marginalized communities); for institutional and organizational development; to increase the number of micro-enterprises through microfinance.

In addition to social enterprises, organizations that can become social enterprises are cooperatives; retirement associations and NGOs.

Cooperatives: are groups of individuals or legal entities that comply with special operating principles (eg the principles of structure and democratic control, fair distribution of the net profit of the financial year, the principle of helping the members);

have legal personality and have the main purpose of meeting the needs and / or developing the economic and social activities of its members.

Retirement Associations: defend the right of each of its members to a calculated and granted pension under the law, as well as other social security rights, according to the law; represent the members of the association in the relations with the local and central public administration institutions, in order to obtain, under the law, their rights; organizes recreational, cultural and sports activities for pensioners and their families; organizes social assistance and social assistance for pensioners in collaboration with specialized public administration institutions.

NGOs: the most active actors of sustainable development, and are the symbol of social responsibility (eg, "Greenpeace", "Save Vama Veche", NGOs that advocate for the preservation of the Danube Delta); the fields of activity in which NGOs can become social enterprises are also social and medical services, education and vocational training; sources of funding may come from non-reimbursable funds from private donors or from budgetary resources; identifying and capitalizing on opportunities, the desire to affirm.

A new perspective on entrepreneurship is that of *green entrepreneurship*. It addresses issues ranging from local pollution of the air, soil, water, to global issues related to ozone depletion, global warming, and even the protection of human rights.

Firms can "turn around" in three ways: "greening" processes, adding value (by redesigning, modifying existing technology, or introducing new technologies) to reduce environmental impact at all levels; implementing an environmental management system; "Greening" the products.

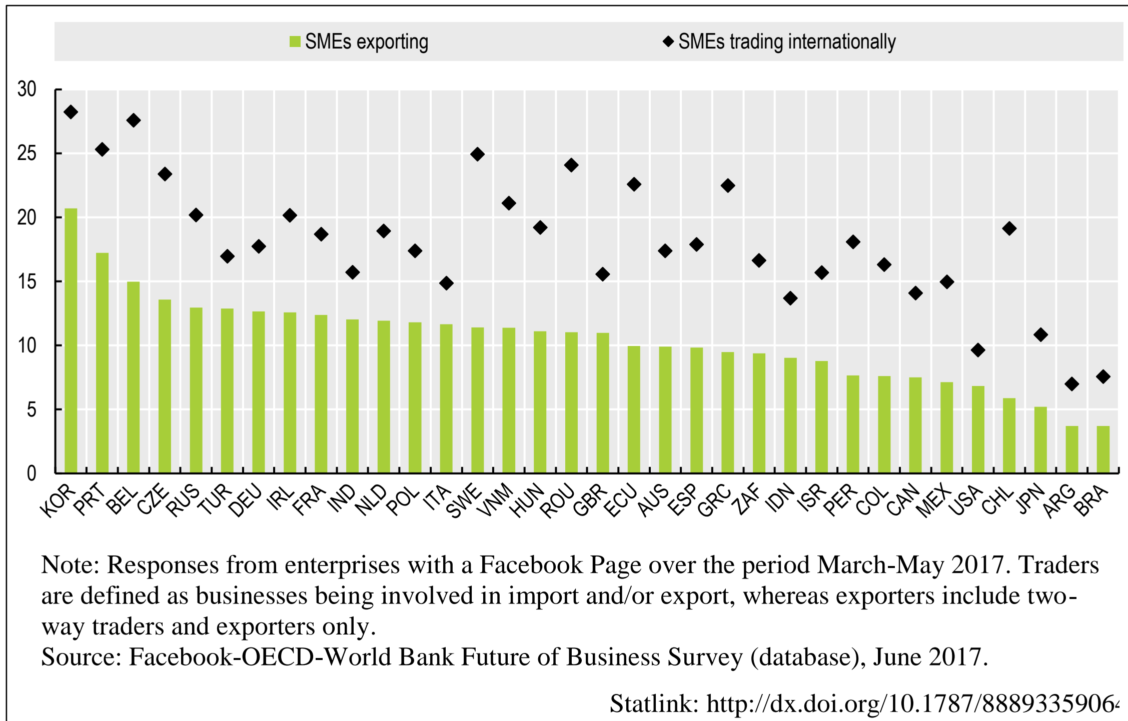
From a green business perspective, problems need to be understood in another way: the consumer has to be approached in another way, the concept of consumer satisfaction has to get another meaning; eco-product concepts and product lifecycle must be given a new approach; there is a need for a more global, open minded approach to change, the logic being "global thinking, acting locally", and an intense promotion of reducing non-organic consumption. The eco-label is a kind of stamp that certifies that the product is environmentally friendly, meets European standards, is quality and protects the health of the consumer. In Romania there are 21 types of products that can be ecolabelled: refrigerators, washing machines, computers, detergents, textiles, textiles, paints and varnishes, bed mattresses, electric lamps, paper, chemical fertilizers and others.

Faced with the specificities of entrepreneurship above mentioned, at European and global level we are witnessing *digital entrepreneurship*, digitization has opened new ways and markets for entrepreneurship.

The development of accessible digital tools and platforms has provided new opportunities for micro-businesses to enter foreign markets in a way that was previously unimaginable.

The data published in the Facebook-OECD-World Bank *Study on Business Future* shows that even "only me" entrepreneurs (ie self-employed without employees) can engage in exports as a major activity for their business, digitally harnessing tools, despite their diminished size (Facebook, OECD, World Bank, 2017). In the past, only large multinational companies could benefit from tools globally, but we are currently witnessing the digitization of small entrepreneurs, and the presence of small and large-scale entrepreneurs in large-scale virtual space and services. Today, small businesses have a menu of digital tools that allow them to take advantage of global ties and directly market potential customers across the world, overcoming barriers to trade that usually weigh more small scale economies of scale.

Although there is a wide variation in the percentage of small and medium-sized enterprises (SMEs) marketed in each country and region, in most economies, around one in five SMEs with a digital presence interviewed between March and May 2017 reported international trade, including 6% import and export, 5% exclusive exporters, and 8% import exclusively (Figure 1). For the purpose of the study, SMEs are defined as enterprises with fewer than 250 employees. Partial country changes reflect the differences in the representativeness of the SMEs surveyed - the survey only covers the companies with a Facebook presence, and in the advanced economies this cohort is likely to be more representative for the general population than in the development and emerging economies.



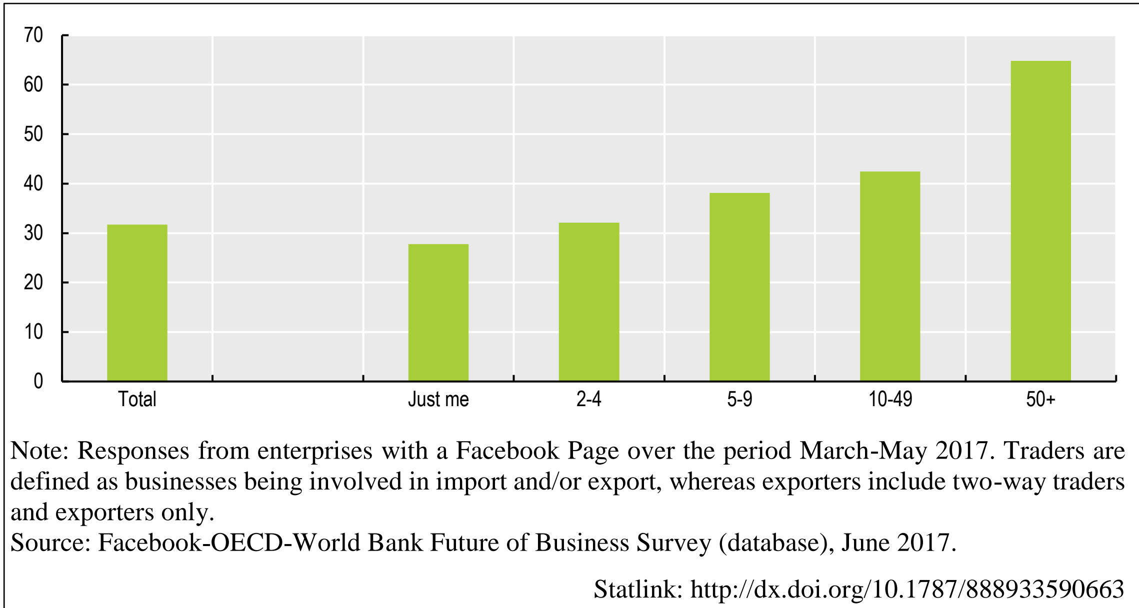
Note: Responses from enterprises with a Facebook Page over the period March-May 2017. Traders are defined as businesses being involved in import and/or export, whereas exporters include two-way traders and exporters only.
Source: Facebook-OECD-World Bank Future of Business Survey (database), June 2017.

Statlink: http://dx.doi.org/10.1787/8889335906

Figure 1. International trade and SMEs with digital presence
Share of survey respondents, March-May 2017

The results of the study show that among the exporting companies, exports are a key element of the business model not only for the significant shares of small businesses (with fewer than 50 employees) but also for many businesses only me. Nearly one-third (28%) of small entrepreneurs who export, indicate that more than 25% of total international trade revenue comes (Figure 2). Two out of three exporting SMEs also reported that more than 50% of their international sales depend on online tools, with the most common export activities among SMEs, followed by retail / wholesale .

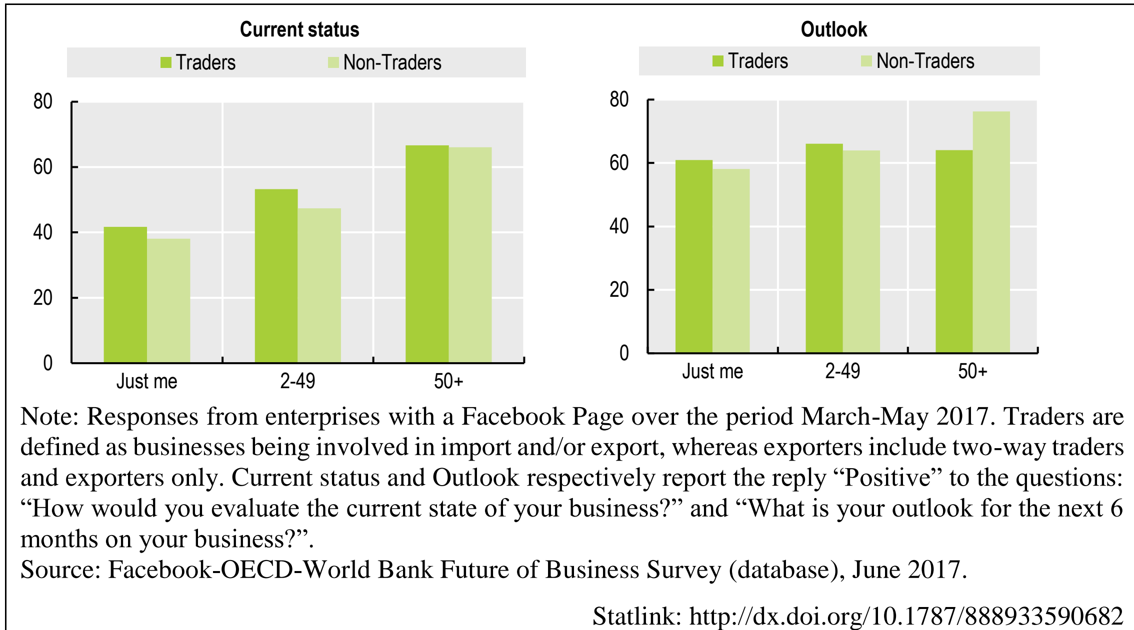
The latest data from the *"Business Future"* study also confirms previous findings on the relationship between business confidence and international trade. Internationally traded businesses appear more confident in their present state and future prospects, and are also more likely to have positive job creation prospects (Figure 3 and Figure 4). This also applies to my entrepreneurs, although it is a positive assessment of the current or future situation as well as the job creation prospects are usually higher for larger enterprises.



Note: Responses from enterprises with a Facebook Page over the period March-May 2017. Traders are defined as businesses being involved in import and/or export, whereas exporters include two-way traders and exporters only.
Source: Facebook-OECD-World Bank Future of Business Survey (database), June 2017.

Statlink: http://dx.doi.org/10.1787/888933590663

Figure 2. Exports revenue greater than 25% of total revenue, by enterprise size
Percentage of exporters, March-May 2017

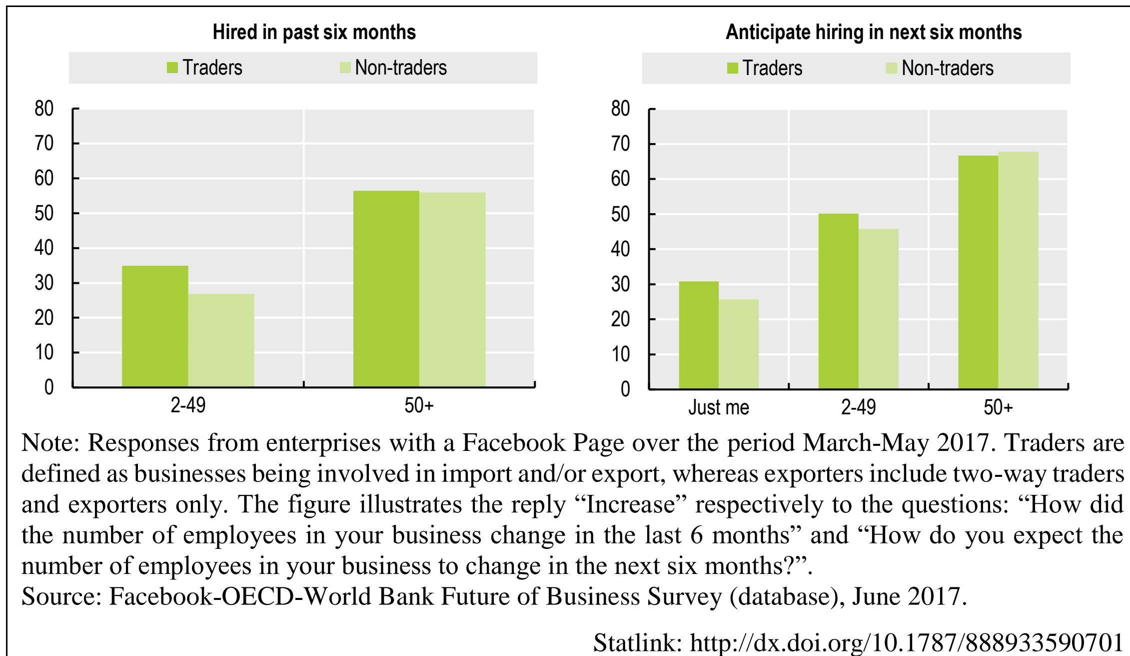


Note: Responses from enterprises with a Facebook Page over the period March-May 2017. Traders are defined as businesses being involved in import and/or export, whereas exporters include two-way traders and exporters only. Current status and Outlook respectively report the reply “Positive” to the questions: “How would you evaluate the current state of your business?” and “What is your outlook for the next 6 months on your business?”.
Source: Facebook-OECD-World Bank Future of Business Survey (database), June 2017.

Statlink: http://dx.doi.org/10.1787/888933590682

Figure 3. Digital presence, international trade and business confidence
Percentage of positive replies among survey respondents, March-May 2017

Setting up an export subsidiary can play a major role in business success and growth as new markets are open. However, almost half of the exporting SMEs identified "Selling to foreign countries" as a challenge (and these challenges could be even greater among SMEs that want to export but who have failed to do so). The main export barriers include finding business partners, market access limitations, and regulations. Overcoming export challenges are a key factor for business success.



Note: Responses from enterprises with a Facebook Page over the period March-May 2017. Traders are defined as businesses being involved in import and/or export, whereas exporters include two-way traders and exporters only. The figure illustrates the reply "Increase" respectively to the questions: "How did the number of employees in your business change in the last 6 months" and "How do you expect the number of employees in your business to change in the next six months?".
Source: Facebook-OECD-World Bank Future of Business Survey (database), June 2017.

Statlink: http://dx.doi.org/10.1787/888933590701

Figure 4. Digital presence, international trade and prospects of job creations
Percentage of positive replies among survey respondents, March-May 2017

Globally there was already a set of indicators for entrepreneurship, indicators that we present in the Annex no.1. This Annex presents a comprehensive list of indicators of entrepreneurial determinants.

The indicators are classified into the six categories of determinants established by the conceptual framework of the OECD-Eurostat program on entrepreneurship indicators: 1) The Regulatory Framework; 2) Market conditions; 3) Access to finance; 4) Creating and disseminating knowledge; 5) Entrepreneurial capabilities; 6) Entrepreneurial culture.

For each indicator there is a brief description and the data source is provided. While many critical indicators affecting entrepreneurship are covered by the indicators presented in the table, the list should not be considered exhaustive. The selection of indicators reflects the current availability of data, meaning that there may be important missing indicators only because no international data source has been found.

Entrepreneurial risk in global digital markets is generated by determinant or conditional factors and, in its turn, generates direct and indirect effects through the risks specific to the digital entrepreneurial network, the risk being placed in a structure of interdependence and mediated influences.

The larger the size and complexity of the market in virtual space (the presence of small entrepreneurs in a large number), the higher the risk, both microeconomic and macroeconomic, and the possibility of increasing economic performance. At the same time, the interdependent macroeconomic and microeconomic relations are intensifying, this necessity being the result of the increase of the number of economic economic policy tools in the direction of evolution.

CONCLUSIONS

For a knowledge of entrepreneurs at the national, European and global level, we consider that in addition to the information presented in the paper, a knowledge of the entrepreneurs' specific indicators and related data sources can lead us in our research into

the types of entrepreneurial models would be digital entrepreneurship) appropriate to current global developments and respond to types of entrepreneurial risk. At the same time, the approach in our activity wanted to demonstrate that, especially for the rural environment, the role of small entrepreneurs is economically, socially and environmentally determined, in an area dominated by economic reasoning, focused on meeting current needs but having a direct impact on sustainable local development. The list of the determinants of the determinants of the entrepreneurial activity is presented in

Economic stability at both macro and micro levels has the same fundamental elements, which, given the interdependence between the two environments on the local and global entrepreneurial market, is a natural and direct consequence of functionality. Entrepreneurial financial instability as a risky financial stability event is also based on macro-and micro-based common elements; In addition, the two types of entrepreneurial financial instability influence each other, starting from the least disturbances of the stability state. In the opposite direction, the entrepreneurial financial stability of the two environments is a necessary objective for the evolution of the local and global entrepreneurs market. In addition, as an important part of the entrepreneurial organizational culture, the general and main objectives should be understood as being common to the two environments, and the specific objectives should be introduced, on a reciprocal basis, into the equations of the entrepreneurial administrative models of the two environments.

The paper attempts to capture these aspects of the types of entrepreneurship developed locally at present, without neglecting other visions, when appropriate. Moreover, the paper captures aspects of international practice based on the views of the great scientific personalities of our century that have approached the phenomenon of entrepreneurship at the local and global level, namely the globalization of entrepreneurs' markets, as well as personal entrepreneurial experience with a direct impact on the sustainable development of small entrepreneurs and their businesses at local, national, European and global level.

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APPENDIX : Indicators of entrepreneurial deteminants and data sources

Category of determinants	Definition	Data sources
	1. REGULATORY FRAMEWORK	
Administrative burdens (entry and growth)		
Burden of government regulation	Survey responses to the question: For businesses, complying with administrative requirements permits, regulations, reporting) issued by the government in your country is (1 = burdensome, 7 = not burdensome). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Costs required for starting a business	The official cost of each procedure in percentage of Gross National Income (GNI) per capita based on formal legislation and standard assumptions about business and procedure. *http://www.doingbusiness.org/data/exploretopics/starting-a-business*	World Bank, *Doing Business*
Minimum capital required for starting a business	The paid-in minimum of capital requirement that the entrepreneur needs to deposit in a bank before registration of the business starts as percentage of income per capita. *http://www.doingbusiness.org/data/exploretopics/starting-a-business*	World Bank, *Doing Business*
Number of days for starting a business	The average time (recorded in calendar days) spent during each enterprise start-up procedure. *http://www.doingbusiness.org/data/exploretopics/starting-a-business*	World Bank, Doing Business
Number of procedures for starting a business	All generic procedures that are officially required to register a firm. *http://www.doingbusiness.org/data/exploretopics/starting-a-business*	World Bank, *Doing Business*
Procedures time and costs to build a warehouse	Corresponds to an average of three measurements: 1) Average time spent during each procedure, 2) Official cost of each procedure and 3) Number of procedures to build a warehouse. *http://www.doingbusiness.org/data/exploretopics/dealing-with-construction-permits*	World Bank, *Doing Business*
Building quality control index	The indicator is based on six other indices—the quality of building regulations, quality control before construction, quality control during construction, quality control after construction, liability and insurance regimes, and professional certifications indices. *http://www.doingbusiness.org/methodology/dealing-with-construction-permits*	World Bank, *Doing Business*
Registering property	Corresponds to an average of three measurements: 1) Number of procedures legally required to register property, 2) Time spent in completing the procedures and 3) Registering property costs. *http://www.doingbusiness.org/data/exploretopics/registering-property*	World Bank, *Doing Business*
Index of the quality of the land administration system	The quality of land administration index is the sum of the scores on the reliability of infrastructure, transparency of information, geographic coverage and land dispute resolution indices. The index ranges from 0 to 30, with higher values indicating better quality of the land administration system. *http://www.doingbusiness.org/data/exploretopics/registering-property*	World Bank, *Doing Business*
Time for paying taxes	Time it takes to prepare, file and pay the corporate income tax, vat and social contributions. Time is measured in hours per year. *http://www.doingbusiness.org/data/exploretopics/paying-taxes*	World Bank, *Doing Business*
Bankruptcy regulations		
Cost - Average cost of bankruptcy proceedings.	The cost of the proceedings is recorded as a percentage of the estate's value. *http://www.doingbusiness.org/data/exploretopics/resolving-insolvency*	World Bank, *Doing Business*
Time - Average duration of bankruptcy proceedings	Time is recorded in calendar years. It includes appeals and delays. *http://www.doingbusiness.org/data/exploretopics/resolving-insolvency*	World Bank, *Doing Business*
Recovery rate	The recovery rate calculates how many cents on the dollar secured creditors recover from an insolvent firm at the end of insolvency proceedings. *http://www.doingbusiness.org/data/exploretopics/resolving-insolvency*	World Bank, *Doing Business*
Court and legal framework		
Enforcing contracts– Cost in % of claim	Cost is recorded as a percentage of the claim, assumed to be equivalent to 200% of income per capita or USD 5000, whichever is greater. No bribes are recorded. Three types of costs are recorded: court costs, enforcement costs and average attorney fees. *http://www.doingbusiness.org/data/exploretopics/enforcing-contracts*	World Bank, *Doing Business*
Enforcing contracts – Time	Time is recorded in calendar days, counted from the moment the plaintiff files the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between. *http://www.doingbusiness.org/data/exploretopics/enforcing-contracts*	World Bank, *Doing Business*
Enforcing contracts – Quality of judicial process	The quality of judicial processes index measures whether each economy has adopted a series of good practices in its court system in four areas: court structure and proceedings, case management, court automation and alternative dispute resolution. *http://www.doingbusiness.org/data/exploretopics/enforcing-contracts*	World Bank, *Doing Business*
Product and labour market regulations		
Difficulty of hiring	It measures whether laws or other regulations have implications for the difficulties of hiring a standard worker in a standard company. It covers components such as whether fixed-term contracts are prohibited for permanent tasks, the maximum cumulative duration of fixed-term contracts, the ratio of the minimum wage to the average value added per worker or the availability of incentives for employers to hire employees under the age of 25. *http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#difficultyHiring*	World Bank, *Doing Business*
Difficulty of firing	It measures whether laws or other regulations have implications for the difficulties of firing a standard worker in a standard company. Components of the indicator include elements such as the length in months of the maximum probationary period or whether the employer needs to notify a third party (such as a government agency) to terminate a redundant worker. *http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#difficultyFiring*	World Bank, *Doing Business*

Category of determinants	Definition	Data sources
Ease of hiring foreign labour	Survey responses to a question related to labour market efficiency: In your country, how restrictive are regulations related to the hiring of foreign labor? [1 = highly restrictive; 7 = not restrictive at all]. *http://reports.weforum.org/global-competitiveness-report-2015-2016/appendix-a-measurement-of-key-concepts-and-preliminary-index-structure/*	World Economic Forum, *Executive Opinion Survey*
Rigidity of hours index	The indicator is an index with seven components, the most important being: i) the maximum number of days allowed in the work week; ii) the premium for night work; iii) whether there are restrictions on night work; iv) whether there are restrictions on weekly holiday work; vii) the average paid annual leave for workers. *http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#rigidityHours*	World Bank, *Doing Business*
Job quality	The indicator covers 12 questions: (i) whether the law mandates equal remuneration for work of equal value; (ii) whether the law mandates non-discrimination based on gender in hiring; (iii) whether the law mandates paid or unpaid maternity leave; (iv) the minimum length of paid maternity leave (in calendar days); (v) whether employees on maternity leave receive 100% of wages; (vi) the availability of five fully paid days of sick leave a year; (vii) the availability of on-the-job training at no cost to the employee; (viii) whether a worker is eligible for an unemployment protection scheme after one year of service; (ix) the minimum duration of the contribution period (in months) required for unemployment protection; (x) whether an employee can create or join a union; (xi) the availability of administrative or judicial relief in case of infringement of employees' rights; and (xii) the availability of a labor inspection system. *http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#rigidityEmployment*	World Bank, *Doing Business*
Income taxes, wealth/bequest taxes		
Average income tax plus social contributions	The average rate of taxation in percentage of the gross wage. The indicator is based on a standard case: single (without children) with high income. *http://dx.doi.org/10.1787/data-00265-en*	OECD *Revenue Statistics*
Highest marginal income tax plus social contributions	The highest rate of taxation in percentage of the gross wage. The indicator is based on a standard case: single (without children) with high income. http://dx.doi.org/10.1787/data-00265-en	OECD *Revenue Statistics*
Revenue from bequest tax	The revenue from bequest tax as a per cent of GDP. *http://dx.doi.org/10.1787/ctpa-rev-data-en*	OECD *Revenue Statistics*
Revenue from net wealth tax	The revenue from net wealth tax as a per cent of GDP. *http://dx.doi.org/10.1787/ctpa-rev-data-en*	OECD *Revenue Statistics*
Business and capital taxes		
SME tax rates	*http://stats.oecd.org//Index.aspx?DataSetCode=TABLE_II2*	OECD *Revenue Statistics*
Taxation of corporate income revenue	The revenue from corporate income tax as percentage of GDP. *http://dx.doi.org/10.1787/ctpa-rev-data-en*	OECD *Revenue Statistics*
Taxation of stock options	The average tax wedge for purchased and newly listed stocks. Average incomes are used. *http://dx.doi.org/10.1787/9789264012493-en*	OECD, The Taxation of Employee Stock Options – Tax Policy Study No. 11
Patent system; standards		
Intellectual property protection	Survey responses to the question: in your country, how strong is the protection of intellectual property, including anti-counterfeiting measures? (1 = extremely weak, 7 = extremely strong). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Property rights	Survey responses to the question: property rights, including over financial assets (1 = are poorly defined and not protected by law, 7 = are clearly defined and well protected by law). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
	2. MARKET CONDITIONS	
Access to Foreign Markets		
Trading across borders	The indicator is an index composed of two components: 1) Time, in days, to comply with all procedures required to import/export goods, 2) The cost associated with all procedures required to import/export goods. *http://www.doingbusiness.org/data/exploretopics/trading-across-borders*	World Bank, *Doing business*
Barriers to trade and investment	This indicator measures explicit barriers and other barriers to trade and investment. It is based on qualitative information on laws and regulations collected periodically and turned into quantitative indicators. *http://www.oecd.org/eco/growth/indicatorsofproductmarketregulationhomepage.htm#indicators*	OECD, *Product Market Regulation Indicators*
Services Trade Restrictiveness Index (STRI)	The indicator is calculated on the basis of a regulatory database of comparable, standardised information on trade and investment relevant policies in force in each country. *http://www.oecd.org/tad/services-trade/services-trade-restrictiveness-index.htm*	*OECD, Services Trade Restrictiveness Index Regulatory Database*
Degree of public involvement		
Government enterprises and investment	Data reflect the number, composition and share of output supplied by State-Operated Enterprises (SOEs) and government investment as a share of total investment. *https://www.fraserinstitute.org/sites/default/files/economic-freedom-of-the-world-data-for-researchers.xls*	IMF, World Bank, UN National Accounts and World Economic Forum
Licensing restrictions	Zero-to-10 ratings are constructed for 1) the time cost (measured in number of calendar days required to obtain a license) and 2) the monetary cost of obtaining the license (measured as a share of per-capita income). These two ratings are then averaged to arrive at the final rating. *http://iresearch.worldbank.org/servicetrade/default.htm#*	World Bank

Category of determinants	Definition	Data sources
Private Demand		
Buyer sophistication	Survey responses to: purchasing decisions are (1 = based solely on the lowest price, 7 = based on a sophisticated analysis of performance). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
	3. ACCESS TO FINANCE	
Access to debt financing		
Country credit rating	The indicator is based on an assessment by the *Institutional Investor Magazine Ranking*. *http://www.imd.org/wcc*	IMD *World Competitiveness Yearbook*
Domestic credit to private sector	The indicator refers to financial resources provided to the private sector – such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable – that establish a claim for repayment. Data are from IMF's International Financial Statistics. *http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world-development-indicators#*	Published in *World Indicators*, World Bank. *Development*
Ease of access to loans	Survey responses to: how easy it is to obtain a bank loan in your country with only a good business plan and no collateral (1 = extremely difficult, 7 = extremely easy). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Interest rate spread	The lending rate minus deposit rate based on an average of annual rates for each country. *http://data.worldbank.org/indicator/FR.INR.LNDP*	World Bank Open Data
Legal rights index	The degree to which collateral and bankruptcy laws facilitate lending. Higher scores indicating that collateral and bankruptcy laws are better designed to expand access to credit. *http://www.doingbusiness.org/data/exploretopics/getting-credit*	World Bank, *Doing Business*
Share of SME loans in total business loans	Specific definitions are implemented by the countries covered in the Scoreboard. *http://www.oecd.org/cfe/smes/financing-smes-and-entrepreneurs-23065265.htm*	*OECD Financing SMEs and Entrepreneurs: An OECD Scoreboard*
Interest rate spread between average SME and large firm rate	Specific definitions are implemented by the countries covered in the Scoreboard. *http://www.oecd.org/cfe/smes/financing-smes-and-entrepreneurs-23065265.htm*	*OECD Financing SMEs and Entrepreneurs: An OECD Scoreboard*
Access to venture capital		
Venture capital availability	Survey responses to: how easy it is for entrepreneurs with innovative but risky projects to find venture capital in your country (1 = extremely difficult, 7 = extremely easy). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Venture capital	Private equity investments	*OECD Entrepreneurship Finance Database*
Stock markets		
Capitalisation of primary stock market	The capitalisation of the primary stock market (the value of the issued shares on the market) relative to GDP. *http://www.world-exchanges.org/home/index.php/statistics/ipo-database*	World Federation of Exchanges
Capitalisation of secondary stock	An assessment of the efficiency of stock markets providing finance to companies. Ranking market goes from 1 (worst) to 10 (best). *http://www.imd.org/wcc*	IMD, *World Competitiveness Yearbook*
Investor protection	The main indicators include: transparency of transactions (Extent of Disclosure Index), liability for self-dealing (Extent of Director Liability Index), shareholders' ability to sue officers and directors for misconduct (Ease of Shareholder Suits Index), strength of Investor Protection Index (the average of the three index). *http://www.doingbusiness.org/data/exploretopics/protecting-minority-investors*	World Bank, *Doing Business*
Market capitalisation of newly listed companies	The market capitalization (total number of new shares issued multiplied by their value on the first day of quotation) of newly listed domestic shares relative to GDP. *http://www.world-exchanges.org/home/index.php/statistics/ipo-database*	World Federation of Exchanges
	4. CREATION AND DIFFUSION OF KNOWLEDGE	
R&D activity		
Business expenditure on R&D BERD	Business enterprise expenditure on R&D (BERD) at current prices and PPPs. *http://dx.doi.org/10.1787/msti-v2015-2-table23-en*	OECD, *Main Science and Technology Indicators*
Gross domestic expenditure on R&D GERD	Gross domestic expenditures on R&D covers total intramural expenditure performed on the national territory during a given period. *http://dx.doi.org/10.1787/msti-v2015-2-table12-en*	OECD, *Main Science and Technology Indicators*
Higher education expenditure on R&D HERD	Higher education expenditure on R&D (HERD) at 2010 prices and PPPs. *http://dx.doi.org/10.1787/msti-v2015-2-table45-en*	OECD, *Main Science and Technology Indicators*
International co-operation between patent applications at PCT	The indicator measures international co-operation between patent applications under the Patent Cooperation Treaty (PCT). The measure is calculated as a percentage of total patents (by application date). *http://dx.doi.org/10.1787/data-00507-en*	*OECD Patent Statistics*
Patents awarded	Number of patents awarded to inventors based on their residence. The indicator is a sum of patents awarded by the European Patent Office (EPO) and US Patent and Trademark Office (USPTO). *http://dx.doi.org/10.1787/data-00507-en*	*OECD Patent Statistics*

Category of determinants	Definition	Data sources
Transfer of non-commercial knowledge		
Research in higher education sector financed by business	R&D expenditure performed at higher education and funded by business, measured in 2010 US dollars, constant prices and PPPs. *http://dx.doi.org/10.1787/data-00189-en*	OECD *Science and Technology Statistics*
Patents filed by universities and public labs	Patents filed by universities and public labs per GDP. Only countries having filed at least 250 patents over the period are included. *http://dx.doi.org/10.1787/139a90c6-en*	OECD Science, Technology and Industry Outlook
Universities or other Public Research Organizations as source of information	The share of innovative enterprises that states universities or other PROs as an important source of information for product and process innovation.	(National) Innovation Surveys
University / Industry collaboration on R&D	Survey responses to: the level of collaboration between business and universities in R&D (1 for non-existent collaboration to 7 for extensive collaboration). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Co-operation among firms		
SMEs co-operating with other firms for innovation	Share of innovative SMEs stating any type co-operation as the source of innovation.	(National) Innovation Surveys
Technology availability and take-up		
Turnover from e-Commerce	Total internet sales over the last calendar year, excluding VAT, as a percentage of total turnover. *http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tin00110&plugin=1*	Eurostat, *Information Society Statistics*
Enterprises Using e-Government	The share of enterprises using any eGovernment services. The measure is based on all firms with 10 employees or more, excluding the financial sector. *http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tin00107&plugin=1*	Eurostat, *Information Society Statistics*
ICT expenditure	Expenditure for ICT equipment, software and services as a percentage of GDP. *http://ec.europa.eu/eurostat/product?code=isoc_tc_ite&language=en&mode=view*	European Information Technology Observatory (EITO)
ICT expenditure in Communications	Expenditure for telecommunications equipment and carrier services as a percentage of GDP. *http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_tc_ite&lang=en*	European Information Technology Observatory (EITO)
	5. ENTREPRENEURIAL CAPABILITIES	
Entrepreneurship education		
Population with tertiary education	The share of persons between 25-34 of age with tertiary education including doctoral education or equivalent. *http://dx.doi.org/10.1787/eag-2015-table8-en*	OECD *Education at a Glance*
Quality of Management Schools	Survey responses to: the quality of business schools across countries is (1 = extremely poor — among the worst in the world; 7 = excellent—among the best in the world). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Training in starting a business	The percentage of the population aged 18-64 that received training in starting a business during school or after school. *A Global Perspective on Entrepreneurship Education and Training (2008).* *http://www.gemconsortium.org/report*	Global Entrepreneurship Monitor (GEM)
Immigration		
Migrants with tertiary education	The share of highly skilled migrants as a percentage of total migrants. *http://www.oecd.org/els/mig/databaseonimmigrantsinoecdcountriesdioc.htm*	Database on immigrants in OECD countries (DIOC)
	6. ENTREPRENEURSHIP CULTURE	
High status successful entrepreneurship	Percentage of 18-64 population who agree with the statement that in their country, successful entrepreneurs receive high status. *http://www.gemconsortium.org/*	Global Entrepreneurship Monitor (GEM)
Entrepreneurial intention	The percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years. *http://www.gemconsortium.org/*	Global Entrepreneurship Monitor (GEM)
Desirability of becoming self-employed	Survey responses to: desire to become self-employed within the next 5 years. This question is asked only to non-self-employed individuals. *http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf*	European Commission, Flash Eurobarometer
Opinion about entrepreneurs	Survey responses to: overall opinion about entrepreneurs (self-employed, business owners). They are ranked against managers in large companies and professions. *http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf*	European Commission, Flash Eurobarometer
Fear of failure	Percentage of 18-64 population who perceives good opportunities but who indicates that fear of failure would prevent them from setting up a business. *http://www.gemconsortium.org/*	Global Entrepreneurship Monitor (GEM)
Risk for business failure	Survey responses to: being willing to start a business if a risk exists that it might fail. *http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf*	European Commission, Flash Eurobarometer
Second chance for entrepreneurs	Survey responses to: people who have started their own business and have failed should be given a second chance. *http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf*	European Commission, Flash Eurobarometer

A century of India's economic transformation: a critical review

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Abstract:
The objective of this study is to examine India's transformation from a colonial to a modern economy on the basis of the macro-economic level changes that have occurred over the last century. This is important because it will help us to understand the associated growth performance and its impact on sectoral changes and employment in the wider context of developing economies such as India. The methodology to be followed here is derived from the aims of the study and comparisons of international statistics that provide the means by which to address the research questions and the objectives of this paper. The study found that during the colonial period, the Indian economy became subservient rather than sovereign in terms of policy matters. As a result, economic development was hampered by the removal of 'surplus', along with very high land rents and tribute charges. A densely populated country like India was drawn into the orbit of exploitation in the mid-18th century. Soon after independence in 1947, the Indian government took a number of initiatives to enhance industrial and agricultural development, but the biggest failure was that it did not make any real impression on the country's huge unemployment problems.

Keywords: *Indian economy, colonial period, famines, growth rates, neoliberal reforms.*

JEL Classification: E20, F41, F43, F54

INTRODUCTION

The aim of this article is to analyse economic policy and its performance in India during the past century. In doing so, the article examines the limitations of such policies. This study is important because India is the second-largest populated country in the world, now having almost has same population as China, and also the study of a longer period of economic changes and polices provides us with a better understanding of the past and present. A critical examination of the Indian economy, besides India, can also help other developing countries to draw lessons from its strengths and weaknesses.

The methodology to be followed here is derived from the aims of the study and comparisons of international statistics that provide the means by which to address the research questions and the objectives of this paper. Analysing pre-existing secondary data is the only possible way to obtain macroeconomic data. These include data from official sources and from international institutions such as the IMF (International Monetary Fund), World Bank and OECD. Due to the nature of the topic, it is considered that such methods will be appropriate to undertake this study.

The objective of this study is to examine India's transformation from a colonial to a modern economy on the basis of the macro-economic level changes that have occurred over the last century. This is important because it will help us to understand the associated

growth performance and its impact on sectoral changes and employment in the wider context of developing economies such as India.

In recent years, India has experienced remarkably high economic growth rates, which have led to much speculation in the media that India is an emerging economic super-power (Bhagwati and Panagariya, 2013). However, such discussions have overlooked the fact that this growth has not been accompanied by an associated rise in equality or reduction in social ethnic conflict. However, despite all failings and mistakes, the records of Indian government since the country became independent (about 70 years ago) in most respects has shown vastly better growth and performance than under the previous British colonial rule, especially on such indices as GDP growth rates, living conditions, health, literacy rates, life expectancy and overcoming famine and mass hunger (Siddiqui, 2018a; Patnaik, 2015).

We need to look at basic facts about India's experience with British colonialism and why colonial (mis)rule cannot be put aside. The study also intends to examine the legacy of the *British Raj* and also post-colonial development, and also that later failures do not in any sense invalidate my criticism of colonial exploitation and subjugation.

British economic historian Angus Maddison (2007) calculated that India's share of the world economy was a quarter of the world's GDP in the mid-18th century, larger than that of all European countries combined at that time. In fact, in 1705, this figure was as high as 27% when Mughal Emperor Aurangzeb ruled the country. By the time the British departed India, GDP share had dropped to 3% (Tharoor, 2017). The reason was that India was ruled to benefit Britain and, as a colony for two hundred years, India was financing not only the industrialisation of Britain but also its military ventures in Asia, East Africa and the Middle East (Bagchi, 2010).

This article is organised as follows. Following the introduction to this topic in section I, section II will briefly discuss the colonial legacy. Section III analyses the economic policies and performance of the post-independent period, in particular from 1947 to 1990, whilst section IV examinees the period of neoliberal economic reforms, i.e., from 1991 to date, followed by a conclusion which summarises the findings.

At independence in 1947, modern large-scale industries and mining constituted just 7% of India's GDP, while small-scale industries accounted for 10%, the agricultural sector, 49%, and services and construction, 34%. Total employment in the industrial sector was just 2.9 million people, which amounted to less than 2% of the total workforce (Patnaik, 2015). In contrast to this, small industries employed a much higher proportion, some 7% of the workforce, while nearly 72% of the Indian workforce was employed in agriculture; services including construction employed 18.7%. Cotton and jute were among the main modern industries established in the early 20th century in India (Siddiqui, 1996).

The tasks for independent India in 1947 were to accelerate the transition towards a modern economy, as dominated by industry. This was because at the eve of independence, the agricultural sector accounted for half of the country's GDP and modern industry contributed only 7% of the total GDP. In fact, despite the development of a few industries during colonial rule, India was still predominantly an agrarian country with low productivity that suffered from widespread poverty and illiteracy (Patnaik, 2015). During the 1950s, the government took a number of measures in industrial and agricultural sectors through public investment in accord with its plans to establish several heavy and capital-intensive industries in crucial areas such as steel, machines and tools, power generation, and in irrigation and technical and scientific institutions such as the Indian Institute of Technology. As a result, in the 1950s growth rates rose to be higher than the

previous decades, but still lower than other East Asian economies (Siddiqui, 2016a). The most important issue was that this growth left unemployment and poverty largely unaffected. Moreover, by the late 1960s, the economy began to slow, heralding the start of a crisis that subsequently became more severe in the late 1970s and in the early 1980s where in order to fund populist measures the government resorted to heavy foreign loans (Bhagwati and Panagariya, 2013). This seemed, and indeed was, to represent only short-terms relief for the country, and the situation became more critical in the 1990 (Siddiqui, 2018a).

World oil prices rose in response to the Iraqi invasion of Kuwait in 1990 and, as a result, India's import bills rose sharply; so, when the Soviet Union collapsed in 1991, India experienced a balance of payment crisis. During that time, the then Finance Minister Manmohan Singh in his budget speech stated: "There is no time to lose. Neither the government nor the economy can live beyond its means year after year. The room for manoeuvre, to live on borrowed money or time, does not exist anymore. Any further postponement of macro-economic adjustment, long overdue, would mean that the balance of payments situation, now exceedingly difficult, would become unmanageable and inflation, already high, would exceed limits of tolerance" (Ministry of Finance, 1991-92).

India asked for an IMF loan in 1991 and, in return, the country was asked to implement neoliberal reforms also known as 'Structural Adjustment Programmes' (Siddiqui, 2012). The mainstream economists welcomed this and emphasised that these reforms would increase competition and efficiency and, indeed, the role of individuals in determining national economic outcomes (Ahluwalia, 2002; Bhagwati and Panagariya, 2013). According to them, any distortions were associated with government intervention and regulation of markets and the crucial issue of aggregate employment determination. They argued that under the free market, prices associated with factors of production would adjust to ensure that all factors were fully employed; the economy self-adjusts towards full employment in the long term. Any distortions induced by the government involving the use of monetary and fiscal policy to raise employment would merely generate inflation. They maintained that economic development requires rapid GDP growth, which has a "trickle-down effect", ultimately benefitting the poor. Finally, it was claimed that the higher growth rates would generate large amounts of revenue for the state exchequer, thus enabling the government to invest more in the country and, accordingly, create more jobs (Ahluwalia, 2002; Bhagwati and Panagariya, 2013).

INDIA'S COLONIAL LEGACIES

It is widely recognised that, until 1760, India was the second-largest manufacturing economy after China. India exported cotton textiles to Africa, Europe and South East Asia (Bagchi, 2010). As J. T. Sunderland (1929:367), a British-born and US minister, noted, "India was a far greater industrial and manufacturing nation than any in Europe or any other in Asia. Her textile goods-the fine products of her looms, in cotton, wool, linen and silk-were famous over the civilized world; so were her exquisite jewellery and her precious stones…; so were her fine works in metal-iron, steel, silver and gold… [India] had great architecture…great businessmen, great bankers and financiers. Not only was she the greatest shipbuilding nation, but she had a great commerce and trade by land and sea which extended to all known civilized countries. Such was the India which the British found when they came."

However, in 1757, Robert Clive defeated Nawab Siraj-ud-Duala and Bengal was taken over by the [British] East India Company; at the time, Bengal was the richest province of India. However, after the British imposed colonial rule Bengal in 1757, and

especially after the end of Napoleonic Wars, India's textile industries were systematically destroyed, large urban centres known for textile industries were depopulated, and as result the proportion of people dependent on agriculture rose dramatically. The textile industries in Manchester were protected, while 'free trade' was forced on India. As a result, Indian-made cloths paid higher duties than cloths imported from Manchester. This, of course, had very serious implications for Indian handicraft industries and for social structure and the structure of the rural economy as a whole (Siddiqui, 1990).

India dominated in global textile trade until 1760, but with the onset of colonialism this no longer remained the case. Britain imposed tariffs and duties of 70% to 80% on Indian textiles exported to Britain, making their sale unviable for Indian exporters. This made Indian textiles expensive in the British markets, while India could not impose retaliatory tariffs on British goods since the British controlled the ports and the government (Tharoor, 2017). Under colonialism, Indian manufactures did not receive any assistance from the government, despite lower wages and locally produced raw materials of which the domestic manufacturers could not take advantage. India still grew cotton as a raw material that was exported to Britain. The devastation of textiles' deindustrialisation and the devastation of the textile industry as a whole significantly reduced the urban population, which is also known as de-urbanisation. As the number of people subsequently dependent on agriculture rose sharply, such development drove rural wages down. Of course, there were some good periods too. For example, the American Civil War interrupted supplies of raw cotton from the New World. It resulted in a boom for Indian cotton growers, but once American supplies were resumed in 1865, they suffered again (Siddiqui, 1990).

In a very short period, India moved from being an exporter of high-quality finished goods to a mere exporter of raw materials such as cotton, jute, opium, spices, tea and rice. The huge increase in the cultivation of the opium, indigo, tea and jute led to the decline of land available for the cultivation of food crops. As a result of colonial government policies, India's share in the world manufacturing exports fell from 27% to 2%, while exports from Britain to India rose sharply under the duty-free and free trade regime imposed by colonialism. In fact, the British tariffs and regulations strangled trade in Indian products, effectively closing off the British markets (Bagchi, 2010).

In the agricultural sector, the British created layers of intermediaries between actual cultivators and the landlords who paid land rent directly to the colonial administration. Land rent increased sharply as compared to the pre-colonial period, and during the poor monsoon and famine, rents were not reduced which led to increased reliance on money lenders who exploited the peasants with their high usurious rates of interests, thus keeping borrowers in a position of virtual bondage. The colonial government also strictly followed 'free market' policies, which meant hardly any investment was undertaken by private or government investors. This resulted in steep decline in land productivity (Bagchi, 2010).

In contrast to the Mughal period, under the British land revenue system, if the farmers' crop failed he was not exempted from paying taxes. The British revenue system was based on potential rather than actual output. The land taxes were not returned in the form of public goods or services, but were rather sent to the British government in London. The lack of investment either from public or private sources destroyed Indian agriculture (Patnaik, 2014). As Sir George Wingate expressed, "Taxes spent in the country from which they are raised are totally different in their effect from taxes raised in one country and spent in another. In the former case the taxes collected from the population…are again returned to the industrious classes… But the case is wholly different when the taxes are not spent in the country from which they are raised… They

constitute [an] absolute loss and extinction of the whole amount withdrawn from the taxed country… [The money] might as well be thrown into the sea. Such is the nature of the tribute we have long extracted from India" (cited in Tharoor, 2017:26).

F.J. Shore, who worked as British administrator in Bengal, testified before the House of Commons in 1857: "The fundamental principle of the English has been to make the whole Indian nation subservient, in every possible way, to the interest and benefits of themselves. They have been taxed to the utmost limit; every successive province, as it has fallen into our possession, has been made a field for higher extraction; and it has always been our boast how greatly we have raised the revenue above that which the native rulers were able to extort" (cited in Tharoor, 2017:16).

In the 18th and 19th centuries under Britain, opium was produced in India and exported to China. The British used the profits from the sale of opium to pay for imports from China such as tea, silk and porcelain, which were in great demand in the Europe, while there was no demand in the Chinese markets for European-manufactured goods. Consequently, European traders had to pay for Chinese products with gold and silver. The [British] East India Company established a monopoly on opium cultivation in the Indian province of Bengal, where they forced peasants to grow opium poppies. The opium trade solved this chronic trade imbalance. The efforts of the Qing dynasty to enforce the opium restrictions resulted in two armed conflicts between China and Britain, known as the Opium Wars, i.e., the first opium war (1839-42) and the second war (1856-60), when British and France troops attacked, and forced China to legalise the opium trade (Bagchi, 2010).

As Tharoor (2017:5) finds: "Britain's industrial revolution was built on the destruction of India's thriving manufacturing industries. Textiles were an emblematic case in point: the British systematically set about destroying India's textile manufacturing and exports, substituting Indian textiles by British ones manufactured in England. Ironically, the British used Indian raw material and exported the finished products back to India and rest of the world." Tharoor (2017:5-6) further notes: "The British destruction of textile competition from India led to the first great deindustrialisation of the modern world. Indian handloom fabrics were much in demand in England; …For centuries the handloom weavers of Bengal had produced some of the world's most desirable fabrics, especially the fine muslins, light as 'woven air', that were coveted by European dressmakers. As late as the mid-eighteenth century, Bengal textiles were still being exported to Egypt, Turkey and Persia in the West, and to Java, China in the East, along well-established trade routes, as well as to Europe".

On top of this, Paul Baran calculated that about 8% of the India's GNP was transferred annually to Britain as 'Home Charges' (Tharoor, 2017). Naoroji's book *Poverty and Un-British Rule in India*, which was published in 1892, presented the 'drain theory'. According to Naoroji, this transfer of surplus is the main cause of poverty in India (Bagchi, 2010). Another study by British economic historian Angus Maddison concluded: "There can be no denial that there was a substantial outflow which lasted for 190 years. If these funds had been invested in India, they could have made a significant contribution to raising income levels" (cited in Tharoor, 2017:22). On top of this, thousands of British officials, who worked in India and received inflated wages and pensions and remittances, were another big drain on resources.

However, recently, apologists for imperialism such as Niall Ferguson (2009) and others have denied that the possession of colonies has benefitted Britain or that it contributed to the destruction of the Indian economy and society in any way. This is the reason that it is important to briefly examine the economic and social consequences of

colonial rule in India. Bagchi (2010: XXII) notes: "the years between 1896 and 1913, [Britain superimposed a] long-term downward trend in income and living standards… hundreds of thousands of artisans lost their livelihoods, productivity-increasing investment in agriculture shrank, and business communities in many parts of colonial India were pushed out of the most profitable avenues of trade or become subordinate collaborators of European businessmen. India witnessed some of the biggest famines in history, in Bengal from 1769, in south India from the 1780s down to the 1830s, again between the 1870s and early 1900s in western and southern India, apart from many smaller famines that were not officially recognised." Many artisans became tenants or agricultural labourers or simply starved to death during these famines. Moreover, the colonial government was insensitive to the deaths of tens of millions of Indians during such periods, including several hundred million alone in avoidable malnutrition and poverty-related diseases (Sen, 1981).

After Britain colonised Bengal, the surplus extracted helped Britain in its military success against France. As Bagchi (2010: XXVI) emphasised: "the tribute extracted from India played a critical part in sustaining the British war against the French, and in facilitating the building up of the overseas settlements of Europeans through the process of European migration and British foreign investment from the 1870s to the First World War. Moreover, the migration of indentured labourers to European-controlled plantations stretching from the Caribbean to Malaysia provided sugar, tea, and other plantation products much needed by the global capitalist economy. Thus, Indian history is a critical part of global history as, indeed, global history is a part of Indian history."

Indian nationalists such as D. Naoroji, M.G. Ranade, R.C. Dutt, Mahatma Gandhi and Nehru were highly critical of the economic policy pursued by the British colonial administration in India. These policies were 'free trade' and the role of the state, which was only limited to the provisions of construction of ports, railways and roads to facilitate the transport of raw materials from interior regions to port and returning British-manufactured goods to the Indian markets. Despite certain modifications after World War I, most of the profitable industries, for instance mining and plantations were still controlled by British businesses. The Indian nationalists viewed that state intervention in the economy could help to build basic industries. Unlike imperialist historians such as Vera Anstey, who blamed Indian culture for the country's backwardness and mass poverty in the country (Siddiqui, 1996), nationalists, on the other hand, pointed out about the transfer of the annual tribute to the British rulers, and also the further drain of resources to finance British military ventures from Kabul (Anglo-Afghan War from 1839 to 1842), Burma, Malaysia, Egypt, Sudan and Mesopotamia in 1860s. The British Indian Army was not only maintaining India's security, but was also sent on foreign colonial expeditions to fight for British imperial interests. In 1922, for example, 64% of the total revenue of the government of India was spent on paying for British Indian troops despatched overseas (Bagchi, 2010).

A major characteristic of colonial rule in India led to the destruction of indigenous industries and the failure to replace it with modern industries accentuated the situation in India. On the top of this, problems were compounded through high taxes, the drain of wealth and negligible growth in agricultural productivity and the exploitation of the peasantry by landlords and money lenders, reducing the rural population to extreme poverty. This resulted in widespread famine throughout India, beginning in 1770 with the Bengal famine which is estimated to have killed one-third of the entire Bengali population (i.e., around 10 million). With regards to the total number of deaths in major famines in India, British writer William Digby calculated that nearly 29 million had died between

1854 and 1901 alone (Sen, 1981). Bagchi (2010: XXVI) concluded that: "The process of colonisation of the Indian economy involved the extraction of a tribute from the economy at an unprecedented rate. That extraction, in turn, required the structural adjustment of the economy in the sense that the domestic absorption of the commodities produced by India had to be continually squeezed so as to yield an exportable surplus that would be remitted to the ruling country. That structural adjustment involved the severe depression of investment in both agriculture and industry and also required radical alteration of the modes of extraction of the tribute. Deindustrialisation in India was accompanied not by reallocation of normally growing resources to agriculture but depression of growth rates in both industry and agriculture".

In fact, through the control and subjugation of former colonial countries (i.e., periphery), the 'core' had established the practice of setting the prices not only of primary commodities such as only oil, and minerals, but also tropical agricultural commodities which could not be produced in the temperate regions of the 'core' countries. The rise in demand of certain tropical agricultural commodities was not accompanied by an increase in their prices, however. As Patnaik (2014:3) argues: "The fact that this did not happen, and has not happened till date, needs to be examined. And this explanation lies in the fact that capitalism imposes an 'income deflation' on the people of the 'outlaying regions', which restricts, even reduces, their purchasing power and hence their demand either for these goods directly, or for other goods which are their substitutes in the sense of being producible on the same land mass… 'Income deflation' ensures increasing amount of goods demanded at the 'core', but produced on the tropical land mass is made available to it without any increase in their prices even though tropical agriculture as a whole remains stagnant".

Table 1. China and India in the world economy and world population, 1705-1950 (%)

	Share in world GDP in 1990 (Geary-Khamis PPP) international dollars)				
	1700	1820	1870	1913	1950
China	23.6	33.0	17.1	8.8	4.6
India	27.0	16.1	12.2	7.5	4.2
Developing Countries	71.1	63.0	42.1	29.6	27.0
Western Europe	21.3	22.9	32.6	34.1	26.2
World	100.0	100.0	100.0	100.0	100.0
	Proportion of the world population				
	1700	1820	1870	1913	1950
China	33.0	36.3	28.1	24.4	21.26
India	21.6	20.1	19.8	16.9	14.2
Developing Countries	76.2	74.4	67.8	63.2	67.0
Western Europe	13.2	12.8	14.2	14.9	12.1
World	100.0	100.0	100.0	100.0	100.0

Source: Maddison, 2003, 2007; Bagchi, 2010; Tharoor, 2017.

As Table 1 indicates, in 1700 India was the largest economy in the world, and its GDP share alone was 27%. However, a few decades after colonisation, India's share of the global GDP had decline to 16.1% in 1820, 7.5% in 1913, and was only 4.2% in 1950. China's share of global GDP declined also, especially in the aftermath of the second opium war, i.e., 33% in 1820 to 17.1% in 1870, and which continued to decline to 4.6% in 1950 (see Table 1).

India was one of the richest and most industrialised economies of the world, which together with China accounted for about 75% of the world's industrial output in 1750. In

1600, when the [British] East India Company was first established, Britain was producing only 1.8% of the world's GDP, while India's share was 27%. By 1950, after two hundred years of British rule, Britain accounted for 4.2% of the world's GDP, while India had been reduced to mass poverty, illiteracy and hunger. Moreover, between 1900 and 1947, India's average annual GDP growth was 0.9%, while the population was growing at over 3.5% (Siddiqui, 1996), which was only negated by the high levels of infant and child mortality that reduced population growth to zero and life expectancy to only 27 years. Figure 1 indicates per capita economic growth of India between 1920 and 2015. The figure clearly shows that per capita income did not undergo any increase during the period between 1820 and 1950. However, after gaining independence in 1947, per capita income rose steadily, as indicated in Figure 1.

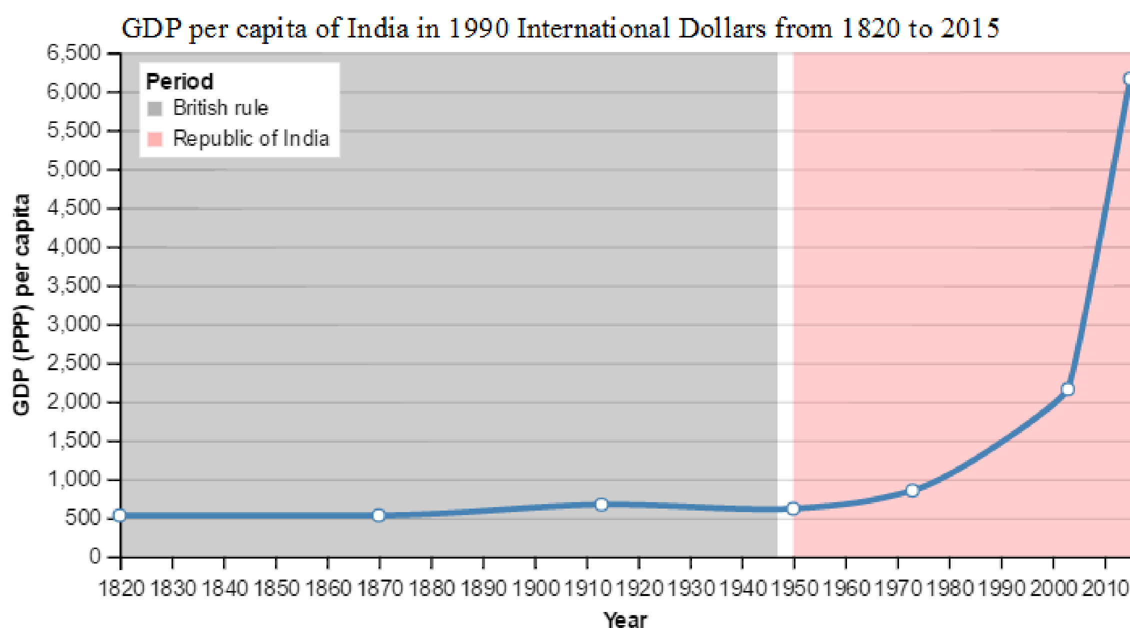

Figure 1. India's per capita GDP from 1820 to 2015

Sources: Tables of Angus Maddison (2003). The per capita GDP over various years and estimate is retrieved from the IMF (2017); OECD (2017). (accessed on 5 June 2017)

On social issues such as the Hindu caste system, colonial rule did not make much difference. Caste is a reality in Indian society and is the predominant social identity in the villages. The castes also reinforce relations of dominance and dependence in rural India. Indian society has been marked historically by a level of institutional inequality due to the Hindu caste system, which includes even 'untouchability' against the 'lower castes'. Despite the inclusion of judicial equality, the colonial administration did not take any concrete measure to undermine this caste social inequality. As Patnaik (2016:5) notes: "there was formal equality before the law for everybody under colonialism, but this hardly had any impact in weakening caste discrimination at the ground level…the absence of alternative opportunities to the most menial and degrading occupation, and were even prevented over large parts of the country from owning any land. What is more, the 'lower castes' were among the worst victims of the economic exploitation of the country under colonial rule, through the twin processes of 'drain of surplus' (which meant a transfer without any *quid pro quo* of resources to the metropolis) and 'deindustrialisation' (which meant the destruction of local craft production by import of machine made manufactured goods from metropolis). The burden of this exploitation greatly increased the pressure of population on land through a process of pauperisation of the peasantry, and this growing

pressure entailed a lowering of real wages of agricultural labourers, among whom, of course, the 'lower castes' had an overwhelmingly presence".

ECONOMIC PERFORMANCE FROM 1947 TO 1990

After independence, India's first Prime Minister, Jawaharlal Nehru, recognised that without the economic diversification and expansion of Indian industries, the aims of modernisation would not be accomplished. He believed that science and technology held the key to India's development and thus the consequent elimination of backwardness and poverty. It was hoped that such polices would increase productivity and generate employment, the latter required to absorb India's large number of unemployed and address the poverty and deprivation colonial rule left behind. The Second Five Year Plan was launched in 1956 with the target of increasing investment in key industries, power and infrastructure (Patnaik, 2015).

The "inward-looking" dirigiste economic strategy was adopted in India from the 1950s onwards, which was seen as the most suitable option by the ruling elites. Also known as the 'import substitution' strategy, under this strategy the public sector was assigned a leading role in the development process. Between 1951 and 1965, the annual average industrial growth was 7%, which was much higher than anything that had been seen in the past (Nagaraj, 1997). There was also a notable shift as the importance of traditional industries such as jute and cotton declined, while modern industries such as machinery, engineering, chemicals, rubber, pharmaceuticals, power and steel became more important. However, the industrial growth also coincided with huge increments in foreign debts and foreign aid, which meant that industrialisation in India did not allow for financial self-reliance (Siddiqui, 2018b). Moreover, Indian industries did not allocate much money for research and development, which resulted in increased reliance on imported technology and foreign multinational corporations. Although pre-reform industrialisation in India was impressive in terms of its growth, it failed to make any real impression on growing unemployment (Siddiqui, 2014a; Nagaraj, 1997).

However, such policies were criticised by the neoclassical economists as inefficient, promoting delays and corruption (Ahluwalia, 2002). The proponents of neoliberal reforms argue that rather than adopting the classic Asian strategy - exporting labour-intensive low-priced manufactured goods to the West - India has relied on its domestic market more than exports and consumption more than investment. In fact, the then government aimed to remove serious gaps in the production structure. Due to the long gestation period, private investors saw such investments as high risk, and also lacked the funds to support them (Patnaik, 2016). In fact, the government was determined not to tax the rich. Therefore, for public sector investment funding, the government relied on foreign aid, deficit financing and indirect taxation. As a result, for example, the share of indirect taxes to the total tax revenue increased from 61.9% in 1955 to 70.7% in 1966 (Patnaik, 2015). Both indirect taxes and deficit financing were regressive, meaning that they had a dampening effect on income for the majority of people. As a result, the domestic market for mass consumer goods did not increase.

The domestic demands for manufacturing were dependent on government expenditure. The government paid little attention towards demand for manufactured goods and also the government's inability to mobilise the resources to finance industrialisation (Siddiqui, 2018b). Land concentration left the agriculture incomes unequally distributed among the rural population and, thus, placed a stranglehold on the expansion of the home market for industrial goods. Inability to tax the propertied classes meant that the state had to rely on other form of potentially inflationary finances like

indirect taxation and borrowings. The domestic industries were protected in the home market meaning a less competitive environment and little threat to their profits. It also resulted in slow growth and little innovations (Chandrasekhar and Ghosh, 2002).

Regarding the agricultural sector, from which nearly three-quarters of India's population received their income, in the 1950s the Indian government passed legislation to implement land reforms, including the removal of rent-seeking absentee landlords. But these modest reforms were met with opposition from the government's own minsters and administrators, and further agrarian reforms in the 1950s failed to make any real impression on the rural inequality. As a result, the reforms failed in removing the agrarian constraints, both in terms of the hurdle to the expansion of domestic market and were also in their inability to end the landlords' domination in rural areas. As Das Gupta notes: "This has four dimensions: first, it defined the demand constraint in the country and perpetuated the huge labour reserves inherited from the colonial period. Second, it ruled out a classical capitalist transformation in ruling out a process of development through creation and channelling of an agrarian surplus into industry. Third, it perpetuated one of the strongest links in preserving the links between caste, gender, and property relations in the hierarchy of definition of property rights. Fourth, it ensured the perpetuation of labour regimes based on extra-economic coercion" (Das Gupta, 2016:123).

However, post-independent agrarian reform - though not fully implemented and uneven in its depth from state to state – did manage to restrict, though not remove, rent-based landlordism, and encourage rural capitalism. The land reform measures in the 1950s, while benefitting some tenants, failed to break land concentration and the top 15% of landowners continued to hold the same percentage of land as before the measures were undertaken (Siddiqui, 1999). Rural inequality persisted, which had obvious socio-economic implications as it restricted the domestic market, including demands for manufacturing goods. On the social front, few changes were witnessed: landlords' oppressive Hindu caste system remained largely intact and untouchables (also known Dalits), who constituted the core of the landless class and were denied land ownership under the old Hindu caste system, remained landless (Siddiqui, 2014b).

In the mid-1960s, the rising prices and balance of payment crisis became unmanageable, leading to the devaluation of the rupee and forcing India to seek a loan from the IMF. Moreover, in the late 1960s, the adoption of HYV (High Yielding Varieties) seeds in certain crops, also known as the Green Revolution, raised agricultural output if HYV seeds are applied in the correct proportion with water, fertilizers and pesticides. Initially it encouraged large landholders towards direct cultivation as additional investment was assured to bring in higher profits due to the availability of subsidised credit, irrigation, and fertilizers. Soon, the Green Revolution also spread to middle farmers. At the time, this did manage to raise agricultural output and yields in certain crops (Siddiqui, 1999); however, now some of the negative effects are more visible such as damage to soil, the level of the water table and the quality of water. But, overall, it did improve the incomes of certain sections of the rural population, which proved to be temporary relief.

Another such short relief came in the 1980s in the form of availability of foreign funds for borrowing. Actually, the extensive funds from oil exporting countries found their way into the Indian financial system. This private financial capital was now available for borrowing, and India took this opportunity and borrowed from commercial banks and non-resident Indians. Access to such capital allowed the government to increase its debt-financed investment. This came as a big relief for the government as the money was used to pay for imports that kept domestic inflation under control. As a result, growth rates

rose more than the previous decade. Because of the slow growth of the period prior to 1980, this sudden increase was known as the "Hindu Rate of Growth", where India was seen to be trapped in low rates of growth by multilateral organisations.

The dirigiste economic strategy brought a very positive change in the industrial sector by building industries in key areas such as power generation, steel and manufacturing industries. However, it failed to achieve land reforms in the sense of curbing the rural power of the landlords and bringing socio-economic equality across the countryside. Despite a number of land reform measures, it did not break the social and economic power of the landlords and also failed to fully implement the 'land to the tiller' policy. The rural poor did not experience any betterment as the majority of these sections also belonged to the lower castes. The government undertook measures to nationalise banks, which meant more credit was made available to the agricultural sector, and subsidies were also extended to agricultural inputs to support the 'Green Revolution'. These measures ultimately increased food production and reduced reliance on food imports. However, such dirigiste strategy promoted capitalist development in agriculture and exposed certain inner contradictions, especially the fiscal crisis of the state. In the 1980s, government began to gradually liberalise trade so that by the mid-1980s India's current account deficit and external debt started to grow. Also, imports grew at a faster rate and the rising current account deficit became increasingly financed by commercial borrowing and non-resident Indian (NIR) remittances, which meant a greater dependence on foreign sources and at higher costs and short-term financing. And as a result, India's foreign debt sharply rose from US$ 20.5 billion in 1980 to US$ 72 billion in 1992, making India the world's third largest debtor after Brazil and Mexico (Nayyar, 2017).

The government reliance on foreign borrowing provided short-term financial relief and in the late-1980s easy access to international credit resulted in the rise of both public and foreign debts. Moreover, the Gulf War and decline in remittances from Indian workers in that region, a dramatic rise in oil prices and, ultimately, the collapse of Soviet Union, created a very challenging situation for India. All these adverse domestic and international factors led to an increase in the current account deficit, which created fear among foreign lenders that India may not be able to meet its debt service obligations. As a result, availability of foreign funds began to dry up, which led to a sharp reduction in reserves and, in July 1991, a balance of payments crisis.

ECONOMIC PERFORMANCE FROM 1991 TO 2017

India saw a severe balance of payments crisis in 1991, when it approached IMF for emergency loans. In return, the IMF demanded the implementation of neoliberal economic reforms involving trade liberalisation, a more favourable climate for foreign investors and also wide-ranging deregulation measures. The adoption of the 'Structural Adjustment Programme' meant increased reliance on market forces and a new policy towards foreign capital. With the adoption of market-friendly policies towards foreign capital, the net inflows of capital rose from less than US$ 1 billion in 1993 to US$ 6 billion by 1999, which further rose from US$ 15.7 billion in 2003 to $65 billion in 2014 (Chandrasekhar, 2013). However, despite the government's efforts to attract foreign capital, India still received less FDI than other developing countries such as Mexico, Turkey and China, as shown in Figure 2.

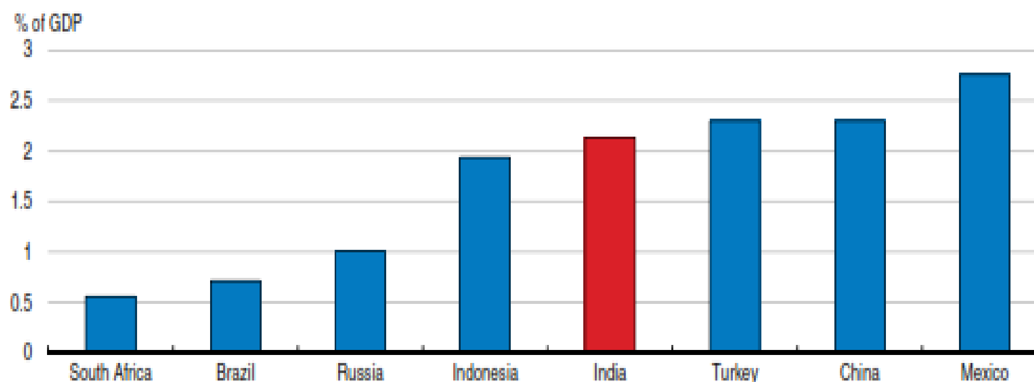

Figure 2. FDI net inflows across countries, 2016.

Source: OECD. 2017:35. http://www.oecd.org/eco/surveys/economic-survey-india.htm (accessed on 15 January 2018).

The inflow of capital in such amounts would not have been possible without the relaxation in laws governing foreign capital and the removal of regulations regarding foreign shareholding and the liberalisation of rules governing foreign investments and repatriation of profit and money from India (Siddiqui, 2016a). The sharp increase in non-debt inflows of foreign capital, especially in portfolio and foreign direct investment, indicates a new trend. As Chandrasekhar (2013:32) concluded: "India's relationship with foreign capital has shifted from muted hostility to one of attracting and wining its confidence, the nature of the regime of accumulation has changed as well. These changes had indeed taken India on to a high growth trajectory by activating mechanisms that were very different in the 1980s, 1990s and 2000s. The long period of relatively high growth created the impression that… the high growth was now irreversible. The argument seeks to establish that… the regimes of accumulation themselves were fragile, besides the fact that growth driven by dependence of financial flows is vulnerable because of the possibility that such inflows can stop, and capital outflows could occur, including for reasons unrelated to circumstances in the host country."

However, greater reliance on foreign capital pressurised India to implement fiscal reforms by bringing legislation in the form of the Fiscal Responsibility and Budgetary Management Act (FRBM), which was passed in 2003 to bring down the fiscal deficit to GDP ratio to 3%. This was an attempt to restrain any attempt to raise growth based on debt-financed government spending (Patnaik, 2016). In the post-2003 period, foreign capital inflows surged, triggering a credit boom that was largely available only to rich and upper-middle class consumers for housing loans, automobiles, and to government for infrastructure. This created optimism and spurred growth, but also increased vulnerability and potential defaulting. In recent years, soon after the boom began, non-performing assets in the banking system have risen sharply and banks profitability could currently be under threat.

It seems that the removal of restrictions on technology imports – so that foreign firms will find it more attractive to set up collaborative enterprises – would be likely to boost domestic production along with foreign capital, technology and management skills. Further capital liberalisation measures taken by the government provided opportunities for retail lending in Indian commercial banks' portfolios. Suddenly, the influx of foreign capital provided excessive liquidity in the system, which could be lent to consumers to allow the purchase of housing, automobiles and consumer durables. This credit was also extended without any collateral and on the basis of speculative projections of borrowers'

current earning profiles. Such individuals have often borrowed excessive amounts of money from multiple sources without revealing this to creditors. The availability of external funds resulted in an increase in debt-finance demand in the late 1990s. As Chandrasekhar (2013:20) argues: "[T]here was evidence of an incipient change in the regime of accumulation. There were two aspects to this change. The first was that private consumption expenditure on manufactured consumption goods and private investment in housing began to play a more important role (relative to public expenditure) in driving demand and growth. Second, associated with this, were signs that debt-financed private consumption expenditure was displacing debt-financed expenditure as a leading stimulus to growth."

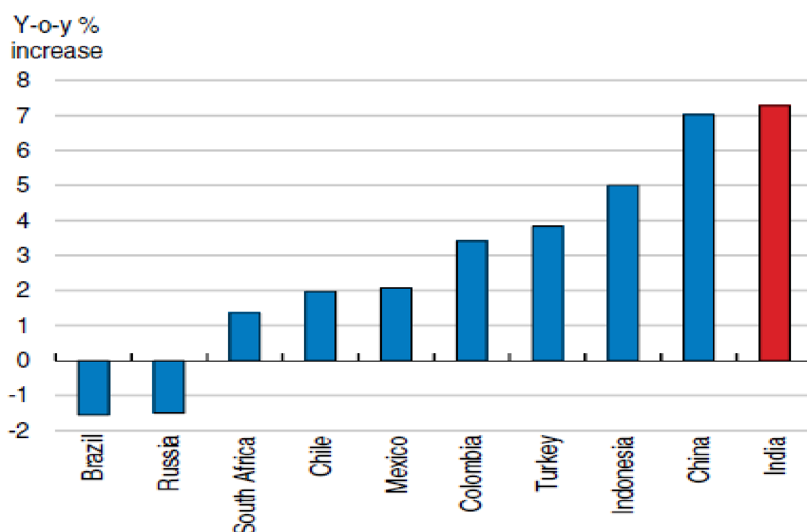

Figure 3. Annual average growth increase 2015-16

Source: OECD, 2017. http://www.oecd.org/eco/surveys/economic-survey-india.htm (accessed on 20 January 2018).

In 2015-16, India's growth performance was highest in the world, slightly above China, as shown in Figure 3. However, only looking at overall growth does not give us the full picture; rather, we need to analyse sectoral growth later on in this article.

On the question of capital stock, during the pre-reform period the public sector was given the leading tasks of most capital-intensive projects such as irrigation canals, dams, electricity, steel mills, and so on. This accounted for a growing share of the country's capital stock. The public sector constituted 41% of the Indian economy's total capital stock in the 1980. However, the public sector's share in India's domestic output has stagnated since the late 1980s. Indeed, its share in capital stock has declined since 1990 and employment has contracted by 10% since mid-1990s (Nagaraj, 2017). As Nagaraj (2015:42) argues, "The public sector's share in GDP...plummeted to 20% by 2008-09, an unprecedented decline of 5 percentage points in five years. However, as the boom went bust after the global financial crisis, the private corporate sector floundered, contracting investment demand, and affecting the banking sector with burgeoning bad debts... Thus, after more than two decades of economic reforms, in 2012-13, the public sector's share in GDP stood at 23% (2 percentage points less than in 1991), employing 17 million workers (two million less than in 1991)".

There is no doubt that since early 1990s industrial production has diversified with improvements in the quality of its products. However, the manufacturing sector's share has stagnated at about 15%, while the industrial share has stagnated at around 26% of

GDP after the reforms (Girdner and Siddiqui, 2008). When we look at the experiences in other countries, such as East Asia and China, Indian industries have clearly not done very well. For instance, when we compare with China, both countries had roughly same levels of industrialisation in the 1950s; India, rather, at this time had slightly more developed industries than China, but by 2015 China became the world's second-largest manufacturing country (Siddiqui, 2009), while India ranked tenth, producing one-quarter of China's industrial output (Nagaraj, 2017). As Figure 4 indicates, in 2010, among the top manufacturing nations India was above Brazil, while China was second at the top just behind US; over just ten years, i.e., from 2000 to 2010, manufacturing declined in the US, but rose sharply in China, while India's manufacturing also increased but to much less of a degree than China (see Figure 4).

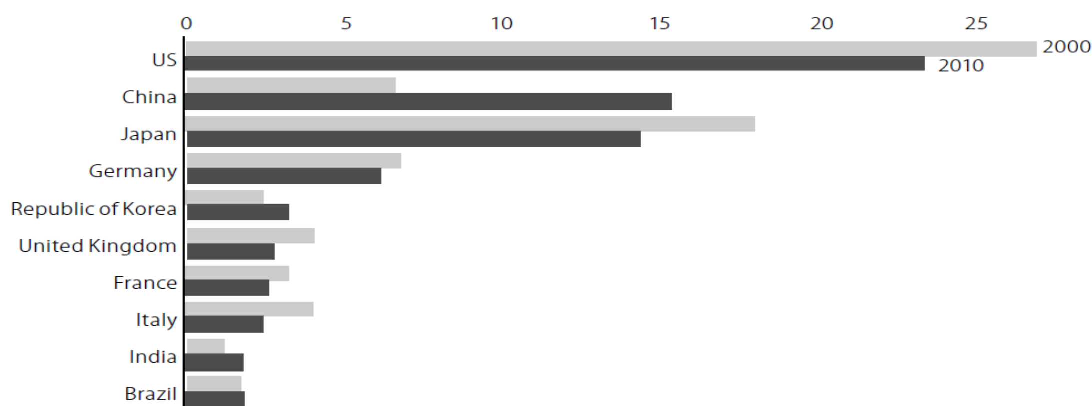

Figure 4. World top 10 manufacturing nations in 2000 and 2010.
Source: UNIDO's International Year of Industrial Statistics, 2014.

On the subjects of post-liberal reforms and industrial performance, Nagaraj (2017:63) summarises that: "the 25-years period can be subdivided into three distinct phases: 1992-96, 1997-2003 and 2003-14. The first phase represents the initial euphoria of reforms, with booming output and investment in the anticipation of a virtuous cycle of faster growth and exports. However, with the expectations of a boost in demand not being realised, industrial growth decelerated. It coincided with the Asian financial crisis, burst of the dot.com bubble, and freezing credit markets in the US in the early 2000s. The period from 2003 to 2014 represents. …the recant debt-led cycle boom and bust… The turnaround in industrial domestic output growth rates [in 2014] not supported by the trends in (i) credit growth and (ii) capacity utilisation in industry". Nagaraj further (2017:67) notes: "the market-friendly policy framework constructed over the last quarter century has not served the manufacturing sector well, despite faster economic growth, and output diversification. The goal of rapid industrialising to catch up with the Asian peers, in an open trade and capital regime employing abundant labour for labour-intensive exports, did not materialise".

At present, the manufacturing sector contributes nearly 16% to India's GDP, provides jobs for 10% of the country's total workforce and produces nearly 80% of its total merchandise exports. Although the manufacturing sector is relatively small in comparison to India's whole economy, this sector could nevertheless play an important role in raising India's productivity and in its development efforts (Siddiqui, 2014b; 2016b).

In the light of a recent study by Dani Rodrik (2016), there is a need to revisit the question of industrialisation, which is still very important for creating employment,

diversifying the economy and removing the low productivity workforce from agriculture. However, according this study, the increased global integration and liberalisation has led to de-industrialisation in some regions. It is very important for a country like India to draw lessons from such a potentially adverse impact, which could be a huge destabilising factor in India. As Rodrik (2016:2) argues: “With some exceptions, confined largely to [East] Asia, developing countries have experienced falling manufacturing shares in both employment and real value added, especially since 1980s. For the most part, these countries had built up modest manufacturing during the 1950s and 60s, behind protective walls and under policies of import substitution. These industries have been shrinking significantly since then. The low-income economies of sub-Saharan Africa have been affected nearly as much by these trends as the middle-income economies of Latin America – though there was less manufacturing to begin with in the former group of countries…Developing countries are turning into service economies without having gone through a proper experience of industrialisation. I call this premature deindustrialisation.” Rodrik further narrates (2016:2-3) “There are two senses in which the shrinking of manufacturing in low and medium economies can be viewed as premature. The first, purely descriptive, sense is that these economies are undergoing deindustrialisation much earlier than the historical norms… The second sense in which this is premature is that early deindustrialisation may be detrimental effects on economic growth. Manufacturing activities have some features that make them instrumental in the process of growth”.

Table 2. India’s macroeconomic indicators and projections (annual % changes), from 2013-14 to 2018-19.

	2013-14	2014-15	2015-16	2016-17	2017-18*	2018-19*
Real GDP*	6.6	7.2	7.6	7.0	7.3	7.7
Consumer Price Index (CPI)	9.4	5.8	4.9	4.8	5.0	4.6
Wholesale Price Index (WPI)	6.0	2.0	-2.5	2.8	4.0	4.2
Fiscal Balance (% of GDP)	-6.7	-6.5	-7.2	-7.0	-6.7	-6.4
Current Account Balance (% of GDP)	-1.7	-1.3	-1.1	-0.8	-0.9	-0.9
Gross Fixed Capital Formation	3.4	4.9	3.9	0.4	4.3	7.3
Total Domestic Expenditure	2.0	6.9	8.0	5.4	7.5	7.9
Exports of Goods and Services, National Accounts Basis	7.8	1.7	-5.2	4.5	4.6	5.2
Imports of Goods and Services, National Accounts Basis	-8.2	0.8	-2.8	-2.3	5.4	6.3
Net Exports, Contribution to Growth of Real GDP	4.5	0.2	-0.5	1.5	-0.2	-0.2

Source: OECD, 2017:12. http://www.oecd.org/eco/surveys/economic-survey-india.htm. (accessed on 6 January 2018).

*Note: *GDP measured in market prices (i.e., at factor costs plus indirect taxes, minus subsidies).*

Table 2 shows India’s macroeconomic changes (average annual % changes) from 2013-14 to 2018-19. The figures of 2017-18 and 2018-19 are projected data from the OECD. India’s rates are projected to remain above 7% per annum, while the consumer price index is expected to remain low. Also, imports will remain higher than exports (see Table 2).

The share of agriculture in terms of GDP in 1950-51 was 56.7%, while its share in total employment was 85% for the same period. The share of agriculture in GDP fell sharply thereafter, and by 2014-15 it was 13%, while the fall in the share in the agricultural employment was much slower (55%), and more than half the population still depends on agriculture for their livelihood, as shown in Table 3.

Table 3. Share of agriculture in GDP and employment in India.

Year	Share of agriculture in GDP at 1999-2000 prices (%)	Share of agriculture in employment (%)
1950-51	56.70	85.0
1960-61	52.48	77.3
1970-71	46.00	63.9
1980-81	40.00	60.0
1991-92	34.04	58.1
2001-02	25.18	57.3
2011-12	14.00	56.0
2015-16	13.05	55.0

Source: National Sample Survey various years, Central Statistical Organisation, Government of India, New Delhi.

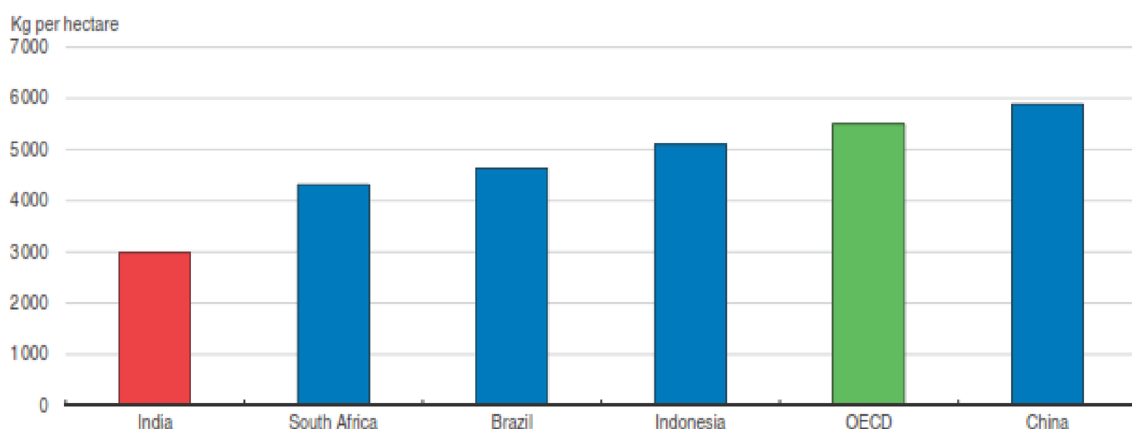

Figure 5. Productivity in agriculture sector, cereal yield, 2014

Source: OECD. 2017:48. http://www.oecd.org/eco/surveys/economic-survey-india.htm (accessed on 4 January 2018).

Although India's annual growth rate was the highest in the world in 2016, when we look at the productivity in agriculture, this is quite low for India and nearly half that of China, as indicated in the Figure 5. India's productivity in the agricultural sector is less than in other developing countries such as Indonesia, South Africa and Brazil.

During the neoliberal reforms, the agriculture sector had been completely ignored, despite nearly two-thirds of the population relying on it for employment and income. Also, the majority of India's poor live in rural areas, and rely heavily on the performance of the agricultural sector. The 1991, the economic reforms package did not consider specific policy regarding agriculture, especially in terms of helping small and medium farmers. Moreover, it was presumed that freeing the agricultural markets and liberalising external trade in agricultural commodities would provide price incentives, leading to a rapid increase in the incomes of farmers and investment in agriculture. With the greater role of market forces leading to a sharp decline in the availability of institutional credit, subsides on fertilizer and electricity were also reduced drastically. All these developments increased difficulties for small and marginal farmers, who were forced into greater reliance on informal credit from money lenders and input from suppliers cum merchants.

There has been little increase in income and productivity for the people trapped in the agricultural and informal sectors, which continue to employ around 90% of India's entire workforce. Agricultural stagnation, poverty, sectarian and religious conflicts have

caused social instability and political division, which may well plague India in the future (Siddiqui, 2017a). In order to achieve sustainable growth in the future, India has to radically change the direction of its economic strategy towards a domestic wage-led growth and employment creation, and also employment diversification to shift workers away from the low-productivity agricultural sector to activities with higher productivity and value added in manufacturing.

Since the introduction of the reforms, the government's priority has changed from self-sufficiency in food production and consumption to production for export. The contribution of the agricultural and allied sectors to GDP has been steadily declining, and was only around 14% in 2016; the annual growth in the agricultural sector has been considerably lower than in other sectors.

Under the WTO (World Trade Organisation), further adoption of trade liberalisation led to the removal of restrictions on exports for certain agricultural goods, particularly rice and wheat; import tariffs were also removed from a number of agricultural commodities. India becoming party to the WTO raised hopes that farmers would benefit from access to global markets. India agreed to zero tariffs on a wide range of crops; however, global uncertainties in prices and the nature of competition were ignored. Indian farmers operated in highly uncertain and volatile global markets, competing against highly subsidised and capital-intensive agribusiness in developed countries. When the global prices fell between 1996 and 2002, the adverse impact of imports were realised and India was forced to renegotiate with the WTO (Siddiqui, 2016a).

However, neoliberal reforms overlooked agriculture sector, which was a deliberate policy as government was keen to resolve the balance of payments crisis but seemed to have no long-term strategy. This decision was difficult to understand as about two-thirds of the workforce was directly or indirectly employed in agriculture sector in the Indian economy, and also more than three-quarters of the poor in rural areas. The economic reforms did not take into consideration this very important sector.

In early 2000s, the rise of demand for IT services abroad has created an IT services boom as profits in this sector rose, providing opportunities for further foreign capital investment collaborations in this sector. This period also coincided with India beginning to be seen as a favoured destination for foreign financial investors. This was also a period when Indian businesses went for excessive borrowing from foreign securities. Moreover, in the 2010s, capital inflows exceeded the balance of payments leading to an appreciation for the Indian currency. In fact, excessive foreign capital inflows have resulted in surplus foreign exchange reserves, though it is important to note that these reserves are not earned through exports but are rather borrowed from foreign capital investors.

With its increased integration with the global market, the Indian information technology (IT) industry has grown phenomenally. With the increased demands for software following the personal computer (PC) revolution in the 1980s, Indian IT companies have responded to the growing demand for networking. The commercialisation of the internet in the 1990s and growing demands for IT engineers from India to repair and maintain computers prompted the rapid growth of the IT industry. After the economic reforms of 1991, as observed by Das and Sagara (2017: 57), "India's position as the preferred business process outsourcing (BPO) and knowledge process outsourcing (KPO) destination in the world had been established. India entered the global IT market by capitalising on the demand for low-cost but high-quality programming skills… Besides a favourable domestic policy climate and highly attractive export promotion schemes, a host of external factors was crucial for the growth of the software

industry". Analysing the impressive performance of Indian IT services in recent years, Das and Sagara (2017: 57) further note that: "in 2005 alone, the IT and BPO/business process management (BPM) business had generated a revenue worth US$ 148 billion (amounting to 8.1% of the GDP), and its exports had amounted to approximately US$ 98 billion. The Indian IT companies have set up to over 600 delivery centres across 78 countries, thus maintaining their leadership position in the global sourcing arena... the Indian IT sector is still viewed by the major MNCs from the industrialised nations as a destination where cheap labour is available".

The important question is whether the rapid economic growth was actually due to the economic liberalisation policy of the 1991, to which it is often attributed. To answer this, Nayyar (2017:45) states: "If we consider the 20th century in its entirety, the turning point in economic performance, or the structural break in economic growth, is 1951-52. If we consider the period 1950-1951 to 2000-01, the turning point in economic growth is 1980-81… During the 20th century, the most significant structural break, or departure from the long-term trend in economic growth, was 1951-52, followed by 1980-81. In either case, 1991 was not a turning point… Therefore, it is not possible to attribute the significant jump in India's growth performance to economic liberalisation even on a post hoc, ergo propter hoc basis." He further (2017:46) notes: "The biggest failure of the last 25 years is that, despite such rapid economic growth, employment creation has simply not been commensurate. In fact, the employment elasticity of output declined steadily from reasonably high levels during 1972-73 to 1983 (0.60) through modest levels during 1983 to 1993-94 (0.41), to low levels during 1993-94 to 2004-05 (0.17) and 2004-05 to 2011-12 (0.04). In fact, between 2004-05 and 2011-12, employment elasticity of output in agriculture (-0.42) and in manufacturing (0.13) plummeted, as compared to the 1983 to 1993-94 period when in was much higher in both agriculture (0.49) and manufacturing (0.47)."

CONCLUSION

India and China were the top two manufacturing nations worldwide until the British conquest of Bengal and the defeat of the Chinese in the first opium war. In fact, colonialism degraded the Indian economy and squeezed the incentives for local investment in industry and agriculture. For the majority of the colonial period, Indian agriculture stagnated and foodgrain output fell. As a result, peasants became highly indebted to money lenders and had hardly any support from public expenditure on irrigation, soil management or rural infrastructure, particularly devastating when the agricultural sector experienced crop failure and drought. The primary goal for the British colonial administration was to extract revenues from the peasantry. From the mid-18th century, India's economy was integrated into the British colonial system which, besides extracting surplus value, also imposed an international division of labour with unequal terms of trade where India was turned into a supplier of primary commodities.

During the colonial period, the Indian economy became subservient rather than sovereign in terms of policy matters. The Indian economic surplus was transferred to Britain, which did not lead to job creation into the local economy. As a result, economic development was hampered by the removal of 'surplus', along with very high land rents and tribute charges. A densely populated country like India was drawn into the orbit of exploitation in the mid-18th century and, later on, into the interest of British industry. Such development created mass poverty, de-industrialisation, starvation and famine across the entirety of India.

The study found that soon after independence in 1947, the Indian government took a number of initiatives to enhance industrial and agricultural development. Initially, these met with some modest success including building key industries, becoming self-sufficient in terms of food production and improving literacy rates. However, the biggest failure was that it did not make any real impression on the country's huge unemployment problems. By the mid-1960s economic growth had begun to falter and the fiscal crisis of the state deepened. Finally, India sought an IMF loan in 1991 to avert balance of payment crisis. In return, India was asked to adopt neoliberal reforms.

To compare Indian economic policies under neoliberal reforms with those of the previous period under dirigisme would seem to be important, particularly when we consider this comparison in terms of employment expansion. In the period of neoliberal reform, the growth rates accelerated to 7% annually, but the rate of growth of employment has remained at only 1%, while in the dirigiste period the average growth rate was 3.5%, but the expansion of employment was doubled i.e., 2% annually. It seems that rate of employment growth was far below the natural growth rate of the workforce. This is greater when we further consider displaced peasants and petty producers due to the accelerated process of "primitive accumulation" unleashed by the economic reforms. The neoliberal reform, rather than creating new jobs, saw the total number of unemployed rise and the steady growth of the relative size of the labour reserve.

In fact, in the late 1950s and 1960s the industrial sector did witness a sharp rise. For example, the share of manufacturing in GDP rose from 9% in 1951 to 16% in 1961. Indeed, a decade later this share reached 18% before reaching its peak of 20% in 1996. However, the industrial share in GDP was still less in comparison to other developing economies, particularly in East Asia. For example, in 1971, the manufacturing share in GDP for South Korea was 25%, Malaysia 28%, Thailand 26%, China 35% and Brazil 29% (Siddiqui, 2017b).

The Indian growth story is one of around 4% per annum from the 1950s through to 1981, and then 6.3% from 1982 to 2016 (Nayyar, 2017). The source of recent high growth appears to be rooted in services such as real estate, construction, automobiles, IT industries, commercial centres, and the financial sector. Many of these new developments are taking place around urban and semi-urban centres. By contrast, India's rural economy has experienced very slow growth and, indeed, near stagnation during the pro-market reform period (Dreze and Sen. 2013). The study has argued that India's progress towards industrialisation has been disappointing and the optimism that foreign capital and technology would bring efficiency and boost growth in manufacturing has largely been proven unfounded. In fact, manufacturing is very important for a country like India, where rapidly growing manufacturing, besides earning foreign capital, can utilise labour, increase productivity and incomes through linkages and spill-overs into other sectors.

However, since neoliberal reforms were undertaken in 1991, the agriculture sector hardly saw any benefits and, during this period, its growth rates were negligible (Siddiqui, 2010). The pursuit of neoliberal economic policies has led to the withdrawal of the state role in assisting farmers in particular and the rural sector in general, and is instead promoting the interests of global financial capital, with which the Indian corporate capital is closely integrated. Despite the fact that the majority of the country's population has not witnessed any improvement in its living conditions, the government nevertheless celebrates this as a "great achievement"; it has completely ignored economists such as John Stuart Mill when he said that he did not mind a zero growth rate if workers are better off in such a stationary state than in a growing economy. For him, improvements in workers' real incomes should take priority over high GDP growth rates. On this account,

the statistics reveal that half of India's population has witnessed stagnation in its real per capita income.

It seems that recent growth based on neoliberal economic policies are fragile as their success relies heavily on foreign capital inflows (Siddiqui, 1998); if such inflows reverse due to external reasons or the global situation, then this could lead to a similar situation as that experienced during the 1997 East Asian crisis.

India should focus its efforts on building its industrial sector based on manufacturing because it is well established that increasing returns are received based on productivity growth and also where backward and forward linkages to the rest of the economy could be established. India faces many challenges of poverty and growing inequality. It needs to stimulate growth within its manufacturing sector rather than increasing dependence on export-led growth, as such a strategy relies on foreign demands and markets which are already stagnant and for which there is little hope of a dramatic reversal.

Now, after more than a quarter of a century since the inception of the neoliberal market reforms, it seems that the high growth rate has failed to make any impression in expansion of employment. Therefore, the study argues that the problems are not just in rapid growth rates, but the reliance on unsustainable stimuli to growth. The current growth is not sustainable as it is unable to address the problems of massive unemployment and other forms of social deprivation in India.

The study suggests that an alternative economic policy is needed, which should be based on raising the incomes of agricultural workers, expanding domestic markets, and the revival of public investment in crucial areas such as irrigation, education and health. Such measures would eliminate illiteracy and improve health and will raise productivity and domestic markets. Therefore, government intervention is needed to achieve inclusive growth; such intervention should be aimed at increasing employment and redistributing incomes, and ultimately ensuring access to basic services such as food, education and health care.

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High Frequency Trading, it's role in the 2007/2009 financial crisis and the 2010 flash crash

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Abstract
High Frequency Trading (HFT) is automation of the conventional securities trades in exchanges that begins by placing limit buy or sell orders, connecting the buyer to the seller and executing the transaction for profit. HFT began in the wake of the millennium and rapidly grew till 2005, later dropping after the 2007-2009 financial crisis; igniting a huge debate. I argue that HFT neither caused the 2007-2009 financial crisis actually occasioned by mispricing of subprime mortgages nor the May 6, 2010 flash crash actually caused by the immediacy problem. That HFT is just an algorithm that attracted mistrust by a section of exchange stakeholders by reason of high speed trade execution. I finally forecast that HFT can only gain more ground after reaching its lowest in 2014, but that it requires regulation to operate in stability.

Keywords: *algo-trading, immediacy, high frequency financial, econometrics, latency, regulation*

JEL Classification: C01, G01, G12, G15

INTRODUCTION

The ordinary process of securities trading entails receiving a buy or sale order, determining whether the bid-ask spread is within the desirable thresholds of the trader; cognizant of the conveyance costs of brokerage, taxes, exchange rates and other costs. Over time, physical convergence of buyers and sellers in the exchange floor to carry out this process has been replaced by computers which are programmed for parameters like the desired margins, trade size (volume), brokerage fees, taxes and other costs. The programs used are algorithms that command a computer to execute a transaction without human prompting. Traders who subscribe to this form of trading are also known as algo-traders. This operation results in a much easier process that saves time; resulting in a higher frequency of trade filling which has come to be known as High Frequency Trading (HFT) (Krudy, 2010). This conceptual note evaluates HFT activity with a view to establish the trend of its adoption. This will help stakeholders to make the necessary preparations towards institutionalizing ago-trading in exchange markets.

The aim is to evaluate the status of the debate on HFT adoption by traders in transaction execution. This entails an examination of the adoption trends over the last decade and a projection of future expectations. Three objectives have been pursued: first is to assess the status of the HFT debate by reviewing arguments for and against its adoption. Secondly, to find out the relationship between HFT activity and the infamous 2010 flash crash. Finally, I seek to find out the relationship between HFT activity and the 2007-2009 financial crisis.

METHODS

This is a conceptual review of the history and development of HFT, which employs analysis of the process of closing a sale using the HFT algorithm. It may be recalled that HFT entails submission of limit orders, that is, securities orders with preferred minimum sales price and/or maximum buy prices. These figures are plugged into a database containing all the orders submitted. The search engine is activated which identifies the securities and closes the sale by debiting the relevant buyer bank account and crediting the corresponding seller bank account, both of which are also fed into the algorithm. It may be noted that once the limit orders are submitted, no bargaining window exist unlike where a buyer and seller physically meet. For a physical sale, the purchase price may change depending on the buyer-seller relational chemistry established between them. The key effect is that the 'halo effect' ordinarily established in the case of physical sale, disappears, so that possibility of greater volatility escalates.

DISCUSSION

High frequency trading debate

In 2005, HFT transactions comprised 21% of all exchange traded funds (ETFs) in the United States of America (US). However, by 2012, the percentage had risen to 51% even after the 2007-2009 financial crises. Today, between 50% and 77% of all ETFs in the US and 25% of the Canadian market are transacted through HFT, usually with a Sharpe ratio greater than 10. The growth of computer sophistication in processing time has increased the rate of trading to almost the speed of light. This takes place in as little as 8.5 milliseconds. HFT firms have even moved their servers close to exchanges to further reduce the time and attract more business. HFT has grown to include equity markets, foreign exchange, fixed income markets, commodities and derivatives (Brogaard, 2010). Proliferation of new trading venues, regulation change allowing decimalization, reduced barriers to entry coupled with technological innovation have led to unprecedented growth of HFTs (Moosa, 2016)

Despite HFTs growth over the last decade, a section of finance specialists and practitioners hold dissenting views about this practice. Some feel that it's unfair to deprive traders the novelty of speculating in their business to make profits out of own wit (Bhupati, 2009). Others argue that HFT is dangerous for the markets, while another section like Lotter (2013) support the practice so passionately, quoting Scott Locklin outright dismissal of the cynics against HFT. I submit, in line with the views of Lotter (2013) that HFT is just a computer algorithm that enables high frequency financial data transaction processing and not a trading strategy by itself. This view is shared by Gomber, Arndt, Lutat, & Uhle (2011). A better view would avail by looking at documented advantages and draw backs of HFT.

Arguments for HFT

Top on the list is provision of liquidity. The fact that latency reduces to levels calibrated in milliseconds to a maximum of a few seconds reduces cash holding on assumption that settlement is completed simultaneously. Large share amounts can be purchased through HFT at very small margins. Likewise large amounts of stock can be off-loaded through HFT providing liquidity to the seller in a relatively short time. Secondly, HFT greatly contributes to market efficiency. Efficient Market Hypothesis presupposes inclusion of all public and private information in the stock prices Aldridge (2010). HFT irons out any price discrepancies through arbitrage, hence fostering faster price discovery. A market practicing HFT is a lot less likely to reflect mispriced assets.

Traditional markets possess more asset mispricing on account of information asymmetry compared to HFT markets.

Activities of HFT also lead to lower transaction costs. Most costs are anchored on the bid-ask spread, which is characteristically thin in HFT transactions. Brokerage costs which are sometimes a percentage of the spread grow thinner; and even if they were based on the total stock value, the charges would still be less. HFT transactions are more profitable than the conventional trading. Not on the basis of margin per trade but on the basis of number of transactions per unit time (Aldridge, 2010). Table 1 shows the annualized Sharpe Ratio for various trading frequencies. Clearly, the table shows that higher the frequency, higher the annualized Sharpe ratio. Lowest margins in highest number of transactions yield the highest Sharpe ratio.

Table 1. High Frequency Trading profitability potential

Trading Frequency (Latency)	Average Maximum Gain per period	Range Standard Deviation per Period	Number of Observations in the Sample Period	Maximum Annualized Sharpe Ratio*
10 Seconds	0.04%	0.01%	2,592,000	5,879.80
1 Minute	0.06%	0.02%	43,200	1,860.10
10 Minutes	0.12%	0.09%	4,320	246.40
1 Hour	0.30%	0.19%	720	122.13
1 Day	1.79%	0.76%	30	37.30

*The Sharpe ratio is also called the Reward-to-Variability Ratio measuring excess return per unit of risk.

Source: Ryan Wagna on High Frequency Trading (2016)

Arguments against HFT

It is likely that HFT is used unethically. Traders may engage in market manipulation. Computers are known to be manipulable to the user’s advantage. For instance HFT firms may include an extra margin in their favour and hide it within the algorithm. Other kinds of manipulation include creation of fictitious orders to influence real traders to place orders and influence stock prices in a certain direction. A case in point is Trillium Capital HFT (2008) in New York which placed huge orders that it had no intention of following through but used it to deceive other traders that there was high activity in those stocks, inducing them to place more orders hence influencing price (Lötter, R., 2013). Undoubtedly, HFT is unfair to traders with small trade sizes. HFT trade sizes are usually denominated in bulk shares, which facilitate a thin margin to retain the trader in business. On the other hand, small traders do not have sufficient capital to subscribe to HFT firms. Since small firms rely manually in seeking buy or sell orders, they cannot access information the way computers do from the exchange buy and sell orders database. On this basis, small traders are likely to be edged out of business (Aldridge, 2010).

HFT may also lead to flash crashes. An example is the one that took place on May 6, 2010. In this case, a series of global events contributed to a dramatic fall in equity markets (Lauricella, et.al, 2010). It all started with the Greek debt crisis led to a decline in the market less than an hour to 2.45 pm in the US. Other traders felt that the market would continue declining and executed short trades. This activity led to a further sell-off, overloaded exchange systems leading to trading firms exiting altogether. It is important to note that HFT did not in itself lead to the flash crash. Other trading behaviour led to it. The working of HFT has been cited by many a scholar as not yet properly understood (Moosa, 2016). Algo-trading is deterministic; the way 2 multiplied by 4 can be fed into a

calculator to invariably yield a product of 8. If then, following the Greek debt issue, traders instructed the HFT firm to sell-off stock prompted by immediacy (Chacko, Jurek, Stafford, 2008) for lower values but altering the parameters, just to quit the market, which has nothing to do with the algorithm. If the input in the above analogy was 1.5 instead of 2 while retaining 4, the output would be 6 – not the calculator's dysfunction. I submit, in that case, that the flash crash was exogenous to the algorithm Gomber, Arndt, Lutat, & Uhle (2011). Immediacy costs refer to transaction costs related to immediate execution of the transaction (Chacko, Jurek, Stafford, 2008), which expands the bid-ask spread.

Other draw backs of HFT include deprivation of liquidity for stressed markets, increased credit risk where the algorithm does not work, possibility of system failure due to infrastructural overload and increased volatility. Fortunately, it can be argued that not all human problems can be programed. If all could be, then it would mean existence in a deterministic world rather than the reality of a stochastic world. In this connection liquidity of stressed markets may be addressed through independent policy interventions by the relevant authorities. Algorithm dysfunction should be regulated by instituting sufficient firewalls to secure the system by way of regulation including insurance. This measure may apply for system failure as well.

High Frequency Trading and 2007-2009 financial crisis

There is no existing empirical link in literature between the 2007-2009 financial crisis and HFT. However, the HFT market share has declined gradually since the crisis took place. In actual sense, the causal direction is such that the financial crisis affected HFT market share and not the converse (Kirilenko et.al. 2011). This observation may be associated with the skepticism that visited traders since the crisis set in (Kaya et.al, 2017). Traders are not techno savvy. They fear technology that they do not understand. The crisis in question was occasioned by the busting of subprime mortgage bubble in the US. This was human error as opposed to the effect of an algorithm. Since then the market share rising trend prior to this bust turned into a decline since then as shown in figure 1. A closer look at figure 1 shows that the market share has been decreasing at a decreasing rate; possibly at its minimum in 2014, which is still higher than 2007. It is expected that traders' confidence will start increasing in later years. This is on account of high profitability as shown in table 1. From this discussion, it is clear that if HFT market has been declining but the transactions have been increasing, it is small traders that have kept the market; gradually recruiting bigger traders.

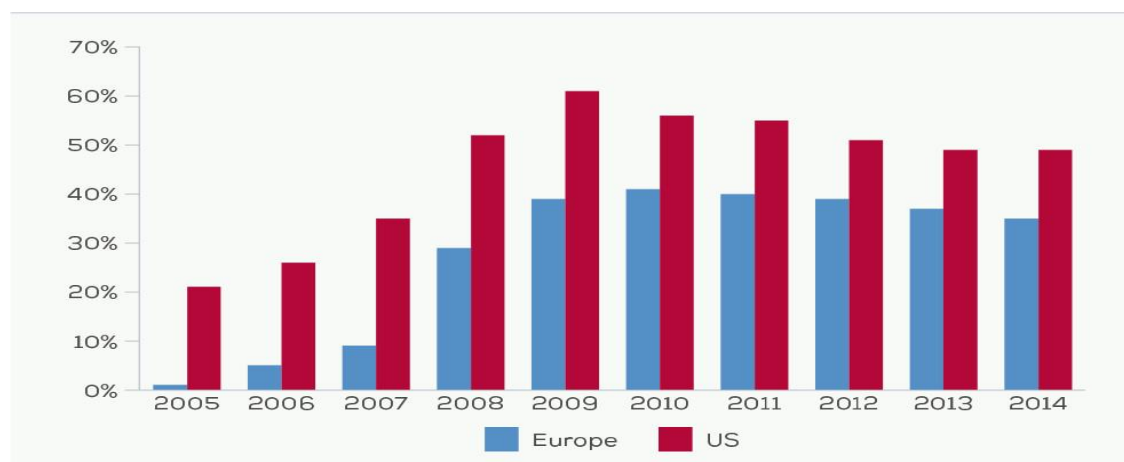

Figure 1. HFT market share with equity before and after the 2007-2009 financial crisis

Source: Orcun Kaya on High Frequency Trading (2016)

HFT regulatory framework

Most of HFT shortcomings can be dealt with by regulation. Currently, HFT firms are governed by Markets in Financial Instruments Directive 2004 (MiFID I). A second edition of the regulatory framework MiFID II is in the offing, to be operational effective January 2018 (Ferrarini & Moloney, 2012). Regulation changes are expected to bear on staff expertise, IT requirements all under organizational requirements. Further, system controls will be enforced to require sufficient capacity and resilient systems, trading thresholds and limits, including proper system testing methodologies. Market abuse is a key area addressed by these regulations with ongoing monitoring of the trading systems. The regulations impose legal obligations for clients of direct electronic access. These include monitoring arrangements, order to transaction ratio and tick sizes. This regulation will hopefully go a long way addressing the fears of bulk stock traders to narrow the gap between them and small traders in terms of trading strategies.

My anticipated contribution as a quantitative behavioural finance scientist in HFT

Conspicuously missing in the HFT scholarly discourse is the behavioural decision making of market players and the asset price forecasting aspects. I posit that there should be a link between the algorithm parameters a trader supplies to the HFT firm and their earnings in the long run. Of course these parameters depict the traders preferred strategies which are a product of their motivations for trading. On the other hand, I feel duty-bound to work on models that forecast asset prices under HFT as accurately as possible justified by the possible rising of the market after 2014 within high frequency financial econometrics.

$$\Delta W = \mu W dt + \sigma W ds \tag{1}$$

where

ΔW = Change in stock price

μ = Average rate of change is the stock price

σ = Stock price volatility

dt = Change in time

ds = A Brownian motion term

The conventional asset price forecasting model is the Ito process depicted by equation 1, a special form of geometric Brownian motion model (GBMM). Black-Scholes-Merton derivatives pricing model derives from it. However, arising from the heightened volatility occasioned by HFT, an additional term is necessary to account for jumps is necessary; and possibly a combination of Markovian methods of GBMM and time series methods Gomber, Arndt, Lutat, & Uhle (2011) may be necessary in HFT asset price modeling illustrated by equation 2.

$$\Delta W = \mu W dt + \sigma W ds + \text{"Jumps"} \tag{2}$$

where jumps are caused by high frequency trading. This equation is neither Riemann nor Ito differentiable by reason of discontinuity.

CONCLUSION

From the above analysis on the debate on HFT and the trends, HFT is making a comeback in market share in a big way while maintaining the transaction share at over 70%. HFT cannot be wished away. Traders have slowly gained knowledge about it and confidence is growing steadily. The initial technical intricacy view by a section of traders is fast waning. The main problem has been erroneous association of financial crises and flash crashes with HFT activity. With the understanding that HFT is just an algorithm that

does not replace the decisions by the economic agent, it is expected to take over ETFs activity for it is just an automation of conventional trading activity in an exchange.
The normal overall effect of automation of processes is that interpersonal interface suffers. However, greater efficiency is harnessed which creates more room for innovation. Information flow is hampered by way of prices not expressing the actual needs of the traders in terms of the difference there would be between physically meeting the buyer/seller and submitting limit orders through HFT. Nevertheless, HFT will continue taking root to facilitate securities' trade globally, facilitating greater allocation of financial resources. This way, an investor in Malaysia can invest in Rwanda from their country and dispose of their investment from any other country of residence.

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Creativity and innovation in achieving success in traditional cake businesses

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Abstract

Many factors influence the success of a business, either internal or external factors. This study aims to examine the interrelationship of internal factors in the form of creativity and innovation to the success of the businesses of traditional cake. Using quantitative methods, data was collected through questionnaires to 37 traditional cake entrepreneurs in Kuala Tungkal City, Tanjung Jabung Barat Regency, Jambi Province. Analysis was done by using path analysis. The results show that creativity and innovation both simultaneously and partially have a positive effect on the success of traditional cake businesses. Innovation has more dominant influence than creativity in the success of businesses. From the descriptive analysis it was found that the success of the business in the form of increasing income was not followed by the addition of new customers. Therefore it is recommended for the entrepreneurs to innovate in product, process, place and design to be able to attract new customers.

Keywords: *creativity, innovation, business success, home industry, traditional cake*

JEL Classification: L25, L26

INTRODUCTION

The increasing population that is not followed by the increase of formal employment opportunities has resulted in people attempting to create their own jobs with their creativity. They later became entrepreneurs in the Micro, Small and Medium Enterprises sector (MSMEs). This is reinforced by data from the Central Bureau of Statistics (BPS) and the Ministry of Cooperatives and Small and Medium Enterprises (UKM) which showed the number of SME actors that continue to grow, especially in the culinary sector. The MSMEs have recruited around 97% of the national workforce, while the macro businesses only owned about 3% of the national workforce (Haryanti & Isniati, 2018)

As entrepreneurs, naturally they always try to achieve their business goals, including earning profits and achieving the desired targets. The success of the business depends on many factors, including the ability of entrepreneurs to run a business, marketing strategies, the nature and type of business, financial support, know-how management, the use of modern technology, market access and networks, government policies and support, a favorable external environment, owner's qualities, etc. (Islam & Al-Mukit, 2016). Whereas Chittithaworn, Islam, Keawchana and Yusuf (2011) summarized the success factors of SMEs in Thailand consisting of external and internal factors. Innovative product, quality, cost, reliability and services are internal strategic key, while external factors consist of social networks, government support and legality.

Another opinion, Tambunan (2012) described the factors that determine the success of one's business consisting of (1) the ability to act creatively and innovatively in carrying out work through ways of thinking and acting, (2) the ability to optimally empower business potential into various productive activities which benefits the business, and (3) the ability to foster an entrepreneurial spirit (creative, innovative and productive). From these three opinions, we can conclude that generally these factors consist of internal and external factors. Internal factors are inherent and can be controlled by entrepreneurs themselves, for example the character, attitude and ability of the entrepreneur in running his business. While external factors are supporting factors and cannot be controlled by entrepreneurs. For example, support the environment around entrepreneurs both from family and business environment in the form of competition and government policy.

The focus of this research is only on internal factors, because internal factors can be controlled by entrepreneurs and are the main capital in achieving business success. This is in line with the argument by Baldacchino (2009) that the essence of entrepreneurs is the ability to create something new and different through creative thinking and innovative action to create opportunities. The ability to develop new ideas and new ways of solving problems and finding opportunities is creativity, while the ability to apply creativity in order to solve problems and find opportunities is innovation. Creativity is what will spur entrepreneurs to innovate (Suryana, 2003; Hadiyati, 2011).

Creativity does not mean just creating something truly new. Modifying something that already exists into a new concept is also creativity (Semiawan, 2009). The ability to make new combinations based on data, information, or elements that already exist or are known before, that is, from all the experiences and knowledge that has been gained by someone during his life both in the school, family, and community environment is also creativity Munandar, 2009). Meanwhile actual innovation is not only limited to products. Innovation is also often used to refer to changes that are perceived as something new by people (Suryani, 2008). Technology and market that changes very fast, product life cycle that are getting shorter, and increasing demands from smart consumers have spurred entrepreneurs to innovate (Keeh & Nguyen, 2007).

Researches on creativity and innovation have indeed been done a lot (Hadiyati, 2011). But understanding and measurement of creativity itself is still debatable (Batey, 2012). The measurement of creativity that is commonly done by previous researchers is based on product orientation, namely the creation of new and useful products (Mumford, 2003). Campbell (2001) described three dimensions of creativity, namely (1) original, (2) usefulness, which makes things better, more practical, simplifies, facilitates, encourages, develops, solves problems, reduces difficulties and bring good results and (3) understandable, i.e. the same results can be understood and can be made elsewhere. On the other hand, innovation is often associated with goods, services or ideas that are felt by someone. Innovation can be in the form of new ideas for other people, for the company or for consumers even though the idea has long existed. Innovation can be done in products (goods, services, ideas, packaging and place) and innovations in management (work, production, financial management, marketing, human resources and others (Larsen & Lewis, 2007). Therefore, it is still necessary to develop research on the influence of creativity and innovation on business success, especially research on the relationship between creativity and innovation in achieving the success of traditional cake business as far as the knowledge of researchers has not been done, especially with descriptive and inferential approaches. The existence of traditional cake entrepreneur needs to be protected, considering that westernization-style cakes increasingly lure the tastes of the younger generation, so this study is expected to provide input in an effort to preserve and increase the success of traditional cake business.

RESEARCH METHODS

This study aims to describe the variables of creativity, innovation and business success and to examine the relationship between variables of creativity and innovation as independent variables and business success variables as the dependent variable. Based on these two objectives, this study uses surveys. The hypotheses proposed are (1) creativity and innovation have a significant positive effect on the success of traditional cake business; (2) creativity partially has a significant positive effect on the success of traditional cake business; and (3) innovation partially has a significant positive effect on the success of traditional cake business.

The research location is in the West Tanjung Jabung Regency, which is located on the East Coast of Jambi Province with an area of 5.009,82 Km^2 or ± 9.38% of the total area of Jambi Province which reaches 53,435.72 Km^2. Of the 13 sub-districts with 70 villages in West Tanjung Jabung Regency, Tungkal Ilir sub-district (with its capital city, Tungkal IV Kota) is the sub-district that has the most population and densest, 67,817 out of total 278,741 people with the spread rate of 24.33% and population density reaching 676 people per Km^2. The majority of the population chooses entrepreneurship with various types of businesses in the informal sector. One of the most sought-after informal sector businesses in the Tungkal Ilir sub-district is home industry business, especially in traditional cakes such as *gembung* bread, *srikaya* cakes, *gandus* cakes, *Bolu Kojo*, etc.

The definition of success in this study is the perception of the entrepreneurs about their ability to achieve his business goals according to what they want. The indicators used are profit, number of customers, competitiveness, good image and revenues which are described in five statements. Creativity in this study is imaginative activities carried out by entrepreneur to be able to produce new creations or combinations of pre-existing, useful and understandable. The dimensions used are novelty, useful and understandable which are described in six statements. The "novelty" is measured by the different method of baking cakes and packaging design that is different from competitors. The "usefulness" is measured by the product package that is easy to carry and by the taste of the product that encourages people to repurchase. While the "understandable" is measured by the production process that is easy to understand and can be applied at other times, also the product packaging is easily recognized. Innovation in this study is an attempt to make changes to be better than before, and it's described in eight items. The dimensions of "innovation" are measured by product innovation, process innovation, place innovation, and design innovation.

The population for this study were 57 traditional cake entrepreneurs in Kuala Tungkal. To determine the sample size, formula of Slovin was applied (Umar, 2008), that is by using a proportional method in accordance with the field of business for each village. By using a precision level of 5%, the number of samples obtained was 37. Meanwhile, the sampling method used in this study is a proportional stratified sampling. Samples were based on the domicile of the business unit as follows:

Table 1. Number of business units as samples based on the area and the type of business unit

No	*Kelurahan*/Villages	Population	Sample
1	Tungkal IV Kota	12	8
2	Tungkal III	12	8
3	Tungkal Harapan	22	14
4	Tungkal II	8	5
5	Tungkal I	3	2
	Total of business units	57	37

Source: Cooperatives and Small and Medium Entreprise Office of West Tanjung Jabung, 2017

Data was collected through questionnaires. Each statement is presented in a multiple choice form using a Likert scale by 1 (strongly disagree) to 5 (strongly agree). For processing descriptive data, SPSS version 22 was applied, while path analysis was used to test the hypothesis. The purpose of using path analysis is to explain the direct and indirect consequences of a set of variables as causes (exogenous variables) of a set of other variables as consequential variables (endogenous variables). Through path analysis, it can be known the influence of each variable and can be described in a diagrammatic structure of the causal variables (exogenous) with the consequential variables (endogenous). This diagram is known as path diagram. The magnitude of the effect (relatively) of an exogenous variable on a particular endogenous variable is expressed by the number of path coefficient of the exogenous to the endogenous. The use of the path analysis is based on the assumption that (a) the relationship between variables is linear, adaptive, and normal; (b) all residual variables are not correlated with each other; (c) the relationship pattern between variables is recursive and; (d) level of measurement of all variables at least interval scale.

Given that the data collected to explain each variable using a Likert scale with ordinal data scale, so before the data is processed, it should be transformed into an interval through the MSI (Method of Successful Interval). In this study, path analysis used by considering the pattern of relationships between variables is correlative and causality.

RESULT AND DISCUSSION

Profile of respondents

The majority of respondents in this study are men (51%), the remaining 49% are women. It indicates that respondents in the study who work as traditional cake entrepreneur in Kuala Tungkal are no longer dominated by women.

The highest levels of education of respondents are senior high school (65%), followed by junior high school (24%) and elementary school (8%). Only one person (3%) has an undergraduate diploma. It is understandable because being a baker / pastry cook generally starts as an hobby and it also requires special skills in culinary. Meanwhile those with an undergraduate diploma generally have a higher job expectation.

Based on age, most respondents are still young, from 30-40 years old (41%), followed by 20-30 years old (27%), 40-50 years old (24%) and only a few of them is 50 years old or older (8%). It indicates that cake entrepreneurs/bakers in Kuala Tungkal are mostly young (68%) and in productive age.

Most traditional cake entrepreneurs in Kuala Tungkal are newcomers. 51% of them are in this business for less than 5 years, 3% (1 respondent) of them are experienced in this business for 12-17 years, and the remaining 46% are in this business for between 6 and 10 years. It indicates that over the past 10 years, traditional cake businesses have been favored by young generation. Traditional cakes have promising market opportunities and also it doesn’t need large initial investment (capital). The majority of respondents acknowledged that their businesses only relied on their own capital (78%) and the remaining 8% from loan capital. The majority of their initial capital (59%) ranges from 5 to 10 million.

Description of business success, creativity, and innovation of traditional cake entrepreneurs

The statistical results showed that the average score for the indicators of business success variable ranged from 3.7027 to 3.8649. The average score of five dimensions and five statements of the variable of business success are 3.7945. Furthermore, of the five

indicators of business success, three of them have scores above average, namely the ability to increase profits, to improve image, and to increase income. Other two indicators, namely increasing numbers of customers and competitiveness have scores below average.

If the results of the statistical calculations are observed per dimension, the highest score lies precisely in the business income and the lower score lies in the increase in customers. It indicates that even though income has continued to increase, it hasn't been followed by the increase in customers. This problem must be taken seriously, because by relying solely on the income of existing customers without being followed by the addition of new customers, in the long run this certainly will result in a decrease in income and profits.

For creativity as a variable, the statistical results show that the average score for indicators of creativity ranged from 3.2973 to 4.027. The average score of three dimensions and six statements of creativity are 3.64. Furthermore, of the six statements of creativity, two of them have scores above the average, namely easily recognized product packaging and easily understood production process. In addition to that, statements that have scores below average and relatively have lower scores are those concerning the different ways of making products. Thus the process of making traditional cakes is simple, by only using traditional tools and materials, which is easily understood by all workers.

Furthermore, for innovation as a variable, the statistical result shows that the average score for almost all indicators ranged from 3.973 to 4.0811. The average scores of four dimensions and eight statements are 3.72. Of the eight statements, five of them have scores above average and three of them are below average. By looking at the dimensions assessed, it shows that innovation in design has the highest score. If it is seen by the statements of respondents, then the statements related to unique packaging that is different from competitor's have the highest score, followed by the statement of variety of cakes produced. Meanwhile the responses that have the lowest score are those that are related to differences in taste of the product. These results indicate that the taste of the cake produced is not diverse, so it's difficult to distinguish it between competitors.

The Table 2. illustrates the average score per indicator, the average score per variable and the standard deviation of each indicator. The statistical results showed that the average score for the indicators of business success variable ranged from 3.7027 to 3.8649. The average score of five dimensions and five statements of the variable of business success are 3.7945. Furthermore, of the five indicators of business success, three of them have scores above average, namely the ability to increase profits, to improve image, and to increase income. Other two indicators, namely increasing numbers of customers and competitiveness have scores below average.

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Table 2. Descriptive statistics of business success, creativity, and innovation

Variables	Indicators	Mean of Indicators	Mean of Variables	Standard Deviation
Business Success	1.Able to increase profits	3.8372		0.69
	2.Increase in numbers of customers	3.7027		0.62
	3.Able to compete	3.7568	3.7946	0.55
	4.Able to improve image	3.8108		0.59
	5.Increase in incomes	3.8649		0.71
Creativity	1.Making different products from competitors	3.2973		0.57
	2.Different product design	3.4324		0.60
	3.Easy to carry packaging	3.5946	3.6396	0.50
	4.Good taste	3.6216		0.49
	5.Production process is easily repeated	4.0270		0.50
	6.Easy to recognize packaging	3.8649		0.54
Innovation	1.A wide variety of cakes	3.9730		0.44
	2.Taste of cake is unique/different from competitors'	3.4595		061
	3.Using modern tools	3.5405		0.51
	4.Inggredients are different from competitors	3.7838	3.7770	0.63
	5.Business location is easy to find	3.9189		0.64
	6.Trying to make customers willing to wait	3.5946		0.50
	7.Different packaging from competitors'	4.0811		0.49
	8.Packaging has prestige value	3.8649		0.57

Furthermore, for innovation as a variable, the statistical result shows that the average score for almost all indicators ranged from 3.973 to 4.0811. The average scores of four dimensions and eight statements are 3.72. Of the eight statements, five of them have scores above average and three of them are below average. By looking at the dimensions assessed, it shows that innovation in design has the highest score. If it is seen by the statements of respondents, then the statements related to unique packaging that is different from competitor's have the highest score, followed by the statement of variety of cakes produced. Meanwhile the responses that have the lowest score are those that are related to differences in taste of the product. These results indicate that the taste of the cake produced is not diverse, so it's difficult to distinguish it between competitors.

Reliability test

An instrument is said to be reliable if the instrument consistently has the same results every time a measurement is made (Ferdinand, 2014). Reliability testing was carried out using SPSS 22 software to see Cronbach Alpha coefficients of business success, creativity and innovation. The following are the results of the calculation.

From the table it can be seen that all statement items are valid. It means that the measuring instrument used is right as an indicator in measuring the variables.

Table 3. Reliability test results

Variables	Statement items	Cronbach Alpha
Business Success	5	0,814
Creativity	5	0,767
Innovation	8	0,780

From Table 3, it can be seen that the overall research instrument for the three variables shows Cronbach Alpha is above 0.7. This value indicates that the three variables show a high level of reliability as a measuring instrument.

Validity test

A measuring tool is said to have high validity if it carries out its measuring function according to the purpose of the measurement. The following are the results of the calculation of the validity of each variable with r table of 0.325.

Table 4. Validity test results

Variables	Indicators	r stat	r table	Note
Business Success	1.Able to increase profits	0.776	0.325	Valid
	2.Increase in numbers of customers	0.614	0.325	Valid
	3.Able to compete	0.488	0.325	Valid
	4.Able to improve image	0.503	0.325	Valid
	5.Increase in incomes	0.744	0.325	Valid
Creativity	1.Making different products from competitors	0.600	0.325	Valid
	2.Different product design	0.750	0.325	Valid
	3.Easy to carry packaging	0.594	0.325	Valid
	4.Good taste	0.443	0.325	Valid
	5.Production process is easily repeated	0.316	0.325	Valid
	6.Easy to recognize packaging	0.374	0.325	Valid
Innovation	1.A wide variety of cakes	0.398	0.325	Valid
	2.Taste of cake is unique/different from competitors’	0.602	0.325	Valid
	3.Using modern tools	0.544	0.325	Valid
	4.Inggredients are different from competitors	0.545	0.325	Valid
	5.Business location is easy to find	0.631	0.325	Valid
	6.Trying to make customers willing to wait	0.474	0.325	Valid
	7.Different packaging from competitors’	0.436	0.325	Valid
	8.Packaging has prestige value	0.354	0.325	Valid

Hypothesis test results

The following are the results of statistical tests on the effect of creativity and innovation on the success of the business of traditional cake entrepreneurs in Kuala Tungkal.

Table 5. Results of path coefficient analysis

Coefficients	Value
Path coefficient X1 to Y	0.275
Path coefficient X2 to Y	0.594
Coefficient of multiple determinations	0.737
Coefficient of determination of external variable to Y	0.260
Path coefficient external variable to Y	0.520

From the results of the path coefficient analysis, it can be seen that creativity and innovation simultaneously have a positive and significant influence on the business success of traditional cake entrepreneurs in Kuala Tungkal. It is proven by the value of coefficient of multiple determinations of 0.737 or 73.7%. It means that 73.7% of the success of traditional cake businesses in Kuala Tungkal is determined by variables of creativity and innovation. Meanwhile other 26.3% is determined by other variables not included in the model. It proves hypothesis 1 which stated that creativity and innovation has a significant positive effect on the success of traditional cake business in Kuala Tungkal is supported.

From Table 6, it is seen that direct effect of X1 (creativity) on Y (business successs) is 0.075 or 7.5%. Indirect effect of X2 (innovation) through X1 is 0.084 or 8.4%. Total value of effect of X1 both directly and indirectly is 0.075 + 0.084 which is equal to 0.159 or 15.9%. Thus the second hypothesis which stated creativity has a significant positive effect on business success proved to be true.

Table 6. Direct and indirect effect of variable X1 on Y

Direct Effect		Indirect Effect Through			Total
		X1	X2	Sub Total	
X1	0.075 +	- -	0.084 +	0.084 +	0.159 +

From Table 7, it is seen that direct effect of X2 (innovation) on Y (business successs) is 0.353 or 35.3%. Indirect effect of X1 (creativity) through X2 is 0.084 or 8.4%. Total value of effect of X2 both directly and indirectly is 0.353 + 0.084 which is equal to 0.043 or 43.7%. Thus the third hypothesis which stated innovation has a significant positive effect on business success proved to be true.

Table 7. Direct and indirect effect of variable X2 on Y

Direct Effect		Indirect Effect Through			Total
		X1	X2	Sub Total	
X2	0.353 +	0.084 +	- -	0.084 +	0.437 +

From the results of the calculation, it can be seen that the innovation variable looks dominant affecting the success compared to the creativity. Thus the more innovations made, the greater the success of the business that will be gained.

The following figure is a recapitulation of path coefficients from the calculations done using a statistical program.

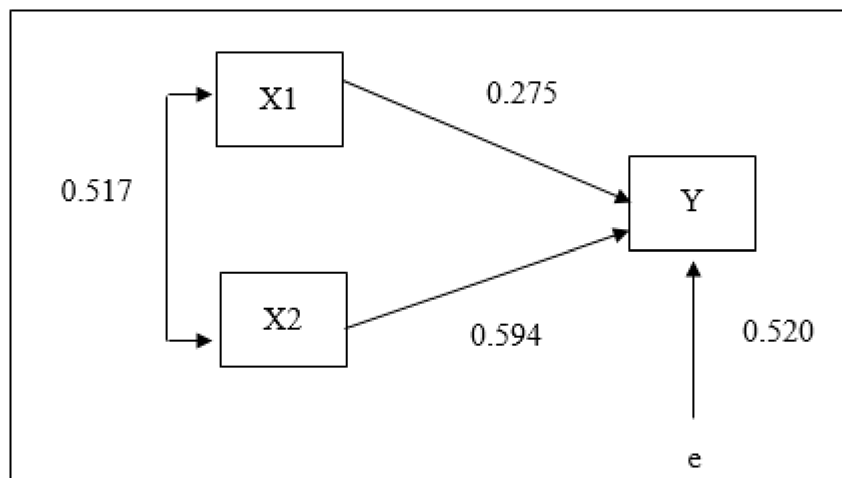

Figure 1. Recapitulation of path coefficients

Discussion

From the results of statistical calculations, it is proven that creativity and innovation have a positive and simultaneous effect on the success of the business of traditional cakes. It means that if creativity and innovation improve, the success of the business will also significantly increase. If it is seen partially, innovation has a greater influence than creativity. It indicates that if the cake entrepreneurs do more product innovation, process innovation, place innovation and design innovation, the success of the business will increase even greater. These findings are different from the study of Hadiyati (2011) who

concluded that creativity has a dominant effect compared to innovation in influencing the success of small businesses. The difference is caused by differences in the characteristics of respondents. Traditional cake entrepreneur who were respondents in this study had limitations in creating cakes with various flavors in order to maintain traditional recipes. But that does not mean that they cannot carry out various innovations.

Product innovation can be done through the diversity of cakes and the appearance of cakes that are unique from competitors. Process innovation can be carried out in the manufacturing process carried out with modern tools but does not reduce the original taste and by using prime quality ingredients that are different from competitors. Place innovations include the location of both as production site and as place to sell that are easy to reach, convenient and hygienic. Design innovations can be done with unique packaging and packaging containing prestige value and in accordance with trends, so that they can attract customers to try and keep repurchase the products. Innovations in services means that the product can be delivered directly to the customers' address or by online order must also not be ignored.

To further preserve the existence of these traditional cakes, it is necessary to support all parties to continue to love the products from heritage. For example by holding regional culinary festivals or participating in every exhibition held by the government.

CONCLUSIONS AND RECOMMENDATIONS

Creativity and innovation have a significant positive effect on the success of the business of traditional cake in Kuala Tungkal. It means that if creativity and innovation are improved it will have a significant effect on increasing business success.

Being compared to creativity, innovation has a dominant effect in influencing the success of the business of cake. Innovation has a greater effect in increasing business success. This fact is in accordance with the characteristics of the product that is traditional food. On the one hand, the sense of traditional must be kept, especially its original recipe, but on the other hand, they still have to innovate to keep up with changing consumer tastes. So the kinds of innovation that can be suggested are place innovation, design innovation, and service innovation. The support of all parties to continue to love traditional products also helps preserve traditional cakes from the tight competition of westernized cakes.

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The dynamics of firm growth, size and liquidity constraints for Botswana listed firms

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Abstract
The study employed panel Ordinary Least Squares (OLS) model and panel Vector Autoregressive (VAR) model to examine the dynamic linkages among firm growth, liquidity and firm size. Specifically the study sought to: examine the key variables explaining the growth of firms in an emerging market; examine the reaction of one variable to innovations in another variable within the system and to identify the major drivers of changes in the main variable and the magnitude of the total effect over a certain period of time. Findings, using both panel VAR and panel OLS, showed that growth of firms is financially constrained by the availability of cash flows. There is a significant relationship between cash flows and firm growth which is consistent with theoretical prediction of imperfect capital markets. The panel VAR analysis further that the presence of financial constraints is sensitive to the measure of firm growth. The study shows the existence of causal relationship among firm size, liquidity and growth. Firm size, depending on measure adopted, is affected by availability of cash flows. Variations in investment expenditure were the main drivers of changes in firm growth, firm size and liquidity. The study suggests the need to improve and have a diversified access to finance. Policy makers should aim to develop the financial sector to guarantee sustainable access to bank and stock market finance. The development of strong institutions and reduction of information asymmetry is highly recommended.

***Keywords**: Panel VAR, Liquidity, Firm Growth, Botswana*

JEL Classification: G31, G32, L25

INTRODUCTION

The growth of firms is fundamental in addressing challenges faced in emerging economies such as unemployment and attaining a prosperous life, by the general populace. Policy makers in different economies are cognizant of the role played by firm growth in driving economic growth. They are very much interested in employment creation while firms are interested in growth of their sales (Coad and Holzl, 2010). Consequently, they have devoted resources to assist firms to attain growth and ensure economic prosperity. Studies on macroeconomic settings have failed to bring clarity on firm growth and subsequently its role on economic growth. Previous studies (Hermelo and Vassolo, 2007, de Wit, and Zhou, 2009, Gopinath, 2012) have been done to test the theories of growth and how they apply to developed nations. There is not much evidence on the applicability of such theories in emerging markets. They have failed to reach consensus on the factors explaining growth due to differences in measuring the growth variable. Growth has been measured using employment levels, differences in logarithms

and rate of growth of sales (Coad and Holzl, 2010, Zhou and de Wit, 2009, Oliveira and Fortunato, 2005).

The extent and magnitude to which firms are affected by financial constraints has not received adequate attention in literature. Financially constrained firms may fail to generate enough resources to support their size and growth efforts. As a result they remain small as they are limited by available internal sources. Firms in economies with cheaper and alternative sources of finance tend to take up growth opportunities easily than their counterparts in less development markets. The development of financial markets may indicate the growth potential of firms. More so, the availability and cost of finance affects the rate of firm growth. Overall, investment volume falls in economies where firms have limited access to financial resources (Campello et al, 2010, Duchin et al, 2010). Firms with limited access to externally generated funding resort to retained earnings which may be inadequate for growth.

This study combines the literature on firm growth and investment literature to understand their dynamic linkages in the context of an emerging market. By engaging literature on financial constraints, the study contributes to the existing knowledge on firm growth. The dynamics of firm growth may be better explained by analyzing its linkages with financial constraints. Past studies have focused on the traditional sources of growth and more so they do not provide adequate guidance to a policy maker in developing market. The standard panel data models used in previous studies and results which they generate are limited in scope and hence their applicability in developing nations. They fail to provide evidence on the dynamic linkages among variables which is important to a policy maker. By employing panel vector autoregression (panel VAR) techniques, the study addresses the following key questions to a policy maker: what are the key variables explaining the growth of firms in an emerging market? How does each variable react to innovations in another variable within the system? Which factors are the major drivers of changes in one variable and what is the magnitude of the total effect over a period? Findings suggest that firms in Botswana are financially constrained in relation to growth. However such constraints are linked to the measure of growth employed. The study provides evidence of causal linkages among the key variables. Variations in investment expenditure were the main drivers of changes in firm growth, firm size and liquidity.

The Botswana Stock Exchange (BSE) is among the leading exchanges in the region and provides a greater variety of investment products in an effort to promote economic development. It started off as the Botswana Share Market (BSM) in 1989 with five listed firms and only one stock broker. The BSM grew over the years culminating into the formation of the BSE in 1994 by the Act of Parliament. The BSE, which became operational in 1995, currently comprises of twenty five (25) listings under the domestic equity (main board and venture capital), foreign equity (main board and venture capital) with ten (10) listings. These thirty five (35) listings can be categorized into financial and non-financial entities. Listings on the domestic equity are relatively small compared to those on the foreign equity with current market capitalization of Botswana Pula (BWP) 41, 737.27 million and BWP 412,872.63 million respectively. The BSE also include, on foreign equity, four (4) exchange traded funds with a current market capitalization of BWP 15016 million.

There is still untapped potential for growth for all firms listed on the BSE. Despite the size of firms and moderate rate of growth, studies focusing on BSE firms have looked at issues other than growth. For example, Josiah, Themba and Matenge (2016) focused on the evaluation of corporate governance in Botswana to check the level of compliance with the code by listed firms. This follows the moving away from the King code, from

neighboring South Africa, which had been governing the manner in which firms operate. Chiwira and Muyambiri (2012) evaluated the presence of the weak form efficiency and they found that the BSE is inefficient in the weak form. Their findings are consistent with those by previous studies (Magnusson and Wydick, 2002, Smith et al, 2002). The rest of this paper is organized into six sections as follows: summary of key studies that focused on area under study; methodology; discussions of findings and conclusion and policy implications.

LITERATURE REVIEW

Theoretical review

The discussions on firm growth in this study are underpinned by the Gibrat's law of proportionate growth. The theory by Gibrat (1904–1980) in 1931 is one of the very first models of industrial dynamics. It suggested an independent relationship between the proportionate growth of a firm and its absolute size. This is sometimes rendered as the law of Proportionate Effect because the rudimentary principle underlying the model is that at the inception of the period of examination a firm’s rate of growth is independent of its size. Thus the probability of a given proportionate change in size during a specified period is the same for all firms in a given industry. The theory suggested that both large and small firms have equal probabilities of growth. The manner in which firms grow is merely by chance as some tend to enjoy above average growth rates while others remain stagnant or they decline. However, Bain (1956) argued that firms below their minimum efficient scale grow more that those that have reached their optimal levels. Firm sizes higher than the minimum efficient scale were associated with losses as enshrined in the neoclassical theory of growth.

The study is also supported by the theory on financial constraints which shows that firms follow the pecking order theory of finance as they source funding (Myers and Majluf, 1984). The theory shows that when faced with constraints to access external funding, firms would resort to internal funding which are considered as cheaper. There are informational asymmetries between lenders and borrowers on investment opportunities or growth potential faced by firms. This results in huge differences on the costs of using internal and external sources of finance to take advantage of such potential. Suppliers of external finance would require a premium to compensate for this lack of information which creates uncertainty.

Arguably, studies linking the theory of growth to the theory of financial constraints (Carpenter and Petersen, 2002, Cummins et al, 2006 and Carpenter and Guariglia, 2008) showed that there is a strong link between these two strands and periods of high profitability were associated with more growth potential. On the other hand, more profitable episodes may be associated with more debt where there is easy access to such markets. This is made possible where firms would use the internal resources as collateral in debt markets. This kind of behavior shows the existence of financial constraints in the market. Discussions that follow focus on the key variables employed in this study in relation to the two theories summarized above.

Firm growth and liquidity constraints

The financial markets are imperfect as such firms may fail to grow due to limited sources of external funding. Firms would rather rely on the availability of cash-flows for making investment. Firms that are financially constrained rely more on availability of cash flows for exploiting growth opportunities. There are studies that bear testimony to this assertion which have been summarized in this study. Markovic and Stemmer (2017) showed that highly financially constrained firms rely more on retained earnings for

growth. Similarly, previous studies (Gopinath, 2012, Oliveira and Fortunato, 2005) showed that leverage has a negative effect on firm growth while liquidity has a positive effect. Furthermore their study showed that manufacturing firms with foreign participation grow faster than service firms. The study showed that the dynamic firm growth model is applicable in manufacturing and not in services industry. Their findings show the significance of industry effects on the analysis of growth. Again, Aregbeyen (2012) showed that firm growth is affected by the financial constraints. These findings are consistent with Zhou and de Wit (2009) who showed that financial capital is important for firm growth.

The findings by Oliveira and Fortunato (2005) on the dynamic analyses of firm growth and liquidity constraints attributed higher growth-cash flow sensitivity to younger and smaller firms as opposed to their larger and older counterparts. This is inconsistent with Schiantarelli (1996) who attributed relatively more severity in financial constraints on firm growth to small and medium sized enterprises (SMEs) particularly in their early years of operation. Fagiolo et al (2004) found that the constraints of liquidity engender a negative effect on growth once controls for size are made and as such smaller firms tend to encounter more volatility in growth patterns post control of liquidity constraints. This was later supported by previous studies (Rozenfeld, et al, 2011, Malevergne et al, 2011) which argued that smaller firms that are more liquidity constrained at inception, grow quite persistently more than their larger counterpart that were less constrained at inception with liquidity.

Firm growth and firm size

Several studies have been done to show the relationship between growth and size. Aregbeyen (2012) showed that firm growth is determined by firm size. The relationship is sensitive to the measure of growth employed in the analysis. On the contrary, Gopinath (2012) showed that firm growth and firm size have an inverse relationship. More so, Hermelo and Vassolo (2007) argued that firm growth is not affected by firm size which is consistent with Gibrat’s law. Furthermore, Klette and Griliches (2000) as the scholars found no relationship between firm growth and size hence purporting Gilbert’s law as true. On the contrary, Bronwyn (1986) had found gross inconsistency with Gibrat’s law as the smaller firms used in the sample displayed quite remarkable constraints in growth as opposed to their larger counterparts. Thorsten et al (2005) supported the precepts set by Bronwyn (1986) as opposed to Gilbert’s theory, the scholar concluded that whether or not financial, legal, and corruption problems affected the growth rate of a firm, all depended on the firm size hence small firms are the most financially constrained.

Heshmati (2001) had hitherto concluded that the relationship that exists between firm size and growth in cognizance to the age of the firm is quite sensitive. In support of his finding the scholar made reference to Geroski, P. (2000) who had further suggested firm size and growth analyses must consider definition of growth and size, functional form and method of estimation. Goyal, Lehn and Racic (2002) on the other hand found a cross-sectional relationship between opportunities for firm growth and variables of leverage. The same validated the prominent role played by firm size in the theory of corporate finance.

Firm size and liquidity constraints

Evidence shows that there is a relationship between firm size and liquidity Constraints. For example, Audretsch et al (2000) showed that medium sized firms displayed more constraints to liquidity pertaining to their financial behaviour regarding investments as opposed to their smallest or largest counterparts. The scholars made reference to Elston and Ann (1998) who also found small firms to be less constrained in liquidity as emergent competition and internationalism has led to improved access to

capital by small firms. The same conclusions were also made by Klette and Griliches (2000) who added that governments are continuously getting committed to funding small enterprises hence alleviating their liquidity constraints.

‘Goyal, Lehn and Racic (2002) found that a negative but highly significant effect of size to liquidity constraints as the scholars observed that the stronger the level of constraints to liquidity, the more firm operations are negatively affected by size. These findings were consistent to those by Klette and Griliches (2000) who concluded that small firms though usually constrained in liquidity at startup are prone to rapidly grow with time as they alleviate their constraints through access to funding. In relation to the same results, Abral and Mata (2003) concluded that larger firms tend to experience more liquidity constraints as they tend to overtrade unlike their smaller counterparts. In contrast to the above, Eroski (2000) rather found no relationship between the firm size and its liquidity constraints as the scholar pointed to firm mismanagement as the main cause of liquidity constraints.

METHODOLOGY

Population and sample

The population for the study comprised of 25 firms that are listed under the domestic equity. Out of this category thirteen (13) firms were dropped from the sample as follows: six (6) financial firms, two (2) firms that were listed after the year 2012, two (2) were listed as venture capital and three (3) did not have adequate data. Thus, a sample of twelve (12) non-financial firms with complete data sets remained

Data and variables

The study employed panel data for the period 2012 to 2017. This period has been selected based on data availability to assist in making a preliminary analysis of the dynamic relationship between three key variables as defined in Table 1.

Analysis tools

The study employed panel ordinary least squares (OLS) and panel vector autoregressive (panel VAR) to allow for comparison in the analysis of the dynamic linkages among variables. Firstly, the panel OLS model was specified as:

$$Growth_{it} = \beta_0 + \beta_1 Size3_{it} + \beta_2 Liquid_{it} + \beta_{it} Inv_{it} + \mu_{it} \quad (1)$$

Where:

- Growth is a measure of firm growth represented by growth1 and growth2.
- Size3 is a measure of firm size
- Liquid is a measure of financial constraints
- Investment (inv) is a measure of investment expenditure by firms
- β_i = Parameters to be estimated
- μ_{it} = Error term

All variables have been defined in Table 1 below.

Secondly, the study specified a panel VAR model due to the potential of endogeneity among variables. This model takes all variables as endogenous and allows for individual heterogeneity. The model is specified as:

$$X_{it} = \delta_i X_{i(t-1)} + f_i + \varepsilon_t \quad (2)$$

Where:

X_t is a four vector variable: {growth, size, inv, liquid,

δ_i are the parameters,

f_i captures fixed effects in the model to allow for individual heterogeneity in the levels of variables.

Love and Zicchino (2006) argued that this technique would allow us to impose the restriction that the underlying structure is the same for each cross-sectional unit. In order to eliminate fixed effects, which are correlated with regressors, the study employed the forward mean-differencing in Arellano and Bond (1995). This transformation removes only the forward mean and preserves the orthogonality between transformed variables and lagged regressors. This allows the study to use lagged regressors as instruments and to use generalized methods of moments (GMM) to estimate the coefficients. The study performed the following diagnostic tests: panel unit root tests were done using methods by Levin, Lin & Chu test and Im, Pesaran and Shin; the problem of multicollinearity was checked using correlation analysis; the choice between fixed and random effects was done using Redundant Fixed Effects Test and Hausman tests and residuals normality test were done using the Jarque-Bera (JB) statistic.

The study employed impulse response functions (IRF) to describe the reaction of one variable to innovations in another variable within the system, ceteris paribus. Residuals were decomposed in such a way that they become orthogonal to allow for the isolation of shocks to one of the VAR errors. The identifying assumption is that variables that appear earlier in the system are taken to be more exogenous while those that appear later are more endogenous. Thus variables that come earlier in the ordering will affect those following contemporaneously as well as with a lag. Confidence intervals should be estimated when using IRF. The matrix of IRFs was obtained from the estimated VAR coefficients and the standard errors were determined and confidence intervals were generated using Monte Carlo simulations. Forecast Error Variance Decomposition (FEVD) was employed to show variables that have short and long term impact on another variable. It was employed to identify the percentage changes in one variable attributable to variations in another. FEVD identifies the major drivers of changes in a variable and the magnitude of the total effect over a certain period of time (Lutkepohl, 2008).

Definition of variables

The expected signs for variables in relation to firm growth were based on evidence found in literature. Variables employed in this study are explained in Table 1.

Table 1. Definition of variables

Variable	Definition	References	Expected signs
Growth1 [1)]	Annual total growth given by Log TA_{it} – Log $TA_{i,t-1}$.	Coad and Hölzl (2012); Markovic and Stemmer (2017); Achtenhagen et al. (2010); Gopinath (2012)	
Growth2	Annual % change in Total assets $(TA_{it} – TA_{it-1})/TA_{i,t-1}$	Gopinath (2012)	
Size3	Turnover/total assets	Aregbeyen (2012); Gopinath (2012)	+/-
Liquid	Total cash flows from operations/Total assets	Markovic and Stemmer (2017); Aregbeyen (2012)	+/-
Investment (inv)	Capital expenditure/total assets	Aregbeyen (2012)	+/-

[1)] Previous studies (de Wit and Zhou, 2009, Coad and Hölzl, 2012) usually use number of employees as a measure of growth. This variable was not used for lack of data for some firms. The study employed growth measure in log differences and in percentage to help check the potential problems of heteroscedasticity (Coad and Hölzl, 2012).

RESEARCH FINDINGS

Panel unit root test

The study employed Levin, Lin & Chu test and Im, Peseran and Shin methods to conduct panel unit root tests. Analysis using the panel OLS model and panel VAR model require that all variables employed within the system of equations are stationary, that is, I(0).

The study evaluated using Levin, Lin & Chu test and Im, Pesaran and Shin test at least at the 5% significance level. The results (Table 2) suggest, using the Levin, Lin & Chu test, that all the variables were stationary at levels I(0). Using the Im, Pesaran and Shin test, results show that size and investment variables were stationary after first differencing.

Table 2. Panel unit root tests

Variable	Levels			
	Levin, Lin & Chu [1]		Im, Pesaran and Shin [2]	
	Statistic	Prob	Statistic	Prob
Growth1	-18.0660	0.0000***	-9.1435	0.0000***
Growth2	-14.8152	0.0000***	-7.6667	0.0000***
Size	-2.5851	0.0005***	0.2409	0.5952
Liquid	-8.3561	0.0000***	-1.8299	0.03360**
Investment	-4.477	0.0000***	-0.9353	0.1748

**** significant at 1%; ** significant at 5%*

[1] For the Levin, Lin & Chu test, the null hypothesis is a unit root (assumes common unit root process)

[2] For Im, Peseran and Shin test, the null hypothesis is a unit root (assumes individual unit root process)

The study also computed the correlation matrix to check for problem for multicollinearity. Table 3 shows that all coefficients were less than 0.8 except for the measures of growth which had coefficients greater than 0.8. Thus the measures of firm growth were not used in the same model to avoid spurious results.

Table 3. Correlation matrix

	Growth1	Growth2	Size	Liquid	Inv
Growth1	1.0000	0.9906	0.0319	0.0264	-0.106
Growth2	0.9906	1.0000	0.0431	-0.030	-0.093
Size	0.0319	0.0431	1.0000	0.3589	0.6957
Liquid	0.0264	-0.030	0.3589	1.00000	0.4349
Inv	-0.106	-0.093	0.6957	0.4349	1.000

Panel OLS model results

The study employed the panel OLS model to determine the factors explaining growth. Such estimations can be done using fixed effects and random effects. The study used redundant fixed effects test on the fixed effects panel OLS model and Hausman test on random effects panel OLS model to identify the best specification. The null hypotheses were as follows, respectively: that fixed effects were redundant and that the random effects were uncorrelated with explanatory variables. Findings, Table 4, showed that fixed effects are not redundant and the random effects are correlated with explanatory variables. As a result the study employed the fixed effects specification for analysis. Using random effects model would result in spurious results.

Table 4 (a). Redundant fixed effects test

Redundant Fixed Effects Tests
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.673915	(7,28)	0.0298
Cross-section Chi-square	20.476493	7	0.0046

Table 4 (b). Hausman random effects test

Correlated Random Effects - Hausman Test
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	18.037211	4	0.0012

The study estimated two (2) models (Table 5) using Panel OLS and findings showed that firm size and liquidity have negative and positive effect on growth respectively. The two models were estimated to check for robustness. Findings showed that firm growth is explained by firm size and levels of cash flows. The evidence shows that firms on the BSE are facing financial constraints on growth. This is reflected by a positive coefficient of the liquid variable in relation to firm growth. The degree of financial constraints, as measured by the coefficient of liquid variable, increases with a different measure of growth. The study shows that a 10% rise in cash flows or liquidity will result in a rise in firm growth by 10.42%. This is double the level of growth experienced when the study uses change in growth as a dependent variable. Thus firms rely more on internal sources of finance for growth. The availability of cash flows drives the rate of growth for firms. There is imperfect substitutability between internal and external sources of finance. Consistent with theory, internal finance appears to be a cheaper source as compared external sources like share issues and debt. These findings are consistent with previous studies (Carpenter and Peterson, 2002, Markovic and Stemmer, 2017, Ismail et al, 2010) which showed the presence of financial constraints among firms. They showed that very severe financial constraint is evidenced by a coefficient of liquid variable that is greater than one (1).

Firm size has a negative effect on growth of firms. This is reflected by a negative and significant coefficient which changes its magnitude depending on the measure of firm growth employed. The study shows that 10% increase in firm size results in 4.86% decline in the growth rate of firms. The result is consistent with the traditional economic theory that postulates that firm size and growth have an adverse relationship. This is explained by the fact that larger firms may not grow much since they would have reached their optimal level. They may have reached a point where the rate of growth would shrink. These findings are not consistent with the theory by Gilbrat (1931) which shows that firm size does not matter for growth. Both larger and small firms have a capacity to grow at a given rate. Furthermore, Aregbeyen (2012) showed that firm growth is positively affected by firm size. These results may be attributed to differences in economic environment where the firms operate and different measurements used for variables employed. For example Gilbrat's model employed the number of employees as a measure of firm size hence the differences in the results. This may also be explained by severe financial constraints as discussed earlier. The negative relationship between firm size and growth is consistent with past studies (Becchetti and Travoto, 2002, Mata, 1994, Hermelo and Vassolo, 2007) showing that smaller firms grow faster than larger ones.

On the other hand, the study shows that investment has a positive but insignificant effect on firm growth. Thus investment expenditure is not useful in explaining firm growth, even though the sign for the coefficient is correct.

Table 5. Fixed effects panel OLS model results

Variable	Model 1 - Dependent. Var: Growth1		Model 2 - Dependent. Var: Growth2	
	Coefficient	**P-Value**	**Coefficient**	**P-Value**
C	0.0190**	0.0031	0.4394 **	0.0036
Size	-0.0220***	0.0009	-0.4857***	0.0017
Liquid	0.0535**	0.0427	1.0422*	0.0974
Inv	0.0058	0.8450	0.1750	0.8016
R-squared	0.5110		0.4909	
Durbin-Watson	2.588		2.4297	
F-stat	3.031**		2.796**	
	(0.0095)		(0.0149)	

**** significant at 1%; ** significant at 5%; * significant at 10%*

It is also important to perform diagnostic tests to check if the model is good and hence its reliability. The study employed the residuals normality test using the Jarque-Bera (JB) statistic which is based on values for skewness and kurtosis. It tests the null hypothesis that the residuals are normally distributed. When residuals are normally distributed the expectation is that the values for skewness and Kurtosis should be closer to zero (0) and three (3) respectively. Findings (Figure 1), using growth1 as a dependent variable, showed that the value for skewness was 0.16 while kurtosis had a value of 3.83, the null hypothesis was not rejected at 5% level of significance. Thus the residuals are normally distributed and the conclusion is that this is a good model.

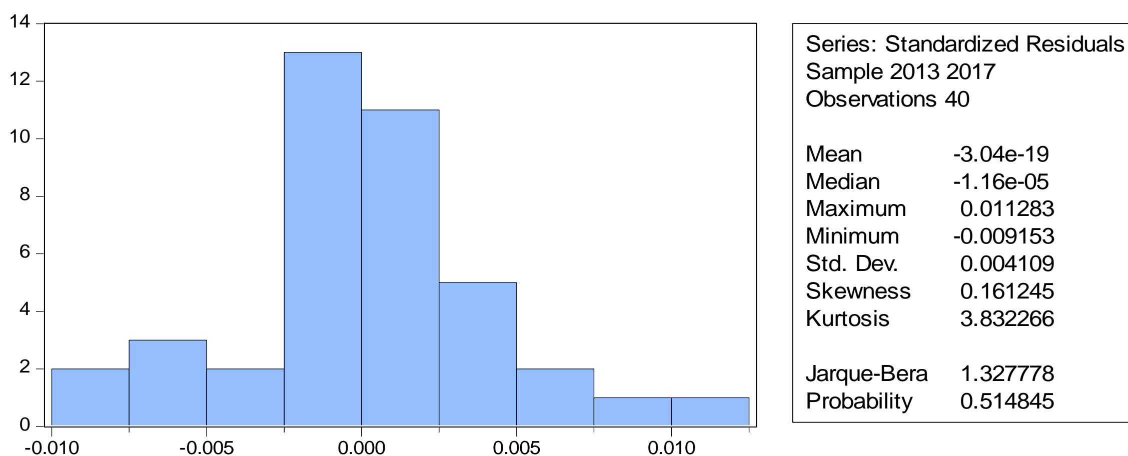

Figure 1. Residuals normality test

Panel VAR analysis

It is necessary to tests for cointegration tests to check for the existence of a long run relationship among variables. Panel Cointegration test is done on the non-stationary. If the linear combination is stationary, the conclusion reached is that there is a long-run relationship among the nonstationary variables. The findings in Table 3, using Levin, Lin & Chu test showed that all variables are stationary in levels as such a Panel VAR Model is appropriate for analysis. Thus the study employed the Unrestricted Panel VAR Model in level form (Gujarati and Gunasekar, 2012) to examine the dynamic relationships

among the variables as opposed to the determination of parameter estimates (Sims, 1980). For that reason, the coefficients in a VAR model may not be directly interpretable. This is because a VAR model is usually over parameterized making its coefficients unreliable for interpretation.

Panel VAR model results

The study shows that liquidity, as expected, has a positive contribution to growth for firms on the Botswana Stock Exchange (BSE). Specifically the study provides that a measure of growth elasticity of 0.0451, which shows that a ten percentage improvement in liquidity would lead to a 0.451 percentage growth in firms. This measure gives a direct effect of liquidity on firm growth for the one year lag while the second lag for liquidity is insignificant. Thus firms on the BSE are financially constrained as discussed using the panel OLS model. There is unidirectional causality flowing from liquidity to growth and not the other way round. However, the causal relationship between firm growth and liquidity is statistically insignificant when using the growth in percentage changes. This shows that the causal link between the two variables in sensitive to the measure of growth employed in the study.

Table 6 (a). Panel VAR Model 1

Response to / Response of:	Growth1 (-1)	Growth1 (-2)	Inv (-1)	Inv (-2)	Size3 (-1)	Size3 (-2)	Liquid (-1)	Liquid (-2)
Growth1	-0.0792	0.4071**	0.0444	-0.0511*	-0.0067	0.0067	0.0451**	-0.03010
	(0.7321)	(0.0339)	(0.1885)	(0.0848)	(0.4249)	(0.4217)	(0.0390)	(0.1687)
Inv	-1.5783	0.9321	0.5516**	0.7752***	-0.0939*	0.0698	-0.0463	-0.0182
	(0.2968)	(0.4479)	(0.0137)	(0.0001)	(0.0926)	(0.2036)	(0.7403)	(0.9001)
Size3	8.8902	0.0827	-2.1112*	3.9732***	1.2041***	-0.2268	-1.3751*	0.3122
	(0.2412)	(0.9892)	(0.0571)	(0.0001)	(0.0000)	(0.4074)	(0.0530)	(0.6681)
Liquid	1.4174	-1.2387	-0.3948	0.6589***	0.1060	-0.1213*	0.4417***	0.3932**
	(0.4203)	(0.3870)	(0.1242)	(0.0041)	(0.1028)	(0.0598)	(0.0084)	(0.023)

**** significant at 1%; ** significant at 5%; * significant at 10%*

Table 6(b). Panel VAR Model 2

Response To / Response Of:	Growth2 (-1)	Growth2 (-2)	Size3 (-1)	Size3 (-2)	Liquid (-1)	Liquid (-2)	Inv (-1)	Inv (-2)
Growth2	-0.0458	0.2967	0.1245	0.1238	0.7991	-0.5479	1.1637	-1.2151*
	(0.8590)	(0.1195)	(0.5484)	(0.5468)	(0.1082)	(0.2855)	(0.1461)	(0.0829)
Size3	0.3778	0.0351	1.1921***	-0.2147	-1.2933*	0.2863	-2.1375*	3.9224***
	(0.2897)	(0.8926)	(0.0001)	(0.4479)	(0.0598)	(0.6838)	(0.054)	(0.0001)
Liquid	0.0568	-0.0409	0.0986	-0.1140*	0.4706***	0.3681**	-0.3914	-0.6501***
	(0.4967)	(0.5032)	(0.1446)	(0.0896)	(0.0043)	(0.0289)	(0.1310)	(0.005)
Inv	-0.0717	0.0437	-0.0961*	0.0712	-0.0571	-0.0121	0.5640**	0.7823***
	(0.3124)	(3985)	(0.0939)	(0.2077)	(0.6719)	(0.931)	(0.0116)	(0.0001)

**** significant at 1%; ** significant at 5%; * significant at 10%*

Investment expenditure has a negative contribution to all measures of growth used in the study. The study shows that there is unidirectional causality flowing from investment expenditure to growth. Firm growth has not effect on investment expenditure in the case of firms on the BSE. The magnitude of the contribution worsens when measuring growth using percentage changes. Using both measures of growth, the study shows that the second lag of investment has an effect on growth while the first lag is insignificant. The study shows that a one percentage point increase in investment

expenditure would cause growth to fall by 0.0511 percent (when using log differences as measures of growth) or by 1.2151 percent (growth is measured by percentage changes).

The study shows that both liquidity and investment expenditure have an effect on firm size using the two different models. Specifically the study shows that liquidity has a negative contribution on firm size. A one percent improvement in liquidity leads to a 1.3751 percent fall in firm size. The magnitude of firm size elasticity falls as we include percentages changes in growth in the system of equations. The second lag of firm size has a negative effect on liquidity using both systems of equations. Thus the study shows that there is bidirectional causality between firm size and liquidity. However there is no evidence of the effect of financial constraints on the firm size since the coefficient of liquidity is negative. Again the study shows that there is bidirectional causality between firm size and investment expenditure using both systems of equations. Firm size has a negative contribution to investment expenditure while investment expenditure makes a negative and positive contribution to firm size when considering the first and second lag of investment respectively. This finding indicates the possibility of a non-linear relationship between investment expenditure and firm size.
The study shows that there is no causal relationship between firm size and firm growth. Firm size has the correct signs as expected but the coefficients are statistically insignificant. In the same manner the coefficients for firm growth carry correct signs but they are statistically insignificant.

Impulse response functions (IRF)

IRFs were employed to determine interrelationships among variables in the system of equations. The IRFs are equivalent to the addition of coefficients of regression on the lagged exogenous variables. The variables of interest are liquidity, firm growth and firm size. Findings are similar using the two systems of equations containing the different measures of firm growth. The study shows that firm growth responds to shocks in investment expenditure, firm size and liquidity. The impact of liquidity is more significant during the first 5 periods after which it subsides. This means firms may be financially constrained during the early years after which they will be able to access external funding. The shocks from investment expenditure and firm size remain significant even after 10 periods.

The study also shows that firm size responds significantly only to shocks in investment expenditure while shocks from liquidity and growth are insignificant. This shows the importance of the role played by investment expenditure in explaining the sizes of firms trading on the BSE. The levels of liquidity are mainly influenced by the shocks in investment expenditure and firms size. Liquidity responds to such shocks even after ten (10) periods. This is evidence that liquidity is influenced by the manner in which firms make investment decisions and change their sizes.

Variance decompositions (FEVD)

Findings suggest that variations in firm growth, measured as a percentage change, were mainly explained by variations in growth throughout the period. However, among the other variables in the system, the study shows that variations in investment expenditure explained variations in firm growth. This is followed by variations in firm size and variations in liquidity. Variations in firm growth, measured as changes in logs, were mainly explained by liquidity in periods 2 to 4 and by investment expenditure thereafter. Variations in liquidity were explained by variations in firm size from period 1 to period 6 and by investment expenditure thereafter. Variations in growth, measured as percentage changes, accounted for changes in liquidity ahead of variations in investment

expenditure up to period 4. Findings are similar, when the system of equations includes growth as measured by log changes except that variations in firm growth accounted for changes in liquidity ahead of investment expenditure in period 1. Variations in firm size were mainly explained by variations in firm growth during period 1 to 3 and thereafter investment expenditure became dominant. This result is similar for different measures of firm growth employed in the system of equations.

CONCLUSION AND POLICY IMPLICATIONS

Conclusion

The study employed panel Ordinary Least Squares (OLS) model and panel Vector Autoregressive (VAR) model to examine the dynamic linkages among firm growth, liquidity and firm size. Both panel VAR and panel OLS provide evidence that firms on the BSE are financially constrained in relation to growth. OLS method was employed to establish the factors explaining growth while the panel VAR approach helped in adding dynamics in the analysis and separate the contributions made by each individual factor to firm growth. It was also useful in determining the factors explaining the variations in the firm growth variable during the review period. It is not possible to determine such dynamics using the OLS approach only. The study employed two systems of equations with a different measure of growth. Botswana firms are heavily dependent on internal funds for growth. This may indicate the high risk aversion of finance managers such that they avoid the usage of external sources of finance like equity and debt which may be costly and result in bankruptcy. Findings, using both approaches, are consistent with theory, internal finance appears to be a cheaper source as compared to external sources like share issues and debt. The presence of financial constraints is dependent on the measure of growth employed in the analysis. The study provides evidence of causal relationships between growth variables like liquidity and investment expenditure. Investment expenditure is the main driver of variations in growth of firms, firm size and liquidity levels during the later periods. Causal linkages were established between firm size and liquidity. The size of firms is not limited by the availability of internal funding. Firms are still spending more on investment up to an optimal level. The study points out the presence of a non-linear relationship between firm size and investment expenditure which has huge policy implications. The findings suggested that firm sizes remain smaller as liquidity levels improve and vice versa. This suggests that firms are electing to spend more on growth.

Policy implications

The overreliance on internal finance suggests that Botswana needs to put in place a better developed financial sector to enhance uptake of other sources of funding. Improved and more diversified access to external finance is a priority for Botswana. The usage of debt finance may help reduce the agency costs as it brings discipline to finance managers. Finance managers need to understand the optimal levels of capital expenditure to help improve firm sizes. The overreliance of funding from the banking sector may not be a panacea for growth. The capital market still needs to be developed to facilitate sustainable access to finance. Financial markets may be limited, due to weak institutions, in the manner in which they improve access to finance by firms. It is also recommended that policy makers put in place strong institutions and reduce information asymmetry to strengthen the role of financial markets in improving access to finance.

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APPENDIX

Appendix 1. Forecast Error Variance Decomposition (FEVD)

Variance Decomposition of Growth2:					
Period	**S.E.**	**Growth2**	**Inv**	**Size3**	**Liquid**
1	0.108149	100.0000	0.000000	0.000000	0.000000
2	0.112419	93.23177	3.396292	0.000881	3.371054
3	0.119255	90.79577	5.784285	0.363246	3.056695
4	0.122703	86.25364	9.235223	0.552427	3.958714
5	0.124951	83.65315	11.66772	0.852444	3.826689
6	0.126916	81.14745	13.82533	0.954796	4.072418
7	0.127956	79.83500	14.84020	1.232250	4.092553
8	0.128940	78.62179	15.94311	1.220788	4.214310
9	0.129466	78.00237	16.15147	1.505813	4.340352
10	0.129982	77.39324	16.61713	1.524603	4.465034

Variance Decomposition of Size3:					
Period	**S.E.**	**Growth2**	**Inv**	**Size3**	**Liquid**
1	0.148831	46.92265	5.993873	47.08348	0.000000
2	0.189967	36.20595	3.743585	56.95746	3.093000
3	0.244218	26.82858	16.77924	52.20049	4.191691
4	0.272929	22.63812	22.94487	46.64665	7.770354
5	0.332043	15.75652	42.06350	33.17581	9.004175
6	0.383960	12.00881	52.74973	24.81080	10.43066
7	0.462540	8.339477	64.20499	17.35251	10.10303
8	0.540816	6.171997	70.18719	14.02002	9.620789
9	0.635701	4.488030	74.76903	12.14048	8.602467
10	0.733128	3.405452	76.92559	12.10039	7.568571

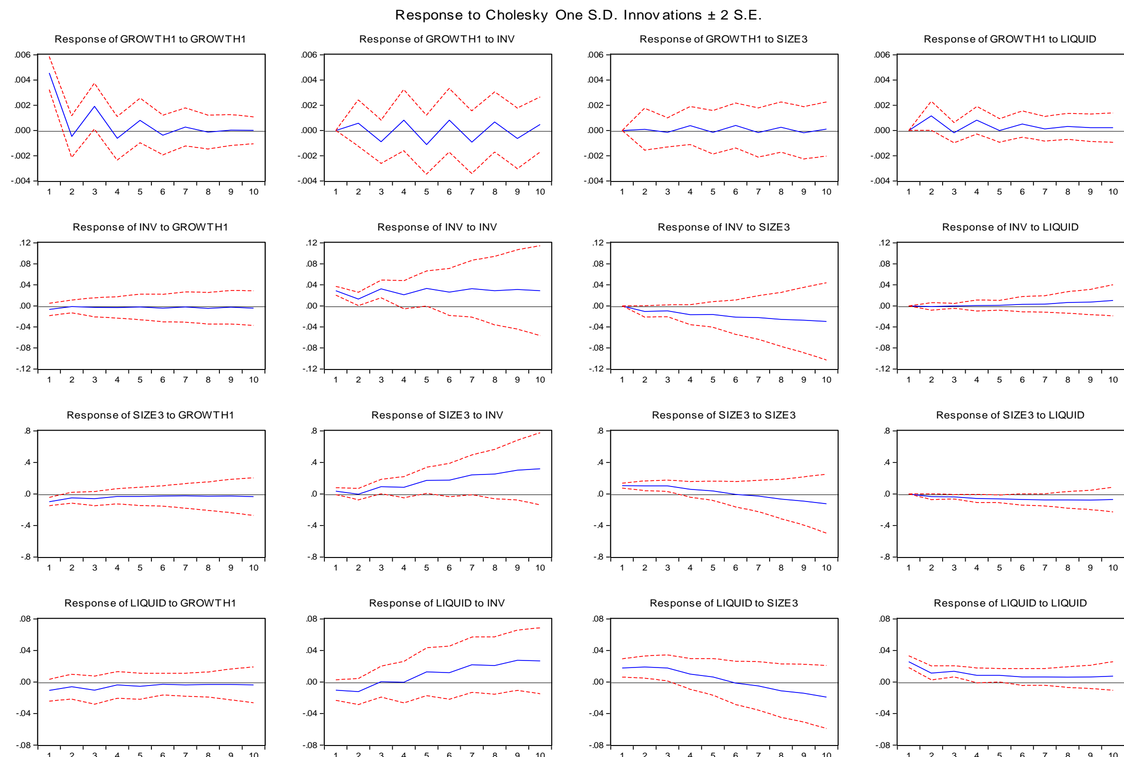
Variance Decomposition of Liquid:					
Period	**S.E.**	**Growth2**	**Inv**	**Size3**	**Liquid**
1	0.034974	14.16050	9.494750	21.79186	54.55289
2	0.043750	12.31592	14.71751	30.38600	42.58057
3	0.049963	13.85734	11.28579	34.70348	40.15339
4	0.051917	13.72630	10.48748	35.50942	40.27680
5	0.054536	13.20909	14.41052	33.37613	39.00426
6	0.056253	12.69664	17.74006	31.43389	38.12941
7	0.060684	11.05056	27.31627	27.72340	33.90977
8	0.065578	9.573623	33.77764	26.68061	29.96813
9	0.072893	7.783724	41.37283	25.75141	25.09204
10	0.080826	6.376111	45.33390	26.98724	21.30275
Cholesky Ordering: Growth2 Inv Size3 Liquid					

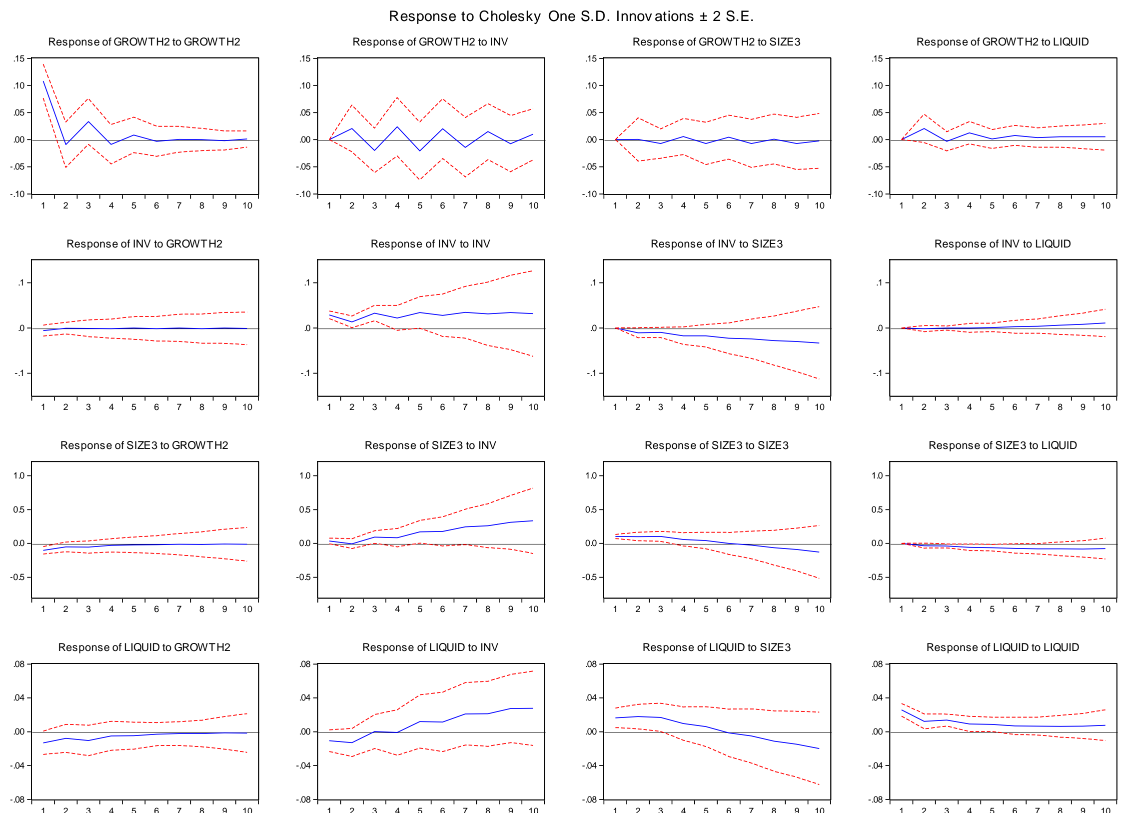
Variance Decomposition of Growth1:					
Period	S.E.	Growth1	Inv	Size3	Liquid
1	0.004550	100.0000	0.000000	0.000000	0.000000
2	0.004755	92.60330	1.443636	0.032775	5.920292
3	0.005211	90.63263	4.187195	0.119670	5.060504
4	0.005385	86.18836	6.193166	0.616803	7.001674
5	0.005558	82.92564	9.848676	0.653278	6.572407
6	0.005665	80.27665	11.51006	1.102021	7.111268
7	0.005751	78.11000	13.78191	1.158707	6.949379
8	0.005805	76.70724	14.84867	1.332330	7.111769
9	0.005847	75.61641	15.81967	1.422741	7.141175
10	0.005872	74.98200	16.35251	1.440657	7.224835

Variance Decomposition of Size3:					
Period	S.E.	Growth1	Inv	Size3	Liquid
1	0.148287	44.34465	5.735000	49.92035	0.000000
2	0.189842	33.75889	3.538563	59.25059	3.451954
3	0.245100	26.40542	16.46443	52.74953	4.380616
4	0.273351	22.55284	22.68232	46.77419	7.990649
5	0.332540	16.17888	41.88085	32.94885	8.991421
6	0.382744	12.68145	52.15510	24.89093	10.27252
7	0.460034	9.067012	63.50014	17.58460	9.848245
8	0.534608	7.023069	69.13181	14.52745	9.317672
9	0.625544	5.318353	73.64442	12.69910	8.338120
10	0.716900	4.293725	75.67634	12.69549	7.334447

Variance Decomposition of Liquid					
Period	S.E.	Growth1	Inv	Size3	Liquid
1	0.034488	9.467492	8.989176	26.22682	55.31651
2	0.043112	7.966071	13.71293	36.01596	42.30504
3	0.049627	10.43749	10.35839	39.91972	39.28440
4	0.051458	10.25643	9.639927	40.95518	39.14846
5	0.054353	10.27475	14.21301	38.03022	37.48202
6	0.056053	9.938883	17.73392	35.81896	36.50824
7	0.060763	8.815234	27.90451	31.14208	32.13817
8	0.065537	7.831655	34.02694	29.65868	28.48273
9	0.072815	6.540994	41.70791	27.90468	23.84642
10	0.080324	5.604776	45.27843	28.66075	20.45604
Cholesky Ordering: Growth1 Inv Size3 Liquid					

Appendix 2. Impulse response functions





Factors that influence bond markets development in Ghana

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Abstract
The various financial crises all over the globe underscore the need for economies to have vibrant bond markets to augment their financial portfolios. Among other benefits, this will enable them to support rapid and sustained infrastructural development, which in turn will lead to swift economic growth. The small size of the Ghanaian bond market, the accompanying huge infrastructural challenges, the overdependence on external debt and Deposit Money Banks (DMBs), the lopsided empirical evidence, which is concentrated on western and Asian economies coupled with mixed findings in related studies call for the need to examine the factors that promote the country‘s bond market development. This study therefore examines the influence of bond market determinants on the development of the bond market in Ghana. Data was collected from secondary sources covering a period from 1980 to 2015. The Vector Error Correction Model (VECM) is mployed as technique of data analysis. The Augmented Dickey-Fuller (ADF) stationarity test, the Johansen Co-integration test and other tests are carried out to ensure the robustness of the results. The findings of the study reveal that bank size, external debt, money supply and size of the economy are significant determinants of corporate bond market development in Ghana. Also, level of economic development, budget deficit and bank size are significant determinants of government bond market size in Ghana. However, bank size, money supply and external debt are seen to be the most important and significant drivers of total bond market size in Ghana.

Key words: *Bond market, VECM, Ghana, Financial crises, infrastructural*

JEL Classification: E44, G10, G12

INTRODUCTION

Bond financing has become a global phenomenon and constitutes a focal point for project financing by both public and private sectors of most economies. This key role of the bond market in meeting financial needs makes it so imperative that concerted efforts have to be made to ensure its sustained development (Bailey, 2005). As a result of this, the development of domestic debt securities markets has increasingly attracted the attention of national and international policy makers (Andresen, 2000; World Bank, 2001). The domestic debt, which is predominantly government bond, stems from the need to identify and exploit alternative financing sources by other tiers of government (states and local governments) to bridge the persistent national budget deficit financing gap as well as the infrastructural need of economies (Ansah, 2015). The private sector also needs funds for investment and infrastructure. Such dearth of resources required for

project or infrastructure financing by most economies, coupled with the high cost of borrowing from the banking sector triggers the preference for domestic debt securities, which provide less risky, less costly and easily accessible financial sources.

Developing countries have up till date relied much on external debt financing from development partners and their banking sectors while largely neglecting the bond market. This is in spite of the fact that external loans and bank loans sometimes attract huge interests as well as penalties for lack of prompt repayment. The external debt challenges reflected by debt crises, leading to the classification of some of those countries by lending agencies such as HIPC (Heavily Indebted Poor Countries) because of their inability to repay their loans coupled with their huge infrastructural gaps, is reflected by poverty, mismanagement and poor strategic financial management.

Research on determinants of bond market development has focused on developed markets and economies neglecting new and emerging markets like that of Ghana. For instance Eichengreen & Luengnaruemitchai (2004) examined the subject matter in Asia whiles Adelegan &Radzewicz-Bak (2009) conducted similar study on sub-Saharan African countries. In addition to the above, Adofu & Abula (2010) conducted similar study on Nigeria. The review clearly shows that previous studies are mostly cross-country studies which fail to capture country specific factors and other contextual factors that could influence bond market development.

Although the Ghanaian capital market appears to be vibrant, the equity component tends to dominate the bond market, which seems to attract little attention by policy makers. The potentials of the bond market of developing economies in bridging this financing gap and serving as a cushioning effect to other sources of finance does not seem to be sufficiently and strategically explored. The relatively small size of the Ghanaian bond market, the huge infrastructural challenges, the dominance of government bonds over corporate bonds, and the over reliance on Deposit Money or Banks as major sources of corporate financing in spite of their vulnerability to financial shocks calls for the need to examine the factors that promote the development of the bond market. That is to say that government continuous borrowing from banks and other financial agencies through its short term instrument crowd out the private sector which bonds can help reduce the impact of the crowding out. Literature have relied on macroeconomic factors such as economic size, money supply, bank size, interest rate, external debt, and stock capitalization in developed countries but this study want to examine these factors in the Ghanaian context. The choice of these factors is based on availability of data and their use in literature.

The purpose of this study is to analyse why the Ghanaian bond market is not developed and factors that have contributed to this under-development. An understanding of the framing processes and dynamics used in bond markets has important implications for understanding the effectiveness and development of bond markets in Ghana. The analysis is divided into three main parts. The first section of this study gives an overview of the bond market in Ghana and Sub-Saharan Africa. It explains both the chemistry and transport associated with bond market development in Emerging Markets of which Ghana is a key contributor. The second section is a compilation of the most viable factors and forces that contribute to the bond market in Ghana being under-developed. The final section provides findings and recommendation on how to improve the under-development of the Ghanaian Bond market.

The general objective of the study is to examine the impact of macroeconomic variables on bond market development in Ghana. The specific objectives include; 1) To

examine the impact of the size of the economy on bond market development in Ghana; 2) 2. To examine the impact Money supply and bank size has on the development of bond market in Ghana; 3) To examine the influence of interest rate and external debt on the development of bond market in Ghana; 4) To examine the influence of interest rate and external debt on the development of bond market in Ghana.

It is hoped that regulatory bodies like the Securities and Exchange Commission (SEC) and policymakers will find the result of this study useful. This is because the key determinants or drivers of the Ghana bond market development could be deployed for policy formulation and reforms in the bond market and capital market in general. The findings of the study will also provide insight to policymakers and regulatory agencies towards initiating innovative avenues for the rapid development of the bond market, which should eventually reduce the overdependence on bank financing and its imminent effects. This would shape their focus on certain bond market fundamentals, which they could beam their searchlights upon.

A few researches have been undertaken in the bond market of Ghana on issues related to the types of bonds issued, the length of bond issuance amongst others. Ghana is an emerging market in securities and the research is aimed at analysing the factors that undermine the developing of the bond market.

The study will contribute to the improvement of the bond market in terms of structure and activities not only in the securities market but the Ghanaian economy at large. The outcome of this study would be of interest to scholars and stakeholders of the bond market in Ghana. It would also contribute to already available literature on Bond market development.

From a practice standpoint, this study is relevant and timely for the securities and financial market sector which is fast becoming a dominant force in spearheading the development of bond markets.

LITERATURE REVIEW

The concept of bond market development

The importance and centrality of the financial system to the growth of any economy is obvious and indisputable. There has been a posture by finance scholars, which suggests that a well-developed financial system boosts the efficiency of financial intermediation roles through cost reduction in terms of information, transaction and monitoring.

The bond market is a vital segment of financial system, and remains central to the development of an efficient economic system. Investment in bonds usually fills a major gap in the financial markets by generating returns that compensate for the cost of funds over the repayment period. The non- investment in bonds within the financial markets has a tendency of limiting investment options. This entails that the network of trading or investment activities in various bonds makes up a bond market.

A bond market refers to an arrangement where bonds are traded. This arrangement facilitates offer by the borrower, and acceptance, which must be backed by a consideration from the lender (Barmash, 2003). Trading in bonds therefore entails the exchange of bonds from one person or organisation to another. This may involve initial public offerings of the bonds at the primary stage, and subsequently, secondary trading of such bonds.

The ease as well as frequency of transferability of such bonds at a controlled cost (minimal transaction cost) entails bond liquidity, which is synonymous with bond efficiency. Bond market liquidity also has tendency to boost bond market development

in an economy. For both corporate and domestic bond instruments, bond liquidity entails transferability of bonds. A liquid bond market therefore entails an enhanced trading efficiency of the bond market. Rigidity, which could be measured by the bid-ask spread, which is a feature of bond liquidity provides an insight on the financial commitment of the market participants in executing transactions (Gaspar, Hartmann & Sleeper, 2002). Depth and resilience are also considered by the trio to shape the nature of liquidity of the bond market. The depth of the market determines the extent to which the bond market could cope with huge transactions, while maintaining little or no variations in bond prices. Resilience on the other hand determines the rate of dissipation of price variations.

Bond market development entails the transformations in bond market size within an economy, its access, stability, and efficiency or liquidity. The prominent aspect of bond market development is the bond market size, which is commonly considered as total value of outstanding bonds in the market as a ratio of Gross Domestic Product (GDP). Most studies on bond market development are actually hinged on the bond market size perspective.

Bond market development involves the influence of a network of bond trading activities, stock capitalisation, macroeconomic variables, bond spread, infrastructure, legal and regulatory as well as related governance issues, which add up to shape the bond market development fundamentals (indicators). Bond market development is commonly used interchangeably with bond size. It could be considered in three dimensions as done in this study, which include government bond market size (or development), corporate bond market development, and total bond market development. However, in a broader perspective, bond market development fundamentals could include bond size, bond access, bond stability, and bond efficiency or liquidity.

It is documented by Brealey, Leland & Pyle (1997), Bouheas, Mizen & Yalcin (2006), and Mizen & Tsoukas (2010) that the financial situation of an organization is a fundamental determinant of access to external finance. Bond access in the context of bond market development may be more appreciated from the view point of the mix of finance accessed from the bond market comprising private or corporate bonds, and government bonds, derived from the entire bonds generated within the economy.

Determinants of bond market development could be viewed from firm specific characteristics and the perspective market based characteristics. Mizen & Tsoukas (2010) identify the broad variables that determine bond market development as local market size and liquidity. It is worthwhile to acknowledge that market characteristics differ from firm characteristics in view of the microscopic nature of firms as against the macroscopic nature of the market. This study is not concerned with firm specific features of the bond market. A more vibrant corporate bond market would create a better opportunity to examine the determinants of bond market development from the firm characteristics angle.

Developing a bond market would shift the focus of an economy away from foreign debt dependence thereby contributing in alleviating the challenges of having to repay such loan with foreign currency. Eichengreen & Hausmann (1999), Eichengreen, Hausmann, &Panizza (2002), Turner (2003), Bordo, Meissner & Redish (2003) in Kahn (2005), and Kahn (2005) all concur that a well-developed bond market will contribute to alleviating the problem of original sin, which emanates from currency mismatch. Original sin is a term coined by Eichengreen & Hausmann (1999) and refers to the inability of developing countries to borrow abroad in their own currencies, and involves denominating a country's external debt in foreign currency, resulting in a currency mismatch.

Currency crises, which emanate from currency mismatch are characterised by depreciating domestic currency as well as rollover challenges for short-term debt, which in turn lead to balance sheet problems, thereby constituting a key source of financial instability leading to default (Kahn, 2005). However, restructuring short term bonds to longer tenured bonds could sometimes be a beneficial repositioning strategy to the issuer.

Bond market developments in Ghana

Developing the bond market of Ghana will assist the government and business organizations in bridging the prevailing long term financing gaps (Aqua-Sam, 2013; Ayee, 2013). In 1999 the Financial Market Department of the Bank of Ghana (BoG) was requested by the Supervisory Technical Committee (STC) of BoG to present a paper on the bonds market of Ghana to mark the nation's attempt to develop its bond market. Since the introduction of the bonds market in the country, it has remained underdeveloped due to many factors such as unfavourable macroeconomic environment, availability of other investment substitutes, inadequate institutional investors and the lack of credit rating agency. These and many other reasons account for the reason why the bond market of Ghana still remains at its infancy level. In the past BoG issued BoG and GoG treasury bonds with 2,3 and 5 year maturity period but the issuance of 5-Year GoG Treasury bond was discontinued in 1994 due to high inflation rate in the Ghanaian economy (Bank of Ghana, 1999). One of the major reasons that stall the growth of corporate bonds in Ghana is market volatility. Macroeconomic challenges such as high inflation, unstable and persistent depreciation of the cedi also account for the reason why the nation has not been able to develop its bond market. This shows why as at 2014, there was no corporate bond listed on the Ghana Stock Exchange. There is the need for the government to take in the necessary monetary and fiscal policy measures to ensure a conducive macroeconomic environment to help ensure the development of corporate bonds to provide long-term funds to business organizations (Central Securities Depository, 2014). Since the introduction of bonds into the Ghanaian economy, the local government such as the Municipal and District Assemblies have not been able to develop municipal bonds to enable them borrow from surplus-fund units to finance their development projects at the local government level. This is due to the high rate of fund mismanagement at the local government level. Ansah (2015) indicates that one major reason why the Bond market of Ghana remains underdeveloped is that, the government has not been able to put in place a legal or operational framework to enable Metropolitan, Municipal and District Assemblies (MMDAs) to issue bonds to finance their infrastructural development projects. The current Priority Action Plan (PAP) by the African Development Bank (AfDB) has necessitated the need for local government to issue bonds to raise long-term funds for infrastructural development.

This is supported by Cobblah (2013) who indicated that there is the need for the government to encourage the Municipal Assemblies to issue bonds to raise funds for their local infrastructural development. Andoh (2010) also identified the lack of a strong industry association as one of the factors which has accounted for the underdevelopment of the Ghana bonds market since the participants of the market are not able to make significant impact on the debt market. For this reason, he suggested that there should be the need for a stronger industry association to help ensure that the key stakeholders are able to make impact on it.

Economic mismanagement, high public debt, corruption and high debt to GDP ratio account for the reason why Ghana's bond market still remains at the infancy level. These factors cause investors to lose confidence in the economy. Excessive external borrowing

by the government causes the state to lose control over its financials. There is therefore the need for government to reduce its excessive external borrowing to focus on the development of the nation's bond market to obtain long-term funds in financing its budget deficits (Osei, 2015).

High inflation has also been a major challenge to the development of the Ghana bond market. Since inflation reduces the value of money, a high inflation rate in the economy causes many investors to channel their surplus funds into other investments and ventures other than investing in bonds. For instance, due to the sharp currency depreciation of the Cedi coupled with high fuel price adjustments, the inflation rate rose from 16.4% in January 2015 to 17.3% in August 2015. The persistent rise in the general price level in the country continues to pose a major challenge to the development of bond market in the Ghanaian economy (World Bank, 2015).

Despite the numerous challenges facing the development of the bond market in Ghana, the government in recent times has taken measures to consolidate its fiscal policy to help provide a favourable environment for the development of the bonds market. Ghana's fiscal consolidation program which started in 2014 has helped narrowed the fiscal deficit. For instance, the current primary balance is estimated to be 0.6% of GDP as against a target of 0.6% represent a significant improvement from the 1.4% current primary balance in June 2014. The Fiscal Consolidation Program (FCP) has also helped reduced the overall fiscal deficit to 2.2% of GDP from 4.3% of GDP in June 2014. This has been a significant attempt by the government in the development of the Ghana bond market since fiscal indiscipline in the past years has been a major hindrance to the development of the nation's debt securities market (World Bank, 2015).

The country's political stability and maturing democracy has been a major plus to the nation's effort in the development of vibrant bond market. This has made the economy a favorite among investors who want to channel their surplus funds into high-yield sovereign bond. This accounts for the reason why the recent $1 billion sovereign bond of the country was oversubscribed. The nation's political stability and maturing democracy continue to attract foreign investors to subscribe to its bonds (Ansah, 2015).

The GoG has also taken measures such as regular publication of issuance calendar and the extension of the yield curve to deepen the development of the corporate bond market (Terkper, 2013). This measure has been put in place to ensure that investors of government-issued bonds are regularly updated with information on the state of the investment and also to attract many investors to purchase government bonds.

Factors that influence on the bond market

Ensuring macroeconomic stability, eliminating tax disadvantages, and encouraging market participation are also key ingredients required for the bond market success (Hong Kong Monetary Authority, 1999:03). Lkhagvajav, Bartnyam & Gan-Ochir (2008) examine the multivariate relationship between stock returns and monetary policy using VAR. They conducted an analysis to determine the temporal relationship between bond market development (prefixed by bond market and capitalization) and macroeconomic variables, based on a lag order 5 selected by LR test statistics. The study applied monthly data from January, 1998 to March, 2007, and augmented with the Schwarz test. It revealed that macroeconomic stability and financial intermediary development are important predictors of bond market capitalization, while the real income level and bond market liquidity do not prove significant, and that financial intermediation and bond market were substitutes rather than complements.

Eichengreen & Luengnaruemitchai (2004) establish that interest rate, exchange rate variability, absence of public sector funding needs, and interest rate variability provide a negative direction to the magnitude of bond market. Although monetary policy and bond market require some degree of government involvement, studies on the subject require a critical examination of causal relationship among the key variables.

Bond market size

Bond size usually measures the value of government, corporate, or total bonds in relation to the GDP of a country. This is perceived to be the most important indicator of bond market development and is usually used by most scholars synonymously with bond market development. Bond capitalization is sometimes used as a proxy to replace bond market size. The Financial Systems Development Indicators (2010) manual reveals that the World Bank‘s financial structure database utilizes the basic measures of both public and private bond market size (ratio of public or private sector bonds to GDP)

Countries vary in the features and characteristics that shape the development of their bond markets. The South African bond market stands out when compared with those of Egypt, Nigeria and Kenya. There are key factors, which are responsible for the rapid development of the South Africa‘s bond market as rated by Fitch Rating (2010). Such factors include advanced regulatory framework, macroeconomic and physical policies, healthy banking sector, and sound quality of infrastructure.

In Tanzania, Nigeria and Ghana, between 30 to 50 percent of the government securities that are issued in the market are limited non-marketable securities (Financial independence, 2008). This ratio has reduced drastically for Nigeria. Non-marketable securities constitute a major liquidity constraint because of the difficulty of transferability of such bonds until maturity. In 2001, Africa as a whole only accounted for 7 percent of the total tradable debt of emerging markets or less than 0.4 percent of the total world bond market, with the average time to maturity of 14.8 years for all developing countries as compared to the global average of 22.1 years (Financial Independence, 2008:03). Such securities, which could hardly be traded, will compel the owner to wait until maturity to recover the principal (Baminadhu, 2003).

On the level of development, Moyo (2010) posits that bond markets, which are an integral part of the capital markets, remain largely underdeveloped in Africa with corporate bond markets non -existent or in their infancy stage despite efforts by government, private sector and donors to enhance its performance. He identifies correcting deficiencies in the legal system, enhancing bond issuance, broadening and diversifying investor base, strengthening market infrastructure, developing supranational, sub-national and corporate bond markets and the promotion of regional initiatives as germane towards enhancing bond market development.

Key determinants of bond market financing as documents by Eichengreen & Luengnaruenuitchai (2004) include: economic size, natural openness, developmental stage of the economy, interest rate, size of the banking system, exchange rate variability, traditions of legal system, law and order, corporate governance and transparency, banking concentration, absence of public sector funding needs, regulatory enforcement, and interest rate variability. The four dimensions of Size, Stability, Efficiency and Access are positively correlated (FSDI, 2010).

Size of the banking system

Banks constitute part of portfolio of finance sources, which provide external finance just as bond markets. But their role cannot be taken in isolation. Although it is glaring that a combination of both financial sources is required for effective project financing, a

research effort is necessary to gauge the level and direction of contribution of the banking sector to the bond market in an economy. This would facilitate policy direction and decision making.

Emerging market economies are perceived to be over-dependent on their domestic banking systems for finance, which calls for the need for further development of their domestic bond markets (IOSCO, 2002:3). Bank loans attract higher intermediation costs as a result of branch networks and required capital as compared to cost advantages of debt securities (Diamond, 1994). This implies that blue chip firms will have preference for debt market in order to attain efficient cost savings. Furthermore, less financially secure firms will opt for bank loans due to greater flexibility in rescheduling, while the larger, creditworthy firms seek to tap the bond markets (Bolton & Freixas, 2000). It is glaring that there is a link between banks and corporate bond market development although the direction and magnitude may not be quite clear, and may differ depending on the features of the banking sector. Furthermore, finding by Demirguc-Kunt & Huizinga (2001) reveals that a transformation from an underdeveloped towards a more developed financial system reduces bank profitability and margins.

An empirical test conducted by Jiang, Tang & Law (2001) shows that bond issuance and bank lending are positively correlated both in countries of the Organisation for Economic Cooperation and Development (OECD) and the emerging economies. The outcome of a study by Hawkins (2002) indicates that highly rated companies issue more bonds than do lower rated companies.

Another study on the determinants of the financing choice for a sample of 1,560 new debt financing undertakings by publicly traded firms reveals that the choice of debt instrument is strongly linked to the credit history and current credit quality of the issuing firms (Denis & Mihov, 2003). To affirm this position, Dickie & Fan (2005) clarify those firms with high credit quality prefer public debt, while firms with average credit ratings borrow from banks, and those with low credit rating borrow from nonbank private sources. They argued that such finding suggests competition between corporate bond markets and banks with a tendency to draw away good borrowers from banks.

The interest group theory, which was developed by Rajan & Zingales (2003) posit that the actions of policy makers in relation to an initial financing source may resist financial development because of competitive tendencies. This could be so in view of their prior sources of finance in their growing business environment and the fear of loss of competitive advantage as a result any potential impairment by such financial development. This is premised on the basis of the argument that financial development aids the entry of new firms, thus enhancing competition (Dickie & Fan, 2005). Based on this theory, it could be deduced that large deposit money banks with corresponding large capital base and high lending capacity are likely to reduce corporate bond market development.

Eichengreen & Luengnaruemitchai (2004) examine the relationship between the banking sector and bond market development for 41 countries and documented that countries with competitive, well-capitalized banking systems have larger bond markets. These studies point to a complementary relationship between banks and bond market development. The mixed results suggest a need for further research to explore the relationship between banks and corporate bond market development. This means that deposit money banks could either play competitive or complementary roles. Many researches, for example, Adelegan & Radzewicz-Back (2009), and Raghavan & Sarwono (2012) document the contribution of banks towards the development of effective and

liquid bond market, especially by their role as dealers and market makers. Bhattacharyay (2011) documents the presence of a large, well developed, competitive, and well-capitalized banking system as a prerequisite for developing a liquid and properly functioning bond market. According to Hawkins (2002), such banks double as dealers and market makers.

The size of the banking sector is measured as the ratio of domestic credit provided by the banking sector to GDP. A well developed and complementary banking system is expected to reveal a positive correlation with size of the bond market, whereas the reverse signals competition between the bond market and the banking sector in providing funds (Eichengreen & Luengnaruenuitchai (2004), and Raghavan & Sarwono (2012).

Size of the government bond market

This determinant from an explanatory variable perspective is relevant to corporate bond market development, and derives from the school of thought that the corporate bond market precedes a well-developed government bond market. Studies conducted by Fabella & Madhur (2003), and Park (2008) support this position by the evidence of catalytic role of benchmark yield curve of sovereign bond markets, which serves as a basis for valuing corporate bonds, towards the latter's development.

However, there may be the crowding-out phenomenon, which could affect corporate bonds in some countries through liquidity squeeze of corporate bond market generated by favourable pricing of government bonds. Raghavan & Sarwono (2012) elucidate this by giving the instance of Indian government securities, which are perceived to be more attractive to foreign investors than the corporate bonds as a result of its higher credit rating.

Although the number of government bonds outstanding could be used to assess the impact of government bonds on corporate bond market performance for a low and dwindling size of the corporate bonds, a negative correlation is expected with government bonds, which signifies that government bonds are crowding out corporate bonds (Raghavan & Sarwono, 2012). A positive correlation on the other hand signifies that government bond market is driving corporate bonds

Economic size

This is otherwise known as the size of the economy, or size of a country, and is measured by natural log of GDP. Key studies on bond market development point to the fact that a huge economy could attract huge capital, hence greater bond financing, whereas a small economy has the tendency of attracting less bond financing. According to Eichengreen & Luengnaruemitchai (2004), the size of an economy positively influences financing through the bond market, although such impact is weak. ―The size or scale of an economy needs to reach a certain level to influence financial decisions of large economic entities investing in the bond market of an economy‖ (Bhattacharyay, 2013).

There is a wide disparity in the size of domestic debt to GDP across SSA countries with some countries still recently developing (Adelegan & Randzewicz-back, 2008). The situation with the Ghanaian bond market is not glaring. There is therefore the need to empirically ascertain the correct position of the size of the bond market in relation to the economy, banking sector, and other related variables.

A large sized economy is expected to move in a positive direction with the size of the bond market. However, an economy that is small in size may be positively insignificant or even be negatively correlated with size of the bond market, especially for an economy that is dwindling in size.

Money supply (M2) as a percentage of GDP

Money Supply is also known as Broad Money and reflects the level of liquidity in a country. Broad money generally involves the total available cash within an economy, whether at hand, outside the bank, at bank, or in the form of demand deposits. M2 includes the sum of currency outside banks, demand deposits other than those of the Central Bank, time, savings and foreign currency deposits of resident sectors other than the central government (World Bank, 2009). It typically involves coins and notes, bills, money in current and savings accounts as well as deposits. Thus M1, which comprises money in circulation and in accounts of banks (including money deposit banks and microfinance banks), is a subset of M2.

It is expected that an increase in the ratio of M2 to GDP could enhance the potentials for investment in the capital market especially bonds provided there is a high level of awareness. M2 is measured as money supply as a percentage of GDP is expected to exert influence on bond market development.

METHODOLOGY

Financial information relating to bond trading activities, which is secondary in nature were gathered on Ghanaian Bond Market from various sources. Such sources included the Central Bank of Ghana (BoG) statistical bulletin, Ghana Stock Exchange (GSE) Fact Book, the SEC Annual Report, the World Bank, and IMF websites for the period between 1980 and 2015.The data on GDP per capita were accessed from both the World Bank and IMF.

Most of the data gathered, especially those that utilised Gross Domestic Product (GDP) as a quotient were predominantly derived from the BoG statistical bulletin, except for Stock Capitalisation which required heavy reliance on SEC Annual Report.

The study presents a major indicator for measuring bond market development, which is Size, patterned after the model in Eichengreen & Luengnaruemitchai (2006) but with modifications. The World Bank financial sector operation and policy through the Financial Sector Development Indicators (FSDI) presents four dimensions of the financial system: size, access, efficiency and stability. This study is limited to bond market size.

$$TBNMS = \alpha + \beta 1BKSIZ_t + \beta 2BUDEF_t + \beta 3EDGDP_t + \beta 4INSPR_t + \beta 5MNSUP_t + \beta 6STCAP_t + \beta 7ECSIZ_t + \mu$$

Where;

TBNMS =Total Bond Market Size = Ratio of Total Bonds as a Percentage of GDP
BKSIZE = Size of the Banking System = Domestic Credit by Banks as a Percentage of GDP
BUDEF = Budget Deficit = Budget Deficit as a percentage of GDP
EDGDP = External Debt = External Debt as a Percentage of GDP
INSPR = Interest Rate Spread = Difference between Lending Rate and Deposit Rate
MNSUP = Money supply = Money Supply (M2) as Percentage of GDP
STCAP = Stock Capitalization = Total Equity Capitalisation as a Percentage of GDP
ECSIZ = Size of Economy = Log of GDP

RESULT AND DISCUSSION

Stationery test

Prior to the regression analysis, a stationarity test is conducted on the respective variables of all the models; a phenomenon with economic theoretical underpinning designed to enhance the reliability of the regression results. Such a test could be conducted using either the Phillip Peron (PP) test or Augmented Dickey-Fuller Test (ADF). In this case, the ADF is deployed in carrying out the test. This will confirm the level of stationarity of the variables, which will be incorporated in the models after differencing while taking cognizance of the level of stationarity so as to avoid misleading results. In performing the stationarity test a maximum lag of 1is used, and included the intercept.

Table 1. ADF Unit root test of stationarity for the variables

Variable	ADF test stats	Max lag	Order of integration
TBNMS	-3.996355	1	I(0)
MNSUP	-3.206755	1	I(1)
ECSIZ	-3.661444	1	I(1)
ECDEV	-3.660937	1	I(1)
BUDEF	-5.515109	1	I(0)
INSPR	-6.250330	1	I(0)
EDGDP	-3.564689	1	I(0)

Critical values 1% = -3.6752, 5% = -2.9665, 10% = -2.6220.

These results show that money supply (M2), size of the economy, level of economic development, budget deficit and capital expenditure, are integrated of order one, I(1) at 5% level of significance with lag 1.

The residual for the model is stationary at levels. This is an indication that all variables including the three residuals of each of the models are found to be stationary, at least once, which entails that the model follows integrating process.

Co-integration tests

Following the establishment of stationarity of the variables, a time series set of variables requires the determination of existence of co-integrating vectors supporting the existence of long-run relationship between the dependent and the explanatory variables.

The result of the test indicates the presence of 3 co-integrating equations at 5 percent level of significance, which signifies the existence of long-run equilibrium relationship between total bonds and the independent variables. This is an indication of long run reliability of the variables, which validates the conclusions on the results.

The effect of bond market size

The level of stationary of each variable of the model in the equation has also been established. Furthermore, the existence of a long run relationship between dependent and independent variables in the model has been established. Subsequently, the result of VECM model is presented in Table 2.

Table 2. VECM results (abridged) for the model

Variable	Coefficient	Standard error	t–stats.
Coint Eqn1	-5.51317	0.40266	-3.75082
D(TBNMS(-1)	0.255234	0.29779	0.85708
D(TBNMS(-2)	0.106583	0.18998	0.56101
D(BKSIZ(-1)	-0.269646	0.23237	-0.16043
D(BKSIZ(-2)	-0.494697**	0.22695	-2.17977
D(BUDEF(-1)	0.058203	0.26104	0.22296
D(BUDEF(-2)	0.287435	0.24477	1.17432
D(EDGDP(-1)	0.538376**	0.20500	2.62618
D(EDGDP(-2)	0.410986**	0.16812	2.44455
D(INSPR(-1)	-0.131678	0.14444	-0.91165
D(INSPR(-2))	0.213789	0.16271	1.31397
D(MNSUP(-1))	-0.719473***	0.23406	-3.07384
D(MNSUP(-2))	-0.259491	0.25229	-1.02855
C	0.117526	0.20594	0.57069
R-Square	0.864343		
Adj. R-Squared	0.746774		
Sum Sq. Resids	16.72591		
S.E. Equation	1.055964		
E-Statistic	7.351781		

Error correction: D (TBNMS)
**** significant at 0.01level, ** significant at 0.05 level*

The result of the VECM estimation shows that the explanatory variables account for approximately 86.43 percent variation in total bond market size in Ghana. The estimation also shows that total bond market size and the size of the banking system are negatively related. For instance, a 1 percentage increase in the size of the banking system in the previous two years reduces total bond activities in the market by approximately 49.4%. The results also indicate that total bond market size and budget deficit are not related.

Furthermore, the estimation reveals that the external debt and total bond market size are positively related and it is statistically and economically significant. A one percentage increase in the external debt in the previous one or previous two year will cause the total bond market size to rise by approximately 53.8% or 41% respectively. In addition, the result indicates no relationship between total bond market size and interest rate spread finally; it shows that the previous one year money supply is negatively related to total bond market size. A 1% increase in money supply in the previous one or previous two years leads to a decrease in the total bond market size by approximately 71.9% or 25.9 % respectively.

Discussion

Although bank size is significant and negative at 5% for Ghana as revealed by this study, it is insignificant and negative for SSA and also insignificant for Asia as revealed by Adelegan & Radzewiczbac (2009), and Battacharayay (2011) respectively. This explains the possibility of country-specific disparity in determinants as against regional based factors.

The interest rate spread and stock capitalisation do not exert significant impact on overall bond market development in Ghana. This implies that they do not matter much for policy decisions on to total bond market size.

Money supply and external debt constitute new phenomena on total bond market size in Ghana as they both present a significant positive impact on total bond market size in Ghana. Thus if the quantum of money in terms of M2 as a percentage of GDP within the economy increases, it will drive total bond market size negatively. But this may not necessarily be the case in isolating either corporate bond market or government bond market. For example, while money supply as a percentage of GDP does not matter much for government bond market size in Ghana, it matters for corporate bond market size as revealed in this study since it is a positive driver of the latter.

The level of economic development on the other hand is significant at 5% level, and is positively correlated with bond market size in line with the findings of Adelegan & Radzewiczbac (2009), and Bhattacharyay (2011). This contradicts the common trends in the Sub-Saharan sub-region, and Asia.

Budget deficit is seen to be a new phenomenon that is important in driving government bond market development in Ghana, in view of its significant positive impact on bond market development. This finding aligns with evidence provided by Adelegan & Radzewiczback (2009), Njiforti & Muhammad (2010) and Paiko (2012). But this would require some caution because the main cause of the budget deficit could be counterproductive, which may hamper bond market development in the long run.

It can be argued that arranging a good mix of debt instruments including corporate bonds, government bonds, and external debt, among others, in a debt portfolio of an economy would facilitate efficient debt management, which could also be achieved through restructuring of such debts. This confirms the relevance of external debt in facilitating bond market development in an economy, provided such debt is within its threshold.

CONCLUSION

It is now evident that although a regional perspective on determinants of bond market development is essential, a study of country-specific determinants may reveal a new set of variables and raise new issues for further empirical inquiry and diagnosis. In the case of Ghana, evidence from this study indicates that the size of the banking sector remains very critical in developing policies for bond market development. Furthermore, money supply as a percentage of GDP, budget deficit as a percentage of GDP, and the composition of external debt to GDP are germane in shaping Ghana's corporate bond market development. The bond market remains the vital avenue for effective financing of projects in financial crisis ridden economy.

This makes it necessary for considering the crucial role played by the bond market in the entire capital structure of an economy.

The revelations of this research suggest that policy makers need to pay attention to the structure, objective, and efficiency of finance generated through external debt. From the evidence gathered so far, policy makers need to harmonise themselves and ascertain the most efficient portfolio of debt within the economy, cutting across domestic debt, external debt and corporate bonds, among others. It is also evident that the proportion of external debt financing is important in determining the long run development of corporate bonds and total bonds, in general. As stated earlier, the channelling of external debt financing to infrastructural developmental projects would in the long run reduce cost of doing business, enhance economic activities, increase competitiveness, and eventually force businesses to raise corporate debt through bonds in a bid to expand.

The numbers from the evidence derived from this study suggest that in order to grow the corporate bond market, the government bond market needs to be deemphasized and a greater searchlight beamed on the corporate bonds. This calls for a need to maintain a threshold for government bonds on one hand and policy that would lead to proliferation of corporate bonds on the other.

LIMITATIONS OF THE STUDY

The study relied on data from macroscopic perspective that uses national data and as such the results and conclusions cannot be generalised to include individual firm level analysis even though firms play a major role in bond market development. The limited data point as a result of a single country study may have methodological implications which call for future studies that can have more data points to test the applicability of the findings.

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The effect of local own-source revenue and balancing funds on regional expenditures: A study of East Kalimantan regional expansion

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Abstract
This study aims to examine the effect of local own-source revenue and balancing funds on regional expenditures and to find out the differences before and after the province expansion. This study uses the performance report of regional/municipal government agencies in North Kalimantan from 2008 to 2017 as the data. The data were analyzed using the SmartPLS 3.0 program. From the test results, it is shown that: 1) Local own-source revenue has a positive and significant effect on regional expenditures, 2) Balancing funds have a positive and significant effect on regional expenditures, 3) There are differences in the effect of local own-source revenue on regional expenditures before and after the regional expansion, and 4) There is no difference in the influence of balancing funds on regional expenditures before and after regional expansion.

Keywords: *Local own-resource revenue, Balancing funds, Regional expenditures*

JEL Classification: O18, R11, R58

INTRODUCTION

The Province of East Kalimantan has an area of ± 204,534.34 km^2 (makes it one of the largest provinces in Indonesia) consisting of 10 regencies and 4 cities, with a population of ± 3,908,737 people in 2011. With this vast region, there are still many undeveloped areas especially in the northern, border, and inland areas. This is one of the reasons underlying the expansion of East Kalimantan into a new province that is North Kalimantan.

The establishment of North Kalimantan Province must go through a long process and discussion since 2000. North Kalimantan Province was officially formed since the signing of the Law Number 20 of 2012 concerning the Establishment of North Kalimantan Province on November 16, 2012, by the former Indonesian President, Susilo Bambang Yudhoyono. With the issuance of Law Number 20 of 2012, North Kalimantan was officially declared as the 34th province of Indonesia.

On the other hand, it turns out that after the establishment, North Kalimantan Province must face some problems in terms of financing the provincial government. In order to improve public services and to accelerate the realization of community welfare, North Kalimantan needs financial assistance to support the administration of government activities.

While joining the East Kalimantan Province, Regency/Cities in North Kalimantan have a very large balancing funds because East Kalimantan is one of the largest oil and gas producers in Indonesia. It cannot be denied that balancing funds have dominated regional income compared to local own-resource revenue.

After the regional expansion, the balancing funds especially the revenue sharing funds were decreased significantly. In comparison, the revenue sharing funds in 2014 were up to 4.3 trillion rupiahs while it fell to 1.4 trillion rupiahs in 2015. The allocation of revenue sharing funds for oil and gas in 2015 has been adjusted to the North Kalimantan Mining Work Area (WKP) causing an average decrease of oil and gas revenue sharing funds by 600 billion rupiahs in every northern regency/city.

Consequently, it also affected the local own-resource revenue of North Kalimantan Province, wherein 2015, the local own-resource revenue was decreased up to 70 billion rupiahs. This was considered a big degradation compared to the decline in the previous years. Haji *et al*., (2015) found that before the expansion, the regencies/cities in North Kalimantan tend to deposit the Government Budget Surplus (SiLPA) from the previous year to increase the local own-resource revenues so that after the expansion, the deposits were used to cover the deficit of Regional Budget (APBD). The decline in regional income is certainly influenced the regional government expenditures.

Based on the condition and background of the issues as stated above, the research questions can be formulated as follows: (1) Does the local own-resource revenue affect the regional expenditures of North Kalimantan Province? (2) Do the balancing funds affect the regional expenditures of North Kalimantan Province? (3) Are there any differences in between local own-resource revenue and regional expenditures before and after the regional expansion of North Kalimantan? (4) Are there any differences between balancing funds and regional expenditures before and after the regional expansion of North Kalimantan?

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Regional expenditures

Regional expenditures are all expenditures issued from the general account reducing the balance of the budget in the fiscal year which cannot be recovered by the local government (Tanjung, 2012). In the Budget Realization Report (LRA), the classification used for the expenditures is economic classifications. Based on the Government Accounting Standards (SAP) in Government Regulation Number 71 of 2010, the economic classifications include (1) Operational expenditures; (2) Capital expenditures; (3) Unexpected expenditure; and (4) Transfers.

Local own-source revenue

The Law Number 33 of 2004 defines local own-resource revenue as the income obtained by regions collected under regional regulations in accordance with the laws and regulations. The sources of local own-resource revenue as stipulated in the Minister of Home Affairs Regulation Number 13 of 2006 are (1) Regional taxes; (2) Regional retribution; (3) Results of the segregated regional assets management; (4) Other legitimate local own-resource revenues.

Balancing funds

According to Kaho (2012: 260), balancing fund is a transfer or allocation from the central government to the region. In general, balancing funds constitute the largest part in

financing regional government activities. In the Government Regulation Number 55 of 2005, it is stated that balancing funds are funds originating from the State Budget allocated to regions to support regional needs in the context of implementing decentralization.

Based on the Article 2 of Government Regulation Number 55 of 2005, balancing funds consist of: (1) Revenue sharing funds; (2) General allocation funds; (3) Special allocation funds.

Development of hypothesis

Local own-resource revenue is one source of regional revenue that is used to fulfill the region's expenditure. According to the Regulation of North Kalimantan Governor Number 15 of 2013, in preparing the regional budget and expenditures, it must be supported by the availability of sufficient regional revenue. This indicates that the amount of regional expenditure budgeted by regional government is influenced by a large amount of budgeted regional revenues.

More local own-resource revenues will allow the area to meet its own expenditure needs without having to depend on the central government. This will determine whether the Regional Government able to be independent or vice versa (Rahmawati, 2010).

Apriliawati (2016) revealed that local own-resource revenue has a positive and significant effect on regional expenditures. This means that higher local revenue will generate higher regional expenditures incurred by the regional/municipal government. In other words, local own-resource revenue has a positive effect on regional expenditures. Based on the description above, the first hypothesis proposed in this study is:

H_1. *Local own-resource revenue has a positive and significant effect on regional expenditures*

In the Regulation of North Kalimantan Governor Number 15 of 2013, one of the sources of regional revenue is Balancing Fund. Similar to local own-resource revenue, Balancing Fund is also one of the sources of regional revenue which is very important for the regional government in terms of fulfilling its expenditure.

Ridho Argi (2011) and Hadi Sasana (2011) proposed that Balancing Funds have a positive and significant influence on regional expenditures. This is in line with the research conducted by Sari and Indrajaya (2014) where balancing funds have a significant effect on regional expenditure allocations. It can be concluded that balancing funds positively influence regional expenditures. Therefore, the second hypothesis in this study is:

H_2. *Balancing funds have a positive and significant effect on regional expenditures*

National Development Planning Agency and United Nations Development Programs (2008) specifically studied the problems related to the development of new autonomous regions and showed that in the aspect of regional finance, there had been an increase in local own-resource revenue even though the assistance to General Allocation Fund was still high. In addition, there was also an increase in the proportion of development expenditure even though the proportion of routine expenditure was still small.

On the other hand, Haji *et al*., (2015) stated that prior to the expansion, regencies/cities in North Kalimantan tended to deposit the Government Budget Surplus from the previous year to increase the local own-resource revenue. Therefore, after the expansion, the deposits were used to cover the Regional Budget deficit. This causes the

local own-resource revenue to decrease because basically the interest generated by these deposits is used by the regional government to increase local own-resource revenue.

Generally saying, the opportunity for the regencies/cities in North Kalimantan to increase its local own-resource revenue is quite large because each region has abundant natural resources. The revenues from the sector of levies and taxes also have big potential to be developed such as parking fees, vehicle tax, and advertisement tax which can be applied in all regions. Besides that, the tourism sector can also increase the regional revenue of the Regency/city. It can be seen from Tarakan City wherein 2014, there were 10 new hotels which indirectly increase the local own-resource revenue in the form of hotel taxes. This, of course, is inseparable from the geographical point of Tarakan as a city for transit in North Kalimantan Province. The changes that occurred in the local own-resource revenue before and after the regional expansion allegedly affected the regional expenditures. By that, the third hypothesis of this study can be proposed as follows:

H_3. *There is a difference in the effect of local own-resource revenue on regional expenditures before and after the regional expansion.*

Juanda and Tuerah (2007) believed that the State Budget and Provincial Regional Budget have a negative and direct impact on regional expansion thus it can be said that the regional income in Regional Budget can decrease with the existence of regional expansion; making the regional expenditures to be decreased. Syafarudin (2008) in Haji *et al*., (2015) also mentioned that there are financial difficulties in the post-expansion development. This can be interpreted that regional expenditures have decreased due to the decline in regional revenues.

The Communication and Information Agency of East Kalimantan Province (2013) said that after the expansion, the structure of East Kalimantan State Budget in 2014 experienced a decline compared to the previous year which was set at 29,36 trillion rupiahs. The amount has decreased by around 9 trillion rupiahs compared to the previous East Kalimantan State Budget in 2013 that was set at 38.7 trillion rupiahs. This is actually a logical consequence due to the expansion of North Kalimantan. The allocation of East Kalimantan Regional Budget is divided for 10 regencies/cities in East Kalimantan as well as for 5 regions in North Kalimantan.

Politically, the formation of North Kalimantan Province is very necessary. However, in the aspects of regional finance, the current expansion of North Kalimantan Province has caused the oil and gas revenue sharing funds to be increasingly decreased. This happens because most of the oil and gas mining work areas are in East Kalimantan Province which is the parent of North Kalimantan Province (Haji *et al*., 2015). Due to the adjustment of North Kalimantan mining areas, the revenue sharing funds for oil and gas were decreased averagely by 800 billion rupiahs in every northern regency/city. Revenue sharing fund itself is the largest component of balancing funds. Therefore, it can be concluded that there was a decrease in the balancing funds caused by a decrease in the revenue sharing funds.

Based on the description above, the researchers assume that there are differences in the effect of balancing funds on regional expenditures before and after the expansion. By that, the proposed fourth hypothesis can be seen in this following section:

H_4. *There is a difference in the effect of balancing funds on regional expenditures before and after regional expansion.*

RESEARCH METHODS

Data

The data used in this study are the public accountability report on budget implementation presented by the heads of local government to the Government of North Kalimantan Province. The technique of data collection in this study is saturated sampling. This means that there are 5 regencies/cities used as research samples. From each regency/city, the period of observation was taken for 5 years before and 5 years after the regional expansion took place. This indicates that the period before regional expansion began in 2008 until 2012 while the period after the expansion began in 2013 until 2017.

Methods of data analysis

The data is analyzed by using the multiple regression analysis with SmartPLS software version 3.0, as below:

$$Y = \beta_1 X_1 + \beta_2 X_2 + \varepsilon_i$$

where:

Y = regional expenditures
X_1 = local own-resource revenue
X_2 = balancing funds
β_i = regression coefficient
ε_i = error term

It is important to note that by using the multiple regression analysis and observed variables from the SmartPLS software, the researchers do not need to do measurement model so that they can directly do an estimation for the model (Ghozali, 2015).

Operational definition and variable measurement

The dependent variable in this study is regional expenditures. Regional expenditures are all regional obligations recognized as the deductions from net worth in the fiscal year. In this study, the items included in the regional expenditures are (1) Operational expenditures; (2) Capital expenditures; (3) Unexpected expenditures; and (4) Transfer. Regional expenditures are measured by using a nominal scale in Rupiah units based on the Government Accounting Standards in Government Regulation Number 71 of 2010.

Whereas, the independent variable in this study is local own-resource revenue. Local own-source revenue includes all regional incomes originating from its own regional economic sources which are collected and managed by the local government in accordance with the applicable law and regulations. The sources of this revenue come from local taxes, regional retribution, results of the segregated regional assets management, and other legitimate local own-resource revenues. In this study, the local own-resource revenue is measured using a nominal scale in rupiah units based on the Regulation of Minister of Home Affairs Number 13 of 2006.

Furthermore, another independent variable in this study is balancing funds. Balancing funds are originated from the State Budget that is allocated to regions to fund regional needs in the context of implementing decentralization. The balancing funds consist of Tax and Natural Resources Revenue Sharing Funds, General Allocation Funds, and Special Allocation Funds.

Balancing funds are measured by using a nominal scale in rupiah unit based on Government Regulation Number 55 of 2005 which technically, the implementation is also regulated in East Kalimantan Provincial Regulation Number 13 of 2008 and North Kalimantan Governor Regulation Number 15 of 2013.

RESULTS AND DISCUSSION

Hypothesis testing

The Results of multiple regression analysis on the local own-resource revenue and balancing fund to regional expenditures are shown in Table 1.

Table 1. Results of multiple regression analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Local own-resource revenue -> Regional expenditures	0.597	0.583	0.117	5.121	0.000
Balancing funds -> Regional expenditures	0.337	0.353	0.121	2.795	0.003
	R-square = 0.621, R-square Adjusted = 0.593				

Source: Smart PLS Output, 2018

From the results of the multiple regression test above, the regression equation can be obtained as follows:

$$\mathbf{Y = 0{,}597X_1 + 0{,}337\ X_2 + \varepsilon_i}$$

Based on the results of the regression equation, it can be interpreted that: 1) The regression coefficient for the local own-resource revenue variable (X_1) has a positive parameter that is equal to 0.597. This means that when the local own-resource revenue (X_1) increases by 1, the regional expenditures (Y) will also increase by 0.597; 2) The regression coefficient for the balancing funds variable (X_2) has a positive parameter that is equal to 0.337. This means that when the balancing funds (X_2) increases by 1, the regional expenditures (Y) will increase by 0.337.

As it can see from Table 1, there is a parameter coefficient of 0.597 in between local own-resource revenue (X_1) and regional expenditure (Y). This shows that local own-resource revenue (X_1) has a positive influence on regional expenditure (Y). Similarly, it is found that the value of t-statistics is $5.121 > 1.96$. This means that the local own-resource revenue (X_1) has a significant effect on regional expenditure (Y). Based on this matter, it can be concluded that Hypothesis 1 is accepted.

Furthermore, the balancing funds (X_2) and regional expenditures (Y) produce a parameter coefficient by 0.337. This indicates that there is a positive influence between balancing funds (X_2) and regional expenditures (Y). Similarly, the value of t-statistics is $2.795 > 1.96$ which points out that the balancing funds (X_2) have a significant effect on regional expenditures (Y). Therefore, Hypothesis 2 is accepted.

The multigroup analysis carried out by using *Partial Least Square* (PLS) is done to answer Hypothesis 3 (H_3) and Hypothesis 4 (H_4). In the multigroup analysis, the sample of the data is divided into 2 types, namely before and after regional expansion.

Table 2. Results of multigroup analysis

Description	Local own-resource revenue –> Regional Expenditures		Balancing Funds –> Regional Expenditures	
	Before	After	Before	After
Path Coefficient	0.520	0.774	0.708	0.779
Standard Deviation	0.226	0.097	0.174	0.146
Standard Error $= SD/\sqrt{n}$	0.058	0.025	0.050	0.038
R-square	0,271	0.598	0.501	0.607

Source: Smart PLS Output, 2018

To test whether there is a difference in the local own-resource revenue to regional expenditures before and after the regional expansion, the researchers used the approach proposed by Chin (2000) with Smith-Satterthwaite test as follows:

$$t = \frac{\text{Path}_{\text{sample_1}} - \text{Path}_{\text{sample_2}}}{\sqrt{\text{S.E.}^2_{\text{sample1}} + \text{S.E.}^2_{\text{sample2}}}} = \frac{0{,}520 - 0{,}774}{\sqrt{0{,}058^2 + 0{,}025^2}} = \frac{-0{,}254}{0{,}063} = -4{,}031$$

Based on the formula above, a t-statistic value by -4.031 is obtained. This value is above the t-table value that is by -1.96 (alpha by 5%) which explains that the two paths before and after the regional expansion differ significantly. In conclusion, Hypothesis 3 is accepted.

Next, to test whether there is a difference in the balancing funds to regional expenditures before and after the regional expansion, the researchers used the approach proposed by Chin (2000) with Smith-Satterthwaite test:

$$t = \frac{Path_{sample_1} - Path_{sample_2}}{\sqrt{S.E.^2_{sample1} + S.E.^2_{sample2}}} = \frac{0{,}708 - 0{,}779}{\sqrt{0{,}050^2 + 0{,}038^2}} = \frac{-0{,}071}{0{,}063} = -1{,}127$$

Looking at the formula above, a t-statistic value by -1.127 can be obtained. This value is below the t-table value that is -1.96 (alpha by 5%). It means that the two paths before and after the regional expansion do not differ significantly. By that, it is concluded that Hypothesis 4 is rejected.

Ghozali (2015: 78) suggested that the value of R-Square reflects the strength of the model. In sequence, 0.75, 0.50, and 0.25 mean that the model is strong, moderate, and weak. From the results presented in Table 2, it can be seen that the R-Square value is 0.621. This describes that the effect of local own-resource revenue (X_1) and balancing funds (X_2) on regional expenditure (Y) is 62.1% and the other 27.9% is influenced by other variables outside this research model. Therefore, R-Square value is included in the moderate category.

Discussion

The results of this study support Hypothesis 1 (H_1) that local own-resource revenue has a positive and significant effect on regional expenditures. This means that the higher the local own-resource revenue, the higher the regional expenditures. The results of this study are in line with the research from Masdjojo and Sukartono (2009), Rahmawati (2010), Argi (2011), and Apriliawati (2016) which stated that local own-resource revenue has a positive and significant effect on regional expenditures.

As stated in Article 20 of the North Kalimantan Governor Regulation Number 15 of 2013, in preparing the regional budget, regional expenditures must be supported by the availability of sufficient revenues. This indicates a special link between local own-resource revenue as regional revenue and regional expenditure as regional spending. In other words, the greater the local revenue obtained by the regional government, the bigger the opportunity to meet the needs of the region in the form of regional expenditures without having to depend on the funds from Central Government. This also determines the level of independence of the area.

It can be seen that the total local own-resource revenue is greater after the regional expansion. There was an increase up to 60 billion rupiahs in 2013 and 2014. This clarifies

that there was an attempt from the regional government to increase the local own-resource revenue after the regional expansion took place. Although in 2015, there was a decline up to 70 billion rupiahs that were caused by a decrease in the funds from Central Government. This caused the regional government unable to optimize the acquisition of its local own-resource revenue in that year.

The results of this study support hypothesis 2 (H_2) that balancing funds positively and significantly influence regional expenditures. This means that the higher the balancing funds, the bigger the regional expenditures. This is also in line with the research from Argi (2011), Sasana (2011), Sari and Indrajaya (2014) which found that balancing funds have a positive and significant effect on regional expenditures.

Similar with local own-resource revenue, balancing fund is one of the main sources of regional income originating from the funds provided by Central Government. This is intended to close the fiscal gap and to evenly distribute the fiscal capacity between regions in order to assist the independence of local governments to carry out its functions and duties in serving the community. In the research of Sasana (2014), financial balancing with funds from the central government is an incentive for the regional government to finance regional expenditures.

The high influence of balancing funds on regional expenditures happens due to the regional/municipal government in North Kalimantan that is highly dependent on the funds from the Central Government. As a new province, North Kalimantan clearly needs a substantial flow of funds from the Central Government to support its regional development. If the balancing funds obtained by the regencies/cities experienced a decline, the regional expenditures will also decrease and will interrupt the main goal of North Kalimantan formation which is the development acceleration in the border.

The results of this study support hypothesis 3 (H_3) that there are differences in the effect of local own-resource revenue on regional expenditures before and after regional expansion. The value of R-square before and after the regional expansion is 0.271 and 0.598. Therefore, we can see the fundamental differences in the influence of local own-resource revenue on regional expenditures. Prior to the regional expansion, the effect of local own-resource revenue on regional expenditures was still classified as weak (0.271). This means that local own-resource revenue only influences regional expenditures by 27.1%. Whereas, after the regional expansion, the influence of local own-resource revenue on regional expenditures was classified as *moderate*, amounting to 0.598. This points out that local own-resource revenue affects the regional expenditures by 59.8%.

It can be seen that there is a difference between the total local own-resource revenue of the Regency/city of North Kalimantan before and after the regional expansion. After the expansion, the local own-resource revenue is known to be greater than before. There was an increase of up to 60 billion rupiahs in 2013 and 2014 emphasizing that there was an attempt from the regional government to increase the local own-resource revenue after the regional expansion. This is in line with the study from the National Development Planning Agency and United Nations Development Programs (2008) which specifically examined the problems related to the development of new autonomous regions. They showed that in the aspect of regional finance, there had been an increase in local own-resource revenue although the dependence on the General Allocation Fund was still high.

Whereas, it turns out that the regional expansion has an impact on the decline in regional income. As already mentioned by Haji *et al*., (2015), before regional expansion,

regencies/cities in North Kalimantan tend to deposit its Government Budget Surplus from the previous year to increase the income from local own-resource revenue. Therefore, after the expansion, the deposits will be used to cover the deficit of the Regional Budget. The decline in local own-resource revenue in 2015 was influenced by the decrease in the balancing funds from the Central Government. This has caused the regencies/cities to cover the regional expenditures with the regional government deposits.

Based on the results of this study, it can be concluded that Hypothesis 4 (H_4) which stated that there is a difference in the effect of balancing funds on regional expenditures before and after the regional expansion is rejected. On the other hand, the R-square value before and after the regional expansion show a value that is equal to 0.501 and 0.607 where both models can be classified as moderate. From the results of the analysis, it is seen that there is no fundamental difference between the effect of balancing funds on regional expenditure before and after regional expansion. This is because the balancing funds are the main and the largest regional income compared to the local own-resource revenue, meaning that the fluctuation of balancing funds will be followed by the number of regional expenditures.

It is also reported that there has been a decline in the oil and gas revenue sharing funds which constitute the largest part of the balancing funds after the expansion of North Kalimantan Province. Haji *et al*., (2015) wrote that in 2015, the allocation of oil and gas revenue sharing funds had been adjusted to North Kalimantan Mining Work Area and caused an average reduction in oil and gas revenue sharing funds for about 800 billion rupiahs in every northern regency/city. In 2015, the regional revenue and expenditures in North Kalimantan regencies/cities were dropped dramatically. This is in line with the research from Juanda and Tuerah (2007) which stated that the state budget and provincial regional budget have a direct and negative impact on regional expansion thus it can be interpreted that the regional budget can experience a decline with regional expansion. If so, the regional expenditures will also decrease.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Local own-resource revenue has an effect on regional expenditures. This is because local own-resource revenue is one of the sources of regional income whose value is quite important to fulfill regional expenditures. With the increase in local own-resource revenue, the regional expenditures issued by the Regency/City in North Kalimantan Province will also increase. Nevertheless, balancing funds also have an effect on regional expenditures. This is because balancing funds have the highest contribution to regional income compared to local own-resource revenue. Higher balancing funds from the central government will increase the regional expenditures issued by the regional/municipal government in North Kalimantan Province.

There are differences in the influence of local own-resource revenue on regional expenditures before and after regional expansion. This was marked by an increase in local own-resource revenue after regional expansion. Although in 2015, there was a decrease in local own-resource revenue due to the decline in the balancing funds obtained by the regencies/cities in North Kalimantan Province. This caused the regions unable to increase local own-resource revenue through deposits.

There is no difference in the effect of balancing funds on regional expenditures before and after regional expansion. This is due to a large number of regional expenditures that tends to be fulfilled by the amount of balancing funds. Therefore, the effect of the balancing funds will be more dominant and not much different in each year.

Recommendations

For the central government, it is suggested to always conduct a feasibility study on the areas that will conduct regional expansion so that the newly formed administrative areas can increase its independence and reduce the reliance on the funding from Central Government.

For the regional/municipal government in North Kalimantan Province, it is recommended to increase the local own-resource revenue by maximizing the potential of the regional revenue, particularly from local taxes and levies. Therefore, the dependent on the income from the deposit interests to increase local own-resource revenue can be reduced.

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The nexus between exchange rate fluctuations and macroeconomic variables in Nigeria

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Abstract

This study examined the nexus between exchange rate fluctuations and macroeconomic variables in Nigeria using annual time series data spanning from 1986 to 2017. The study employed ECMARDL and granger causality to ascertain both dynamics and directional relationship among the variables under consideration. The results showed that FDI and RGDP had positive significant effect on exchange rate fluctuations, while TOT has a positive insignificant impact on exchange rate fluctuations. Furthermore, CPI, GSPGDP, TFRESV and WCOP had negative significant impact on exchange rate fluctuations. The error correction model coefficient which is -0.704469 means that nearly 70.45 percent of any disequilibrium in exchange rate fluctuation is corrected by the selected variable within one period (one year). The findings further revealed that there is causal relationship between exchange rate and the TOT, FDI, CPI and WCOP. The implication of this is that there are directional and equilibrium relationship between exchange rate fluctuations and macroeconomic variables in Nigeria. The study therefore recommend that Government and policy makers should intensify domestic policies that accommodate or tolerate some level of (mild) inflation in order to encourage producers to expand production of goods and services, also the government should diversify the economy so that whenever there is a shock in the oil price, the shock will be less felt by the economy, and Government consumption expenditure should be carried out in a manner that it will encourage and promote investment, and increase domestic demand.

Keywords: *Marshall-Lerner condition, ARDL, Exchange rates, Macro-economic, Balassa-Samuelson effect*

JEL Classification: C22, F31, A10

INTRODUCTION

In the past few decades researchers and policy makers have often debate the issue of exchange rate fluctuations and management in developing and developed countries due to its important on their economy Ebaidall (2013), Insah and Bangniyel (2014), Kadil (2006). The issue became a topical issue for discuss globally in 1971 following the collapse of the Bretton Woods system. Prior to this collapse United State of America fixed the price of her currency (US Dollar) in term of gold while all other convertible currencies were pegged to the Dollar. This collapse compelled countries to exchange their currencies among themselves at the determined rate and since then exchange rate management has been a source of worry for various government of the world.

In Nigeria the issue of exchange rate management came into being in September 1986 when the flexible exchange rate regime was put in place following the government adoption of the Structural Adjustment Programme. The objectives of exchange rate policy under SAP were: to preserve the value of Naira, maintaining external and internal balance as well as achieving the macroeconomic goals. Since the adoption of exchange rate deregulation, the value of Naira has been fluctuating and the government has been formulating different policies to ensure that the Naira is stable. Sanusi (2004), noted that maintaining a stable exchange rate for the Naira is very sacrosanct, given the structure of the economy, and the need to minimize distortions in production and consumption, increase the inflow of non-oil export receipts and attract foreign direct investment. Having identified exchange rate as an important variable that ensure both internal and external balances as well as economic growth (Obadan (2006), Nwude (2012), Mordi (2006) and Odusola (2006)) government has formulated different policies such as adoptions of Second tie Eoreign Exchange Market, Inter- bank Foreign Exchange Market, Autonomous Foreign Exchange Market, Dutch Auction System, Wholesale Dutch Auction System to ensure its stability. However, the currency keep depreciating, thereby causing the gap between official rate and parallel market rate to keep increasing. In curbing this free fall of Naira the government devalue Naira in 2015 with the hope that it would relieve pressure on the balance of payment. Unfortunately, this was not achieve because Marshall-Lerner Condition for a favorable balance of payment adjustment was not met by Nigeria's trade structure. Marshall-Lerner Condition states that an exchange rate devaluation or depreciation will only cause a balance of trade improvement if the absolute sum of the long run export and import demand elasticity is greater than unity.

Despite all these measure and policies from 1986 till date to ensure that the naira is stabilizes, Naira could not be said to have been stable. Rasaq (2013) noted that the continuous depreciation of Naira has adverse effect on the economy both internally and externally. He further said that at the international level, the nation's Balance of Payment (BOP) have continued to record deficit, declining foreign exchange inflow with increasing foreign exchange outflow, and at the home front, inflation has continued in galloping, interest rate is increasing in a disturbing proportion thereby discouraging investment, unemployment has been growing at a disturbing rate and so on. On the other hand, Obadan (2006) argued that some factors and policies such as inadequate foreign capital inflow, fluctuations in crude oil earnings, expansionary monetary and fiscal policies, et al led to the instability of the Naira So, the need to know which one ganger cause the other between exchange rate fluctuation and macroeconomic variables.

Also, there is conflicting empirical evidence among researchers on the relationship between exchange rate fluctuation and macroeconomic variables. Scholars like Hondroyianis, Swamy and Ulan (2005), Vo et al(2000), Osigwe (2015), Akpan (2008), Adeniran, Yusuf and Adeyemi (2014), Akinbobola and Oyetayo (2010) all said there is positive relationship between exchange rate fluctuation and some of the macroeconomic variables they examined, while researchers like Bini – Snachi (1991), Havva (2012), Arize et al (2000), Bosworth, Collins and Yuchin (1995) all said that there is negative relationship between exchange rate fluctuation and some of the macroeconomic variables they examined. Others like Berument et al (2012), Nwude (2012, Dada and Oyeranti (2012), said there is no relationship between exchange rate fluctuation and some of the macroeconomic variables they examined. Given such contradiction, the debate on exchange rate fluctuation and macroeconomic variable remains inconclusive so the need to investigate further.

Researchers and policy makers have identified exchange rate as a crucial macroeconomic variables that helps in formulating economic policies to ensure the achievement of the macroeconomics objectiveTamunonimim and Reginald (2013), Havva, Mohammed and Teimour (2012). These objectives are: balance of payment equilibrium, full employment, economic growth and employment, price stability and even distribution of income. This assertion was corroborated by Ajakaiye (2001) who noted that exchange rate also directly affect all the macroeconomic variables such as: inflation, profitability of traded goods and services, allocation of resources and investment decision, which explains why the government and private sectors seek stability in these variables. In ensuring a stable exchange rate Nigerian government introduced various policies because exchange rate has been identified as an important variable that ensure an internal and external balance and economy growth.

The Structural Adjustment Programme (SAP) that was adopted in 1986 marked the end of an era and the beginning of a new dispensation in exchange rate policy. Before September 26, 1986 when CBN deregulated Nigeria currency, fixed exchange rate regime was what was used to manage the currency. Under the fixed exchange rate regime international businesses were subjected to expensive exchange and trade control regulations.

In solving the problem associated with fixed exchange rate regime the exchange rate was deregulated. Consequently, second-tier Foreign Exchange Market (SFEM) was established to achieve a realistic and sustainable market determined exchange rate for the Nigeria currency and to be determined through competitive bidding with the prices settling at points. To achieve these, government operated a “dual exchange rate” system policy i.e the policy allowed for two different exchange rates and the operational framework of the policy was the Dutch Auction System (DAS).

Due to problems like multiplicity of rates that characterized DAS and which resulted in the further depreciation of the Naira a unified exchange rate that unifies both the first-tie exchange rate market and second-tie exchange rate market was introduced and named Foreign Exchange Market (FEM) in July 1987. The system was designed to achieve balance of payment stability. The objective was to be achieved through the adoption of realistic exchange rate policy coupled with the liberalization of the external trade and payment system (CBN, 1993).

However, FEM was characterized by sharp practices such as round tripping of funds and this led to the persistent instability of the exchange rate. Therefore in 1989 FEM and the inter-bank were merged to form an enlarged Inter-bank Foreign Exchange Market (IFEM).

The continuous fall in Naira made the federal government in 1994 to formally abandon some of its liberalization policies and re-introduced fixed exchange rate system and pegged the official exchange rate at ₦21. 1960/ $1.00 in order to stabilize the currency. However, this policy cannot be sustained, consequently dual exchange rate policy was re-introduced in 1995 with the aim of addressing the substantial depreciation of the naira exchange rate in the parallel market and achieving efficient allocation and utilization of resources. However AFEM could not achieve the objectives for which it was formulated.

In 1999 the AFEM was replaced by the Inter-bank Foreign Exchange Market (IFEM). IFEM allowed other players, such as, bank, oil companies, non-bank financial institutions, parastatals, bureau de change and private companies in the market. Consequently, the Central Bank of Nigeria was dissuaded from participating as the major

supplier of foreign exchange market but could only intervened in the buying and selling of foreign exchange market as and when necessary.

The multiple malpractices that characterized IFEM made it not to meet the policy expectation consequently DAS was re-introduced in 2002. The introduction of DAS was to ensure a stable exchange rate and this is to be achieve through enhancement of transparency in the management of foreign exchange market as well as reduction of speculative demand for foreign exchange market. Wholesales Dutch Auction System (WDAS) was introduced on 20th February 2006 to ensure a realistic exchange rate of the Naira.

In 2015, the value of Nigeria currency experienced a free fall mainly due to shortage of external reserves, speculator activities and reduction in crude oil price which pushes pressure on balance of payment.in curbing this economic menace different policies were formulated. Some of these policies are: Banning of the usage of debit cards abroad; The apex bank barred 41 items from access to foreign exchange (www.cbn.gov.ng); Central bank of Nigeria directed that as from August 1 2015, all foreign exchange transactions in any Bureau de change must have Bank Verification Number (BVN) of applicants; The apex bank released a circular in support of commercial banks that are not allowing foreign cash deposit into customer's domiciliary account.

Aside this introductory section, the rest of the paper is structured into four sections. The next section focuses on literature review which is made up of Literature review and theoretical framework. The third section deals with methodology and data; section four presents empirical analysis and interpretations. While sector five discuses conclusion and policy recommendation.

LITERATURE REVIEW

Chi-Wei-Su (2012) investigated the relationship between exchange rate and macroeconomic variables in China between 1994 and 2010. The result revealed that ratio of government expenditure to GDP, real money supply, degree of openness and relative productive activity differential all had a negative and significant impact on equilibrium of RBM exchange rate.

Edwards (1989) investigated the determinants of exchange rate in 12 developing countries with the model he built for the purpose. The study covered between 1962 and 1985. The study revealed that lag of capital flow and ratio of government expenditure to GDP had negative impact on exchange rate while output growth and ratio of investment-GDP had positive impact on exchange rate. The study also showed that term of trade no impact on exchange rate

Ojo and Alege (2014) examined exchange rate fluctuations and macroeconomic performance in sub- Saharan Africa. The research work cut across 40 sub – Saharan Africa (SSA) countries and it spanned between 1995 and 2007. There is a long term relationship between the variables of the model. Panel granger causality test confirmed that there are bidirectional relationship between exchange rate on one hand and consuming price index, degree of openness and international rate on the other. The results further showed that there is a strict exogeneity between exchange rate on one hand and real GDP, government expenditure and FDI on the other.

Ebaidalla (2013), examined the impact of exchange rate volatility on macroeconomic performance in Sudan between 1979 and 2009 using 2SLS. The study revealed that exchange rate volatility has negative effect on foreign direct investment and economic growth. Robert and Samuel (2007) investigated the determinant of the real exchange rate in Sierra Leonefrom 1970 to 2005 using Error Correction model. The study

revealed that capitalaccumulation, increase in the price level, trade restrictions and capital inflow has positive effect on exchange rate while output has negative effect. Rasaq (2013) analyzed the impact of exchange rate volatility on Macroeconomic variables in Nigeria between the period of 1980 and 2010. The research made use of Ordinary Least Square (OLS) and Granger Causality test. The findings of the study showed that exchange rate volatility has a positive influence on Gross Domestic Product, Foreign Direct Investment and Trade Openness, but with negative influence on the inflationary rate in the country.

Azeez, Kolapo and Ajayi (2012) examined the effect of exchange volatility on macroeconomic performance in Nigeria from 1986 to 2010. They employed the Ordinary least square (OLS) and Johnson co-integration estimation techniques. The result confirmed from both short run and long run analysis that there is a negative relationship between GDP and BOP. Oil revenue is significant in both long-run and short run while BOP and INF are significant in the long run but insignificant in the short-run study. It has been observed in this study that exchange rate volatility is significant and has positive relationship with macro- economic performance both in the long and short run.

Adeniran, Yusuf and Adeyemi (2014) examined the impact of exchange rate fluctuation on the Nigeria economic growth from1986 to2013. The estimation technique the authors used was Ordinary least square (OLS). The result revealed that exchange rate, interest rate and inflation rate had no significant impact on economic growth.

Osigwe (2015) examined exchange rate fluctuation oil prices and economic performance between from 1960 to 2010. The study showed that real exchange rate has a negative effect on the oil price and positive effect on the economic performance. The author used Error correction model as the technique.

Ebiringa and Anyaogu (2014) examined the long run relationship between exchange rate, interest rate and inflation between 1971 and 2010. Autoregressive distributed lag (ARDL) co-integration analysis was used to analysis the data. The result shows that there is a significant short-run and long run positive relationship between inflation and exchange rate. While interest rate had a negative relationship, though insignificant.

Nguyen and kalirajan (2006) examines the impact of nominal effective exchange rate on inflation in Vietnam between 1991 and 1999. Vector Autoregressive approach was used to analysis the data. The result shows that nominal devaluation had positive impact on inflation.

Dada and Oyeranti (2012) examined exchange rate and macroeconomic aggregate in Nigeria from 1970 to 2009. These results shows that there is no strong direct relationship between exchange rate and GDP growth.

Uguru (2015) investigated the relationship between oil prices and exchange rate in Nigeria between 1970 and 2014. The study revealed that crude oil price had negative impact on exchange rate. Tamunonimim and Reginald (2013) investigated the causal relationship between exchange rate, balance of payment, external debt, external reserves, gross domestic product growth rate and inflation rate in Nigeria between 1987 and 2011. The result shows that there is a long-run equilibrium relationship among the indicators. The Granger causality test shows that there is unidirectional causality from exchange rate to BOP, external reserves and gross domestic product growth rate.

THEORETICAL FRAMEWORK

Balassa-Samuelson

The model was development by BelaBalassa (1964) and Paul Samuelson (1964). They split the economy into two sectors: tradable sector and non-tradable sector. The model has the following assumptions: the principle of demand and supply are applicable

in both sectors; tradable prices are equals in the two countries, in the productive sector wages are linked to the level of productivity; labour productivity is higher in the tradable sector compare to the non-tradable sector and wages tend to equalize between the two sectors. However, the developing country have lower productivity level in the open sector compare to the developed country. For the developing country to catch-up with the developed economy, productivity must be increased in the open sector, so that wage could be increased in tradable sector without any inflationary effect.

The Mundell-Fleming model

This theory was developed in the early 1960's by Fleming and Mundell. This model is an extension of the IS-LM model to the case of an open economy. Unlike the IS-LM model which considers three markets: goods, money and asset markets, and is used to analyze the impacts of monetary policy and fiscal policy, Mundell-Fleming helps in determining exchange rate. Under this model, the balance of international payments is considered another equilibrium condition in addition to the money market and goods market. One of the most important issues addressed by the model is the trilemma, which states that perfect capital mobility, monetary policy independence and a fixed exchange rate regime cannot be achieved simultaneously. Specifically, it argues that a country cannot sustain monetary policy independence in a fixed exchange rate regime with perfect capital mobility.

METHODS

Model specification

Guided by empirical finding reviewed in this study and sequent to its logical structure as observed in the theoretical framework, the model specification therefore followed the models of Ojo and Alege (2014) with modification.

EXR = f (RGDPGR, CPI, TOT, FDI, TFRESV, GSPGDP, WCOP)t

$$EXR = \beta_0 + \beta_1 \mathit{RGDPGR} + \beta_2 CPI + \beta_3 TOT + \beta_4 FDI + \beta_5 RTFRESV + \beta_6 GSPGDP + \beta_7 WCOP + \mu_t \quad (1)$$

Where the following notation has been used:
EXR= exchange rate fluctuations
RGDPGR = real gross domestic product growth rate
CPI = consumer price index
TOT = terms of trade
FDI = foreign direct investment.
GSPGDP = the ratio of government spending (fiscal policy) to GDP
WCOP = world crude oil price.Price per barrel in US Dollar
TFRESV= total foreign reserve. Figure in US Dollar
μ_t = error term.

Equation 1 is written in an econometrics form as seen in equation (2) below:

$$(EXR)_t = \beta_0 + \beta_1(RGDPGR)_t + \beta_2(CPI)_t + \beta_3(TOT)_t + \beta_4(FDI)_t + \beta_5(TFRESV)_t + \beta_6(GSPGDP)_t + \beta_7(WCOP)_t + \mu_t \quad (2)$$

For an appropriate coefficient for the EXR with respect to the explanatory variables to be produce I would transform the model equation (2) on log-linear econometrics form as seen below. Variable with negative value cannot be log so RGDPGR was not log which made the model to be log-linear.

$$InEXRt = \beta_0 + \beta_1(RGDPGR)_t + ln\beta_2(CPI)_t + ln\beta_3(TOT)_t + ln\beta_4(FDI)_t + ln\beta_5(INTR)t + ln\beta_6(GSPGDP)_t + ln\beta_7(WCOP)_t + \mu_t \quad (3)$$

Operational definition

EXR = exchange rate fluctuations. This study made use of nominal exchange rate.

TOT = It reflects the capacity of any given amount of exports to pay for a quantity of import. It is measured by (export/import) X 100.

Data and source

The study employs annual data covering the period 1986-2010. This period is chosen as it corresponds to the period where uniform and consistent data on the relevant variables are available. And more importantly that is the period when exchange rate fluctuation came into been in Nigeria. Data for the work are collected from Central Bank of Nigeria (CBN) statistical Bulletins and World Bank Data Base.

RESULT AND DISCUSSION

Unit root test

Unit root test can also be called a stationary test and it used to test if a time series variable is stationary or not. It is important to check the stationarity a variable because the stationarity or otherwise of variable usually influence the behavior and properties of the variable strongly. In the literature, most time series variables are non–stationary and using non-stationary variable in model estimation might lend to spurious or nonsense regression results (Granger and Newbold, 1994).

Table 1. Unit root test

Variable	At Levels			1st Difference			Level of integration
	ADF-Test	1% C.V	5% C.V	ADF-Test	1% C.V	5% C.V	
LN(EXCHR)	1.969	-2.642	-1.952	-4.687	-2.644	-1.953	I(1)
LN(FDI)	0.833	-2.642	-1.952	-7.304	-2.644	-1.953	I(1)
LN(TOT)	-0.577	-2.647	-1.953	-6.935	-2.647	-1.953	I(1)
LN(GSPGDP)	-0.845	-2.642	-1.952	-7.303	-2.644	-1.953	I(1)
RGDP	-3.318	-2.642	-1.952	-9.059	-2.644	-1.953	I(0)
LN(TFRESV)	0.780	-2.642	-1.952	-7.079	-2.644	-1.953	I(1)
LN(WCOP)	2.649	-2.642	-1.952	-5.150	-2.644	-1.953	I(1)
LN(CPI)	-0.585	-2.642	-1.952	-6.359	-2.644	-1.953	I(1)

The result shown in table 1 examines the statistical properties of all the variables. The ADF tests for unit root were conducted for the variables in the model. The results of the test at levels and first difference are presented above. The null hypothesis states that there is a unit root in each of the series that is each variable is non stationary. The rule of thumb is that the null hypothesis should be accepted if the absolute value of ADF statistic is greater than the critical value at any chosen level of significance. The ADF result in Table 1 indicates that variables like EXCHR, FDI, TOT, GSPGDP, TFRESV,WCOP and CPI are integrated of order one, I(1), while variable RGDPGR is stationary at level. Based on the ADF test the condition for Johansen cointegration test is not met. This kind of conflict between the outcomes of the two tests is common in practice (Rahman, 2012). Consequently, this research would employ the ARDL – Bound testing method of co-integration analysis rather than the Johansen method.

Co-integration test

Co-integration test is used to detect or check for the presence of long-run equilibrium between or among series. Since it has been established that some variables

are not stationary at level, there is need to check whether there is existence of similar trend properties between or among the series as a regression model on co-integrated series is said to be super consistent. Thus, given the unit root test result above, the most appropriate co-integration test is the Pesaran Bounds test since the test allows combination of fractionally integrated variables i.e. combines variables of different orders of integration. The Bounds Cointegration test result is provided thus:

Table 2. ARDL Bounds test

Test Statistic	Value	k
F-statistic	14.01629	7
Critical Value Bounds		
Significance	I(0) Bound	I(1) Bound
10%	1.92	2.89
5%	2.17	3.21
2.50%	2.43	3.51
1%	2.73	3.90

Using the ARDL bounds test, the result above shows that with the assumption of weak exogeneity on EXCHR, FDI, TOT, GSPGDP, TFRESV, WCOP, RGDPGR and CPI, the hypothesis of no long run relationship can be rejected at 5% significant levels as the F-statistic for the model is greater than 5% of both I (0) and I (1) bounds of 2.17 and 3.21 respectively. Thus, this shows existence of long-run relationship between EXCHR, FDI, TOT, GSPGDP, TFRESV, WCOP, RGDPGR and CPI.

ARDL analysis

This subsection presents the result obtained from estimating the ARDL unrestricted error correction (short run or dynamic) model and the ARDL long-run (static) model in equation. Following this result, this study examines and estimates both short-run dynamics and the long-run relationships between exchange rate, consumer price index, foreign direct investment, government expenditure, real gross domestic product growth rate, term of trade and world crude oil price.

Table 3. Long run multiplier coefficient of ARDL

Variables	Coefficient	Std. Error	t-Statistic	Prob.*
LN(CPI)	-1.957	0.223	-8.758	0.001
LN(FDI)	1.777	0.241	7.378	0.002
LN(GSPGDP)	-1.721	0.341	-5.052	0.007
RGDPGR	0.0503	0.016	3.076	0.037
LN(TFRESV)	-0.328	0.191	-1.714	0.162
LN(TOT)	-0.138	0.416	-0.333	0.756
LN(WCOP)	-1.738	0.339	-5.121	0.007
C	9.139	2.491	3.669	0.021

Long-run ARDL model analysis

It is confirmed from the result that there is a positive relationship between EXR and FDI and RGDPGR. While CPI, GSPGDP, TFRESV, TOT, WCOP had a negative relationship with EXR. Also, all the variables were significant aside TFRESV and TOT. The co integration equation is:

$$LN(EXR) = 9.138859 - 1.957362LN(CPI) + 1.776902LN(FDI) - 1.720811LN(GSPGDP) + 0.050268RGDPGR - 0.327732LN(TFRESV) - 0.138364LN(TOT) - 1.737981LN(WCOP).$$

Engle-Granger Theorem establishes that when co-integration exist the encompassing power of the error correction mechanism over other forms of dynamic specifications. Therefore the short run analysis is presented below using ECM.

ARDL ECM

Sequent to the existence of cointegration relationships among the variables as evident in the ARDL Bound test, Auto-Regressive Distributed Lag Error Correction Model estimation technique would be used to determine the short-run behavior of the variables. The Error Correction Model captures the short run dynamics of the system and its coefficient measures the speed of adjustment to obtain equilibrium in the event of shock to the system. The below table shows the result of the short run dynamics of equation.

Table 4. ARDL ECM

Variables	Coefficient	Std. Error	t-Statistic	Prob.*
DLN(EXR(-1))	0.176	0.059	2.970	0.041
DLN(CPI)	-0.865	0.051	-16.923	0.001
DLN(FDI)	0.530	0.063	8.477	0.001
DLN(GSPGDP)	-0.850	0.089	-9.513	0.007
D(RGDPGR)	0.007	0.003	2.536	0.064
DLN(TFRESV)	-0.452	0.050	-8.959	0.001
DLN(TOT)	1.130	0.077	14.706	0.000
DLN(WCOP)	-0.722	0.075	-9.614	0.001
CointEq(-1)*	-0.704	0.036	-19.454	0.000
R-squared	0.979	Mean dependent var		0.133
Adjusted R-squared	0.954	S.D. dependent var		0.288
S.E. of regression	0.062	Akaike info criterion		-2.427
Sum squared resid	0.046	Schwarz criterion		-1.666
Log likelihood	49.977	Hannan-Quinn criter.		-2.194
Durbin-Watson stat	2.975			

Short-run (dynamic) ARDL model analysis

The Table 4 above shows the short run (dynamics) results. The optimal lag combination for the models is obtained via Schwartz Information criterion (SIC). The result in table 4 is the Error Correction Mechanism.

It can be observed that there is a positive relationship between EXCHR and FDI, RGDPGR and TOT but a negative relationship with CPI, GSPGDP, TFRESV and WCOP. The results shows that foreign direct investment has a positive significant effecton exchange rate fluctuations. This implies that as FDI increases exchange rate fluctuations increases i.e exchange rate depreciates. This does not conform to the apriori expectation. This is in line with the findings of Rasaq (2013).

However, Consumer price index was found to have negative significant effect on exchange rate fluctuations. The result implies that as consumer price index increases exchange rate fluctuations decreases i.e. exchange rate appreciates (stabilized). This does not conform to the apriori expectation. This is in line with the findings of Rasaq (2013), Edet, Sunday, Daniel and Inimfon (2012) and Tamunonimim and Reginald (2013).

Government expenditure showed that it had a negative significant relationship with exchange rate fluctuations. The result implies that as government spending increases exchange rate fluctuations decreases i.e exchange rate appreciates. This conformed to the apriori expectation and was in line with the findings of Chi-Wei-Su (2012) and Omijimite and Oriavwote (2012).

In the same vein, total foreign reserve was found to have a negative and significant relationship with exchange rate fluctuations. This implies that as total external reserves increases exchange rate fluctuations decreases i.e exchange rate appreciates. This conformed to the apriori expectation and was in line with the findings of Edet, Sunday, Daniel and Inimfon (2012).

Furthermore, real gross domestic product growth rate was found to have a positive but not significant relationship with exchange rate fluctuations. This is in contraction with the apriori expectation but conformed to the work of Adeniran, Yusuf and Adeyemi (2014) and Edwards (1989).

However, term of trade showed that there is positive and statistically significant relationship with exchange rate fluctuations. This conformed to the apriori expectation. Lastly, world crude oil price was found to have a negative significant relationship with exchange rate fluctuations. The result implies that as world crude oil price increase exchange rate fluctuations decreases i.e exchange rate appreciates. This conformed to the apriori expectation and was in line with the findings of Uguru (2015), Ogundipe, Ogegag and Ogundipe (2014) and Osigwe (2015).

The coefficient of most importance is the ECM coefficient. From the result the ECM term is well defined, that is negative and statistically significant at 5% level. The coefficient is -0.704469 which indicates approximately 70.45 percent of the previous year's disequilibrium in exchange rate fluctuations is been corrected by CPI, FDI, GSPGDP, RGDPGR, TFRESV, TOT and WCOP. This also showed the speed at which the model converges to equilibrium. The magnitude of this coefficient implies that nearly 70.45 percent of any disequilibrium in exchange rate fluctuations is corrected by the some of the selected variable within one period (one year). The implication is that the present value of exchange rate fluctuation will adjust to changes in CPI, FDI, GSPGDP, RGDPGR, TFRESV, TOT and WCOP.

Test for causal relationship

Granger causality test is use to investigate causal relationship between two variables in a time series. The method is a probabilistic account of causality; it use empirical data sets to find patterns of correlation. A variable X is causal to variable Y if X is cause of Y. Two test would be obtain from each analysis, the first examines the null hypothesis that the variable Y does not Granger-cause variable X and the second test examines the null hypothesis that the X does not Granger-cause Y. If we fail to reject the former null hypothesis and reject the latter, then we conclude that Y changes are Granger-caused by a change in X. The null hypothesis is rejected if the probability value is more than 5% otherwise do not reject the null hypothesis if the probability value is less than 5%. Unidirectional causality will occur between two variables if either of the null hypothesis is rejected. Bidirectional causality exists if both null hypotheses are rejected and no causality exists if neither of the null hypothesis is rejected.

The Pairwise causality test in table 5 suggests the following: a) There is a uni-directional causality from TOT to EXR significant at 5%level, i.e term of trade affects exchange rate fluctuations; b) There is a uni-directional causality from WCOP to EXCHR significant at 5%level, i.e world crude oil price affects exchange rate fluctuations; c) There is a bi-directional causality between CPI to EXR significant at 5%level, i.e consumer price index affects exchange rate and exchange rate also affect consumer price index; d) There is a uni-directional causality from EXR to FDI significant at 5%level, exchange rate fluctuations affects foreign direct investments.

Table 5. Pairwise Granger causality test

Null Hypothesis:	Obs	F-Statistic	Prob.
LN(FDI) does not Granger Cause LN(EXR)	30	0.900	0.419
LN(EXR) does not Granger Cause LN(FDI)		2.594	0.025
LN(CPI) does not Granger Cause LN(EXR)	30	2.897	0.024
LN(EXR) does not Granger Cause LN(CPI)		2.774	0.042
LN(GSPGDP) does not Granger Cause LN(EXR)	30	0.169	0.845
LN(EXR)does not Granger Cause LN(GSPGDP)		1.684	0.206
LN(TOT) does not Granger Cause LN(EXR)	30	5.516	0.010
LN(EXR) does not Granger Cause LN(TOT)		0.156	0.856
LN(WCOP) does not Granger Cause LN(EXR)	30	3.819	0.036
LN(EXR) does not Granger Cause LN(WCOP)		2.507	0.102
RGDPGR does not Granger Cause LN(EXR)	30	0.102	0.904
LN(EXR) does not Granger Cause RGDPGR		0.246	0.784

CONCLUSION AND RECOMMENDATIONS

Conclusion

This paper investigated the nexus between exchange rate fluctuations and macroeconomic variables in Nigeria using annual data for the period 1986 to 2017. Empirically, it is broadly concluded based on our results and discussion of finding that there existed long-run and short-run relationship between exchange rate and macroeconomic performance in Nigeria.

It is also concluded from the result that, foreign direct investment and term of trade had and real gross domestic growth rate have positive and statistically significant impact on exchange rate fluctuations. The result also found that consumer price index, government spending and world crude oil price have negative and statistically significant impact on exchange rate fluctuations while total foreign reserve had a positive and statistically insignificant impact on exchange rate fluctuations. Moreover, it is concluded that Bound test confirmed that the variables cointegrated.

Granger causality shows that there is uni-directional causality test from log(tot), log(wcop) to exchange rate, while there is uni-directional causality test from log(exr) to log(fdi) and lastly, there is birectional relationship between exchange rate and consumer price index.

Recommendations

I recommend the appropriate policies that will show the way forward out of this predicament as revealed in this study, as follow: a) Since, world crude oil price affects real exchange rate, something should be done to diversify the economy so that whenever there is a shock in the oil sector, the shock will be less felt by the economy; b) The monetary authority should establish mechanism that would lead to the stability in Naira since exchange rate fluctuations had impact on macroeconomic variables; c) The policy makers should intensify domestic policies that accommodate or tolerate some level of (slight) inflation in order to encourage producers to expand production of goods and services. This will eventually lead to exchange rate appreciation; d) Government consumption expenditure should be carried out in a manner that it will encourage and promote investment, and increase domestic demand. Consequently, it would lead to exchange rate appreciation; e) To maintain stable exchange rate, government should

increase the holding of foreign asset in order to maintain surplus or stability in the current account; f) There is need for government to monitor how foreign investor operate in the country and to encourage foreign investors to not be repatriate all profit on their business to their home country; g) Government and policy makers should employ policies that would increase productivity in all sectors of the economy, through the creation of an enabling environment and provision of subsidies so that businesses can grow. This in turn would lead to exchange rate appreciation.

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Implementation of good governance principles in village government context in Bantul Regency, Yogyakarta

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Abstract
This study aims to determine the application of good governance principles of the village government in Bantul Regency, Yogyakarta. In Indonesia, village is the lowest level government. The method used in this study was descriptive statistics with data from all villages in Bantul Regency. This study concluded that the implementation of good governance in villages in Bantul was generally good. Good governance indicators have been implemented by more than 50% of all villages even though some indicators still need to be improved. The villages have applied the good governance principles in accordance with the international formulation, namely, efficiency and effectiveness, openness and transparency, innovation, long-term orientation, reliable, and accountable financial management. The implementation can be strengthened through training to the village government and communities, especially regarding innovation and long-term orientation principles that must be possessed so that the villages can become more independent and develop more rapidly.

Keywords: *village governance, good governance, village fund*

JEL Classification: G38, H52, H72

INTRODUCTION

A governance includes three stakeholders, namely: state, civil society, and market. The crisis that occurred in Indonesia in 1998, which had a great impact in all aspects, showed that state, civil society, and market have not played a positive role in realizing good governance. The crisis forced Indonesia to begin implementing a modern governance system so that it could immediately rise from the crisis and catch up. Based on the United Nation Development Program (UNDP) (1997), the principles of governance include Participation, Rule of law, Transparency, Responsiveness, Consensus orientation, Justice (Equity), Effectiveness and Efficiency (Effectiveness and Efficiency), Accountability (Accountability), and Strategic Vision (Strategic Vision). All of these principles are mutually reinforcing and cannot stand independently.

Public sector accounting has a major role in preparing financial reports as a form of public accountability implementation. Accounting and financial statements are a process of collecting, processing, and communicating information that is useful for decision making and for assessing organizational performance (Santoso and Pambelum, 2008). Minister of Home Affairs Regulation No. 113 of 2014 implicitly regulates the application of accounting in the village which includes administration of village finance,

reporting, and accountability. Sinason (2000) argues that higher funding levels have increased the consequences of financial mismanagement and the application of village accounting aims to increase transparency and accountability in financial management to avoid such misconduct. However, the results of a study by the Anti-corruption Commission (Komisi Pemberantasan Korupsi, or KPK) stated that village accountability reports have not followed the prevailing standards and were prone to manipulation (KPK, 2015).

Indonesia is a country that applies a decentralized government system in the form of regional autonomy. All regulations and instructions for implementing regional autonomy are regulated in the law. Based on law number 32 of 2004, regional autonomy is the right, authority, and obligation of the region to independently regulate and manage government affairs and the interests of the local community in accordance with laws and regulations with the aim of improving community welfare, public services, and competitiveness. With regional autonomy, it is expected that regions can properly regulate Regional Own-Source Revenue (Pendapatan Asli Daerah, or PAD) according to their individual needs so that developed and independent regions can be realized.

However, the implementation of regional autonomy can be a potential vulnerability due to weak central control over the regions, which can lead to contradictory rules and conflict-prone situations. In addition to carrying out the mandate of Law number 32 of 2004 concerning regional autonomy, President Joko Widodo has 9 priority agendas, generally known as Nawa Cita, during his first period of government (2014-2019). One of these important agendas is to develop Indonesia from the periphery by strengthening regions and villages within the framework of the unitary state of the Republic of Indonesia. This agenda was then realized in giving authority to villages to manage village-related programs independently. This independence is given to villages to manage village resources and use them to empower village communities. Such improvement of village human resources can be done if the village has a source of funds to carry out various programs. Therefore, the central government decided to provide Village Fund Allocation which could be used to support the program and be regulated in law.

Law Number 6 of 2014 states that customary villages and villages or what are called by other names, hereinafter referred to as Villages, are legal community units that have territorial limits that are authorized to regulate and manage government affairs and interests of local people based on community initiatives, origin , and / or traditional rights recognized and respected in the system of government of the Unitary State of the Republic of Indonesia. Independence of the village leads to an increase in the decentralization process from the central or regional government to the village in terms of administration and financial and resource accountability.

In agency theory, if agent possesses more information than owner, the agent will most likely prioritize personal and/or group interests, which can reduce the level of transparency and alignments with the community. Differences in the ability of human resources at the central or regional level and at the village level can lead to different perceptions in managing and using funds. One of the causes of differences in perception is the lack of socialization from the central or regional government because of the large number and far distance of villages. Community involvement in determining village programs is also low because it only involves village administrators. These factors lead to weak governance in an organization.

Table 1. Good governance definitions

No	Sources	Definitions
1	Rhodes (1996) quoting World Bank,1994	Good governance is illustrated through predictable and clear policies (through a transparent process); a bureaucracy based on a professional ethos; government executives are responsible for their actions; and strong civil society participates in public affairs and all parties behaves under legal regulations
2	Canadian International Development Agency (CIDA), 1996	Governance is the way in which the government regulates economic and social resources Good governance is an effective, honest, fair, transparent and accountable implementation of all levels of government
3	United Nations International Development Agency, 2005	Good Governance is management that is democratic, transparent, diverse, accountable, and representative where the community participates in adopting the rules; focused on five things: strengthening legislative procedures, decentralization and democracy in local government, anti-corruption, public relations with war, and the development of the rule application
4	Domarkas, 2005	Good governance has characteristics such as large community participation, transparency, subsidization, accountability, diversity, impartiality (equity), easy access, cooperation, and efficiency
5	Kaufmann Kraay, Matsruzzi, 2005	Can be measured by dimensions such as the right to choose, accountable to the external, political stability, no violence, crime, tourists, efficiency management, legal rules, corruption control
6	International Monetary Fund, 2005	Good governance is legal certainty; Development of effectiveness and accountability in the public sector in fighting corruption
7	Barcevicius, 2008	Good governance is the exchange of information both inside and outside the organization; cooperation is carried out when coordinating rules making; citizens are encouraged to participate in the government process
8	Farrington, 2009	Good governance emphasizes democracy, impartial judicial processes, transparency of public agency activities, and citizen participation
9	Negrut, Costhache, Maftei, et all, 2010	Good governance is indicated by five factors: openness, community participation, accountability, efficiency, and relations between government, private sector and society
10	Saparniene, 2010	Good governance is a government that is supported by the principles of democracy that are fair, efficient, accountable and transparent, and clear interactions between the government, the public, the private sector, and non-governmental organizations

Source: data processed

Village funds require the village government to properly manage the organization and align accountability in accordance with the prevailing rules. However, based on the results of a study by the KPK, financial management accountability in villages is still relatively low and there are 14 (fourteen) potential problems in managing village funds.

One way to improve community welfare is the establishment of a Village-Owned

Enterprise (BUM Desa), a business entity whose entire or part of its capital is owned by the village through direct participation from the separated Village wealth to manage assets, services, and other businesses.

The administration of an accountable, transparent, legal, effective and efficient, and fair government with a strategic vision is compulsory to realize good governance. To be able to realize good governance, all institutions from the central level to the village level with various existing limitations need to provide the best service to the community. With village funds allocation, the village government is in the spotlight, which encourages them to apply the good governance principles as community servants.

Kaufman and Metsruzzi (2005) state that poor implementation of good governance can affect people's per capita income. This statement is based on their research in African countries with data covering 8 years using good governance indicators approved by UNDP (1997). The indicators were observed in the community in a government with a large sample.

Saparniene and Valukonyte (2012) found difficulties in defining good governance clearly even though various definitions were available. Their research found that good governance indicators are closely related. The application of one indicator can affect the application of other indicators. For example, indicators of effectiveness and efficiency are closely related to the weaknesses of the strategic plan and implementation effectiveness; Indicators of openness and transparency are closely related to the delivery of information to the public and communication problems. Therefore, the implementation of good governance is highly dependent on the government administration that has moved towards modern system which accommodates the good governance principles.

According to Saparniene and Valukonyte (2012), indicators in the implementation of good governance in government include (1) efficiency and effectiveness, (2) openness and transparency, (3) innovation and readiness to change, (4) sustainability and long-term orientation, (5) reliable financial management, and (6) accountability. These indicators must be applied properly to achieve good governance. This study uses these indicators to measure good governance in villages in Bantul Regency, Yogyakarta. Bantul Regency is one of the regencies that often receive awards in financial management of local governments.

This study aims to find out how the principles of good governance are applied by the village government in Bantul. The village is the smallest government agency that directly serves the community. At present, the village is also given the authority to manage finance independently. Because of the allocation of village funds, the village is required to be able to generate independent income through a village business unit called Village-Owned Enterprises (BUMDesa). The authority in financial management must also be followed by the administration of a professional government with a modern system. With good management, conflicts between communities and the government can be avoided. This research is expected to be able to identify the level of good governance implementation and the development that needs to be done to achieve good governance.

The purpose of this study is formulated in the following two questions: a) How are the principles of good governance implemented in the Village Government in Bantul Regency, Yogyakarta?; b) How can the principles of good governance applied in the Village Government in Bantul Regency Yogyakarta be developed?

METHODS

This study used the same indicators used by Saparniene and Valukonyte (2012), namely, (1) efficiency and effectiveness, (2) openness and transparency, (3) innovation and readiness to change, (4) sustainability and long-term orientation, (5) reliable financial management, and (6) accountability. This study used primary and secondary data. Primary data was collected through direct observation and filling in questionnaires by the community regarding government organization related to indicators of openness and transparency and accountability. Data collected is the frequency of village accountability reports, publication of village reports, and community involvement in determining village programs and the Village Revenue and Expenditure Budget (APBDes). Meanwhile, secondary data is the village accountability report and APBDes that were used to measure financial management efficiency and effectiveness and reliability. Effectiveness and efficiency were measured using the ratio determined by the Minister of Home Affairs Regulation Number 13 of 2006 concerning Guidelines for Regional Financial Management while financial management reliability was measured by how the villages fund their operations and their ability to generate income. Other indicators (innovation and readiness to change and sustainability and long-term orientation) were measured by the availability of village vision, mission, goals and programs. This research was conducted in 2016 and 2017 in 75 villages in Bantul Regency, Yogyakarta.

This study uses quantitative methods with descriptive statistics. According to Sugiyono (2008), descriptive research is research conducted to determine the value of independent variables, either one or more variables, without comparing or relating them to other variables. The variables used were good governance indicators used in the study.

The data were then processed using descriptive statistics to find the average value of implementation, which indicators are widely applied, and how indicators that have not been implemented can be developed.

RESULTS AND DISCUSSIONS

Analysis of the application of good governance principles

This research used the principles of good governance that were agreed internationally through UNDP in 1997 and was also used in research by Saparniene and Valukonyte (2012), namely, effectiveness and efficiency, strategic vision, openness and transparency, innovation and long-term orientation, reliable financial management, and accountability. The study found that the level of implementation of these indicators was 52.8% in 75 villages in Bantul Regency which were measured for two years. Indicators that have been well implemented include effectiveness and efficiency, openness and transparency, and accountability, while strategic vision, innovation and long-term orientation, and reliable financial management have not been fully implemented. This figure is relatively high because village funds have only been running for 3 years. It can be said that the village government in Bantul Regency has adopted a more modern governance system. Various indicators have begun to be implemented even though not yet in their entirety, and not even a village has not yet applied the principles of good governance. Some indicators still need to be developed further so that the government administration will improve which will ultimately increase the economic independence of the village community.

Analysis of effectiveness and efficiency

The majority of village governments have applied the principles of effectiveness

and efficiency in managing finances. Effectiveness can be measured by comparing the realization of village revenue with the set revenue target, even though income is only generated from village funds. Meanwhile, the level of efficiency can be measured by comparing costs incurred with income received. In managing finance, this measure is a priority to be implemented as shown in the graph below

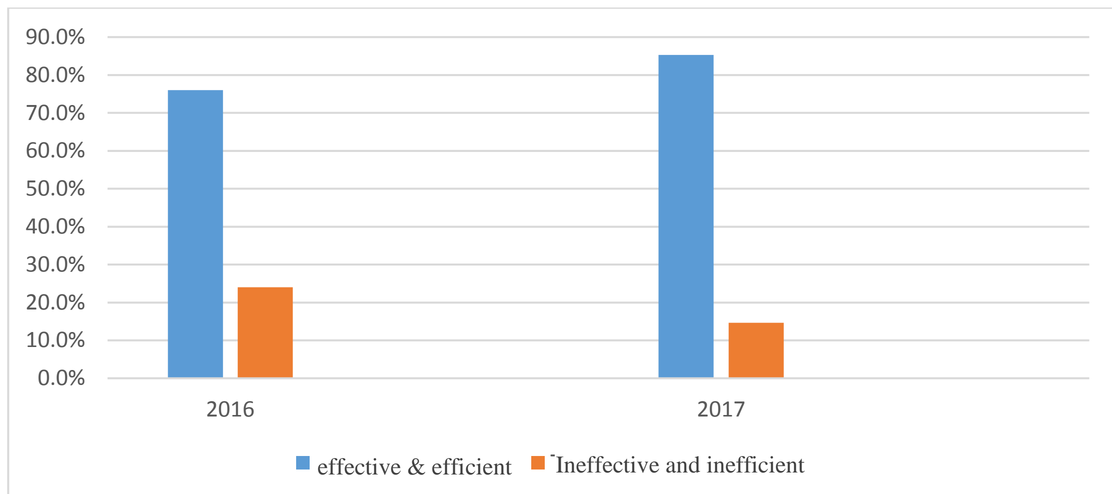

Figure 1. Effectiveness and efficiency indicators

The level of implementation of effectiveness and efficiency indicators in 2016 and 2017 was 76% and 85.3%, which showed an increase of 9.3% both in terms of expenditure and income. Managing costs is an indicator of effectiveness and efficiency.

Analysis of strategic vision

Every organization must be strategic in determining their characteristics because these characteristics are the soul in carrying out their operations to become a superior organization compared to other similar organizations. In addition, the characteristics can also enhance the reputation of the organization.

The strategic vision in village government can be seen from how the village positions itself. Vision must also be valuable and measurable so that its achievements can be evaluated. Villages are no longer the smallest service organization, but sustainability, economic independence, and excellence must also be a priority. The chart below shows the number of villages in Bantul Regency that have a strategic vision during 2016 and 2017.

Figure 2 above shows that 65.3% of all villages have a strategic vision, while the remaining 34.7% have a vision but are not yet strategic. There were no changes in this indicator during 2016 and 2017. The strategic vision is measured by identifying whether the vision is general, can be realized in the short term, and is temporary. For village officials who have not had sufficient competence in determining the strategic vision, after allocating village funds, they are expected to be able to provide special competencies in the development of long-term oriented villages. Based on observations made, they need workshops to support the sustainability of independent villages.

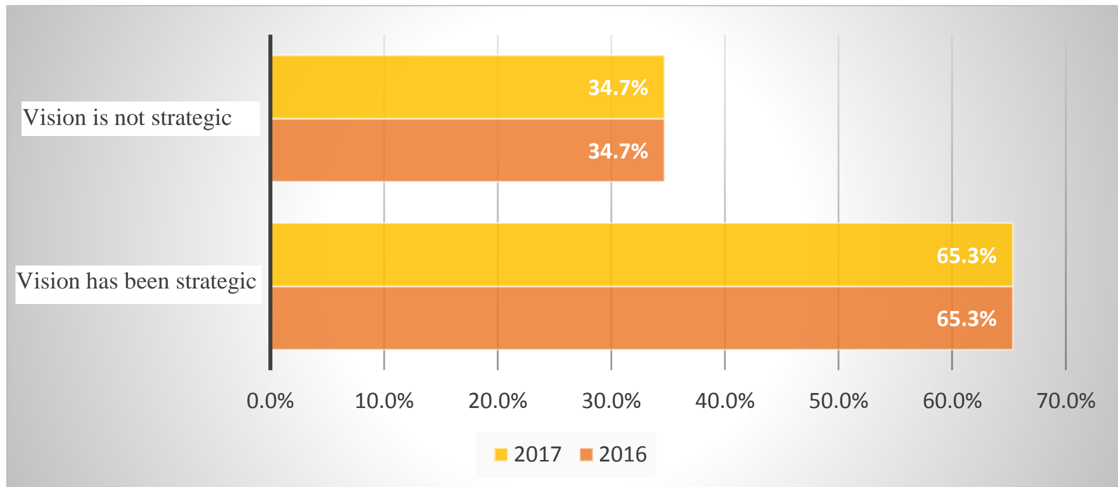

Figure 2. Strategic vision indicator

Analysis of openness and transparency

Transparency in regional financial management is measured using four criteria: availability, accessibility, timeliness of information disclosure, and frequency of disclosure of village financial management documents. Information is deemed available if the indicator documents at each stage of village financial management can be obtained during observation and is made available on the official website of the village government. Furthermore, if the document can be downloaded independently by the public, the information is considered accessible (Adriana, 2017). Based on data collection carried out on village financial planning, implementation and reporting, 70.7% of villages have implemented openness and transparency while the remaining 29.3% have not applied. The application of openness and transparency shows the level of public trust in the village government. This figure can be said to be very good, because the village government has run the administration openly and wants the community to oversee the process. The chart below shows the level of openness and transparency of the village government in Bantul Regency.

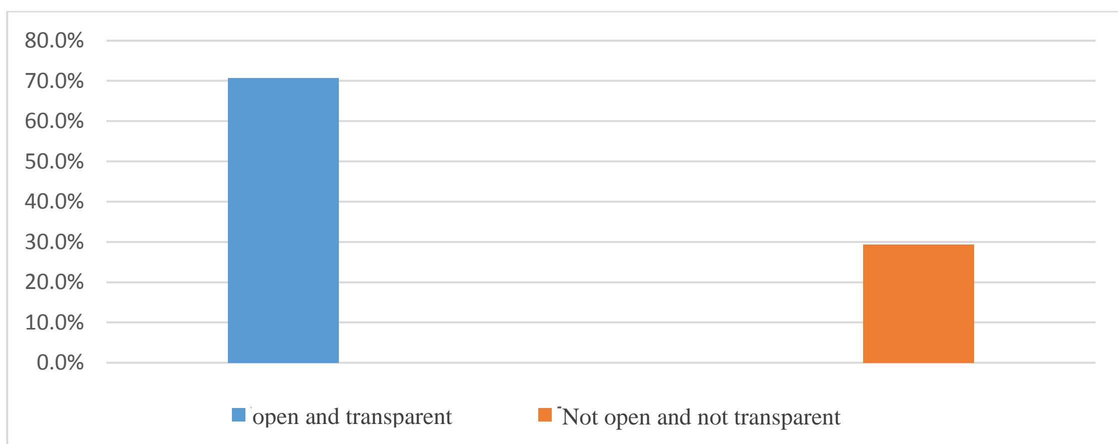

Figure 3. Openness and transparency indicator (Year 2016 and 2017)

Analysis of innovation and long-term oreintation

To have excellence and be superior to similar organizations, in addition to strategic vision, innovations and long-term orientation are also needed. These indicators

are closely related to the strategic vision indicator because it should also contain innovation and long-term orientation. Figure 4 shows the level of innovation and long-term orientation of the village government in Bantul Regency.

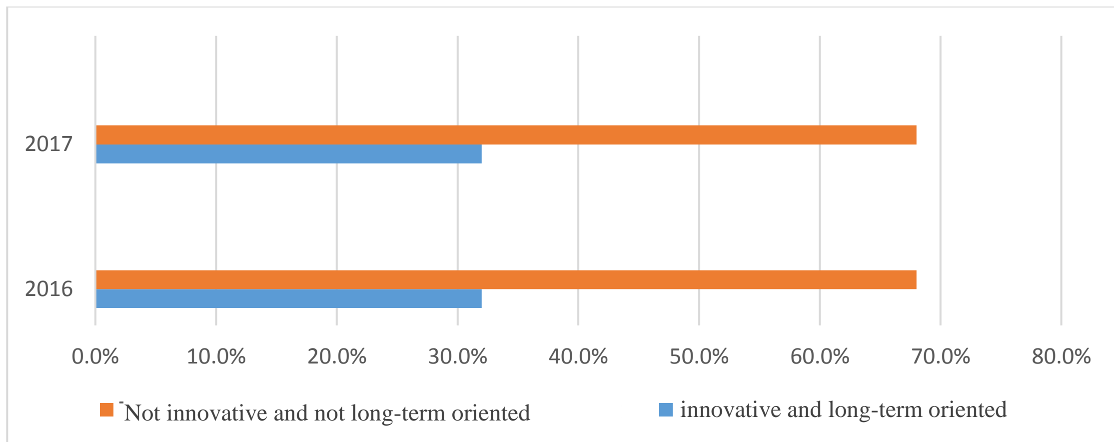

Figure 4. Innovation and long-term oreintation indicators

In 2016 and 2017, only 32% of villages had innovation and long-term orientation. These two indicators can be seen from the uniqueness and positive impact of village programs and objectives in village development and not simply imitate the same programs of other villages. Villages with short-term goals that have not produced output that can be used for a long time show that the village has not implemented both indicators and therefore, the use of village funds is still temporary and tends to change even though the problems faced are still relatively the same. Innovation and long-term orientation are influenced by positive creativity. Habits in a critical environment will shape resources capable of innovation and long-term orientation. These indicators can be relatively quickly developed through focus group discussions that hone creative thinking power for the village growth.

Analysis of reliable financial management

Reliability of village government financial management is measured by how villages can generate income that is not sourced from village funds or allocation of funds from the district or province. The village government carries out various creative programs to bring in income that is used for the benefit of the community. BUMDesa is one form of legality so that villages can generate large income. This study found that the majority of villages in Bantul district have not carried out financial management. Villages tend to wait for income from various allocations of funds from the government at a higher level so that economic independence and improved community welfare are difficult to achieve. The low welfare of the village community will encourage urbanization, which will widen the economic gap. Figure 5 below shows the level of reliability of village government financial management in Bantul district

Based on Figure 5 above, it can be seen that out of 75 villages, only 4 villages (4%) showed financial management reliability. The majority of villages in Bantul Regency (96%) rely solely on income from village funds and are unable to generate income from other sources, whereas nowadays villages are required to have productive business units that are able to improve the community economy. The development that can be done to improve the application of this indicator is to provide assistance to village officials and

other village institutions so that they are able to establish income-generating business units. Ownership of business units will increase village independence economically which is expected to have an impact on the community.

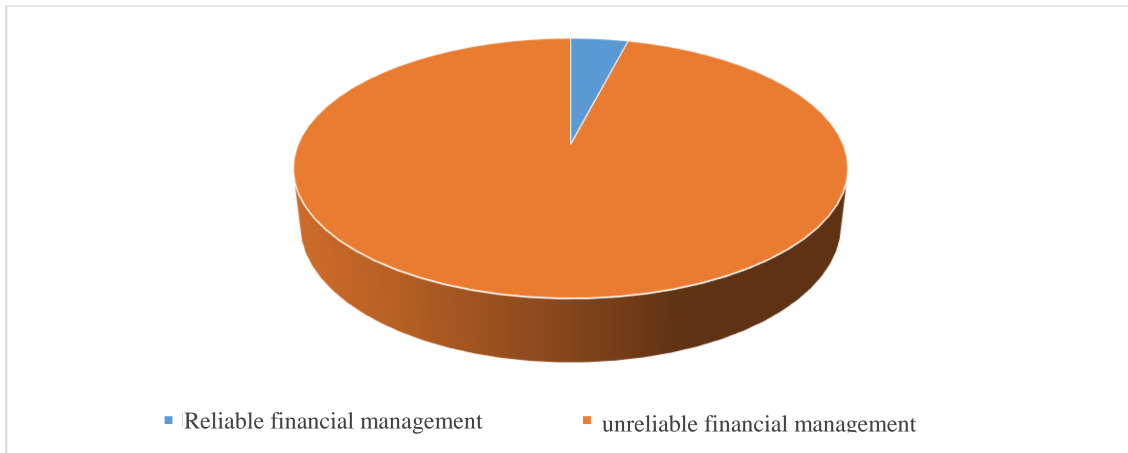

Figure 5. Reliable financial management indicator (Year 2016 and 2017)

Analysis of accountability

Out of 75 villages, 81.3% have applied the accountability indicator. According to Mahmudi (2007), accountability can be seen from various perspectives. This study used two types of accountability: policy and financial accountability. Policy accountability is related to the accountability of public institutions for various kinds of policies and decisions that have been implemented or taken. In this case, public institutions must be able to account for every policy that has been determined both in terms of objectives, reasons for decision making, benefits generated, and various kinds of negative impacts that might be caused by each policy that will or has been taken. Meanwhile, financial accountability is the responsibility of public institutions for money deposited by the public to the government. Public institutions must be able to explain how the money is obtained, where the money is spent, and various other types of accountability (Mahmudi, 2007).

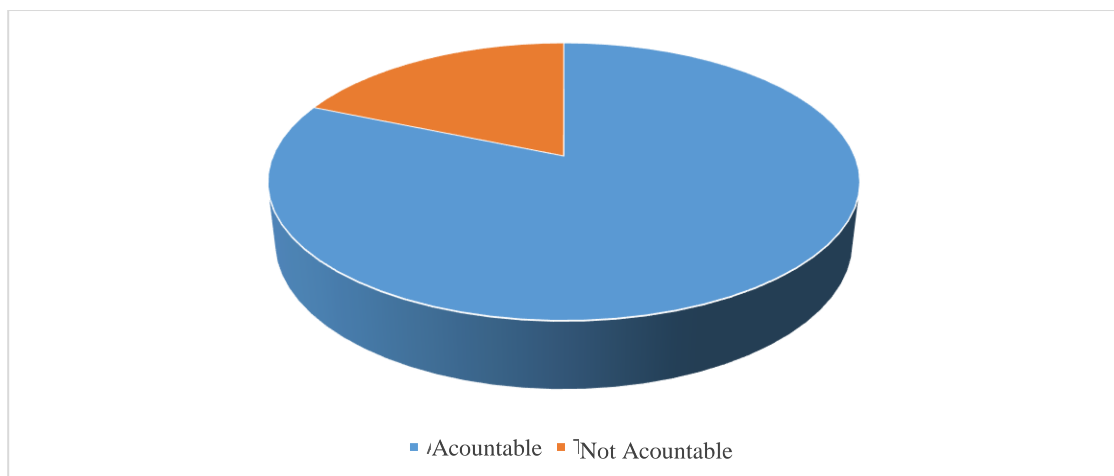

Figure 5. Accountability indicator (Year 2016 and 2017)

The Figure 5 shows the policy and financial accountability of the village government in Bantul Regency. It can be seen that 61 villages (81.3%) have been accountable in 2016 and 2017. This indicator can be strengthened through socialization about the preparation of accountability reports and village policy determination to realize an orderly administrative village so that they are able to account for finances and policies taken and also represent community problems.

CONCLUSION AND RECOMMENDATION

Conclusion

Based on the results of observations and data processing, this study concluded that, first, overall, the level of implementation of the good governance principles in villages in Bantul Regency, Yogyakarta, which had only been running for 3 years, was generally good, although some indicators had not been implemented. Indicators that have not yet been implemented require professionalism, modernization, and experience both from the administrators, the regulatory body, and the community. For example, the financial management reliability, innovation, long-term orientation, and strategic vision really requires learning and adaptation.

Second, several indicators that have not been implemented can be developed by fostering creative and critical thinking that is useful in determining strategic vision, innovation, and long-term orientation. Creative and critical thinking can be improved through workshops, focus group discussions, and mentoring by experienced experts. In these ways, the old government management model can be abandoned and a new public management system (NPM) can be applied to realize villages that are economically independent and having positive reputation. It is natural that some villages have not fully implemented the good governance principles because the authority in independent management has just been recently implemented. In addition, until just recently the village was only the smallest government institution that only served the needs of the community regarding population legal matters. In the new management system, the village carries large demands and responsibilities along with new authority in financial management.

Third, the implementation of good governance in villages in Bantul Regency is generally good and the implementation of several indicators can still be strengthened. Some indicators are still in the process of being implemented because villages are still adapting to changes in village management from traditional systems to the NPM system.

Recomendations

This study replicates the research conducted by Saparniene and Valukonyte (2012), but with different years and objects. In the previous study, research was conducted in the city of Siauliai while this study was conducted in Bantul Regency, Yogyakarta. This study has limitations related to the research method used. With the case study method, the results of the study cannot be generalized to different organizations. Future research can use other methods to obtain results that can be more generalized. Further research can also use respondents from various other levels of government.

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Good university governance: experience from Indonesian university

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Abstract
The purpose of this paper is to discuss the concept of a good university governance. Particularly, this paper discuss the implementation of good governance in Indonesia and the principles used in achieving good governance in Indonesia. Education has developed from time to time and universities as higher education institutions also develop into a dynamic and modern institutions of knowledge. The concept of good university governance provides a guidance for the management of a university and the university should place itself in the middle of the public and the nation. The concept of university governance is originally derived from the good governance concept. The concept of university governance is a guideline for the university to achieve the vision and objectives as a professional institution. There are eight good university governance in Indonesia, namely transparency, accountability to stakeholders, responsibility, independence in decision making, fairness, quality assurance and relevance, effectiveness and efficiency, as well as non-profit. These principles need to be developed in all academic activities and the university management.

Keyword: *good university governance, higher education, university.*

JEL Classification: M1, L3

INTRODUCTION

Education is growing from time to time along with advances in technology and cultural heterogeneity. The universities evolved into an institution that can address the needs and dynamics of knowledge and modernization (Schofer & Meyer, 2005). As an institution that supports the establishment of knowledge development, the universities define itself into an institution with the spirit and dedication to obtain legitimacy through the efforts and achievements.

Traditionally, the role of the university only focus on the transfer or conservation knowledge and expected to be a community that adhere values (Stevenson, 2004). The university is also expected to be a community that is capable to protect itself from the distortion values from external environment which may contain a negative impact (Sadjad, 2004).

Through rapid development, universities are encouraged to make improvements in order to cultivate the future of the organization through strategic planning in education, management, research and community service (Hariyanto, 2004; Widjajanti & Sugiyanto, 2015). National competitiveness also provide an important role, particularly for universities as a moral force to support better community development and capable to compete globally (Sumarni, 2010). Universities as an educational institution are expected to generating the excellent generation, who can contribute to the country development,

both through knowledge in government area, business environment and the public (society) (Muktiyanto, Rossieta & Hermawan, 2014).

The management of university organization have an extensive coverage. This includes the management of science, lecturers, human resources support, students, facilities and infrastructure of academic, academic programs, academic information on the three fundamental tasks of university (education, teaching and public services) (Sadjad, 2004).

One concept that is currently becoming well-known in the management of universities is a good university governance concept. The concept is originally derived from the good governance concept. This concept provides a guidance for how the management of a good university and how the university should place itself in the middle of the public and the nation (Sumarni, 2010). University governance is a guideline for the university to achieve the vision and goals as an institution of professionalism, research, and knowledge (Hussin & Asimiran, 2010).

Good governance implementation among the universities is essential in order to drive the efficiency, transparency and consistent with the laws and regulations. Implementation of good governance, must be supported by three interrelated elements, the government as regulators, the business as market players, and the public as stakeholders and users (Muhi, 2010; Muktiyanto et al., 2015). Good governance as well should meet the demands of many stakeholders, especially students, academics, industry, and government. It is related to providing opportunities, facilities, and resources to ensure the further development and sustainability (Hussin & Asimiran, 2010).

This paper aims to discuss the concept of a good university governance. The paper focuses on the implementation of good governance in Indonesia and the principles in achieving good governance in Indonesia. Further, this paper is arranged as follows. Section two discusses briefly about the university in Indonesia. Section three discusses the concept of governance in the university. Section four present a discussion about the principles of university governance in Indonesia, while Section five provides a summary, suggestions and limitations on this paper.

THE UNIVERSITY IN INDONESIA

Higher education in Indonesia is an education after secondary education (Vocational High School/High School/*Madrasah Aliyah*). The educational unit that organizes higher education is known as the University. According to *Undang Undang No.12 Tahun 2012 pasal 1 ayat 1* (Law of the Republic of Indonesia Number 6 of 2011, Article 1, Paragraph 1) the higher education is level of education after secondary education. This includes diploma, undergraduate, master program, doctoral and professional programs, as well as specialist programs, organized by the universities based on the Indonesian culture.

Undang-Undang No. 12 Tahun 2012 pasal 5 (Law of the Republic of Indonesia Number 12 of 2012, Article 1) mentioned the four objectives of higher education, namely: 1) Bring up qualified and independent human resources; 2) Create graduates who have the ability in science and technology for national interests; 3) Generate science and technology for the advancement of the nation; 4) Embody the community service to promote the general welfare and educating the nation.

The higher education in Indonesia consists of universities, institutes, colleges, and polytechnics. Currently, public and private universities in Indonesia is under the management of the Ministry of Research, Technology and Higher Education of the Republic of Indonesia.

In order to determine the feasibility and maintain the quality of a university, the government established a body that will carry out accreditation in universities. Based on the *Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia No.87 tahun 2014* (Regulation of the Minister of Education and Culture of The Republic of Indonesia Number 87 of 2014), the accreditation of university is the assessment to determine the feasibility of universities and also the external quality assurance system as part of the quality assurance system of higher education.

The good governance implementation has become one of the university reform agenda in Indonesia. This has been mentioned in the agenda of the Department of National Education in Republik Indonesia through Higher Education Long-Term Strategy (HELTS) 2003–2012. With the implementation of good governance, it is expected that entire public universities in Indonesia can improve its quality to the public. Subsequently will increase the public confidence and participation in the role of universities in Indonesia. Implementation of good governance on the university's management in Indonesia, related to the accountability and transparency of the program and activities planned and indicators of performance assessment (Sadjad, 2004; Sumarni, 2010).

Peraturan Pemerintah Nomor 4 Tahun 2014 (Government Regulation of The Republic of Indonesia Number 4 of 2014) also states that the autonomy of university management is implemented based on the principles of accountability, transparency, non-profit, quality assurance, effectiveness and efficient (Article 33). The autonomy university management includes academic and non-academic (Article 22 paragraph 3). Academic aspect is the primary core business activity in the university, while the non-academic aspects (education, research and community service) as a supporting activity such as finance, assets, organization and human resources that contribute greatly to the achievement of the objectives universities, thus requires high attention as well.

In the context of good governance at public university in Indonesia, according to *Undang Undang Republik Indonesia Nomor 20 Tahun 2003* (Law of the Republic of Indonesia Number 20 of 2003) explains that the educational assessment and evaluation consists of control activities, and the establishment of quality assurance, should be applied to both study programs and educational institution sustainable. In *Peraturan Pemerintah Nomor 4 Tahun 2014* (Government Regulation of The Republic of Indonesia Number 4 of 2014)explain the basis and purpose as well as the ability of universities to implement the autonomy, evaluated independently by the university (Article 22, 23, 24, 25 and 26) with the establish the monitoring organization and quality assurance in the university (Article 28 c, and 29 verse 7). Therefore, the role of the audit committee in monitoring and controlling the management, and internal audit that will help the management is important in the universities.

THE CONCEPT OF GOVERNANCE IN UNIVERSITY

The terminology of "government" and "governance" are often considered to have the same meaning that is how to implement the authority in an organization, institution or a state (Ruru, 2002; Sadjad, 2004). The Government also is the name given to the entities that hold the governmental power within a country. Meanwhile, the term of "governance" is known in the literature science since Woodrow Wilson introduced the study more than 120 years ago (Osborne, 2010). However, during that period, governance is only used in the context of corporate organization.

The most fundamental difference between the concept of "government" and "governance" is how the organization of the management authority in the nation (Osborne, 2010). Meanwhile, the governance implies how the authorities distribute the power and

manage their resources and problems. Indeed, the concept of governance should be understood as a process, not a structure or institution. Governance also shows inclusivity, if the government is seen as "them" and the governance is "us" (Hatmodjosoewito, 2010).

According to Kooiman (1993) Governance is a process or activity of sociopolitical interaction between government and society in various fields related to public interest and government intervention on these interests. Tjokroamidjojo (2000) added that governance means governing, control, and manage. Meanwhile, World Bank viewed governance as the way state power is used in managing economic and social resource for development of society. Moreover, United Nations Development Program (UNDP) (1997) defined governance as the exercise of political, economic, and administrative authority to manage a nation`s affair at all levels. Hence, governance means the management and development social, political and economic resource for development o the nation. Subsequently, from the governance concept, the terminology of public governance, private governance, corporate governance evolve and developed widely in various areas of public and business (Ruru, 2002).

The concept of corporate governance, which is actually a refinement of the traditional corporate principles governance and essentially it is the inspiration of the governance concept (Wangui, 2012). The terms of corporate governance initially introduced by the Cadbury Committee in 1992 in their report, which is known as the Cadbury Report (Agustin, 2010).

According to the Cadbury Committee, corporate governance is the principle that direct and control the company in order to achieve a balance between the strength and authority of the company in providing accountability to the shareholders in particular, and stakeholders in general (Agustin, 2010). Meanwhile, the Organization for Economic Cooperation and Development countries (OECD) (2005) defined corporate governance as composed of procedures and processes based upon which the firm is directed and monitored.

The general objective of corporate governance is to improve the performance of the business and accountability. In the long term this will lead to the sustainability of business and increase the profits significantly (Chandra, 2011). In order to achieve these objectives, some organizations such as the OECD and the Asian Development Bank (ADB) introduced the main principles of corporate governance, namely transparency, accountability, fairness, responsibility and responsiveness (Nugroho, 2004).

The governance essentially a concept that refers to the process of decision making and implementation. This concept requires transparent and accountable, and as a consensus for the government, public and private sector for the implementation of governance in a country (Utami, 2007).

The emergence of the governance and corporate governance concept motivated by the management of a public organization cannot be equated with the management of a corporate (Ruru, 2002; Sadjad, 2004). This is because, the differences in the nature and purpose of establishing the two institutions. The management of a country intended to meet the needs of the public while a corporate set up to make a profit (Sadjad, 2004). However, there are principles that can be applied in both organizations, with certain modifications to accommodate the nature and each basic purpose. These principles include accountability, transparency, rule of law, and responsibilities (Kaihatu, 2006).

In the public sector context, there are several concept of governance provide by some organization. World Bank viewed governance as a solid and responsibility management implementation. Which is in line with the principles of democracy and efficient markets as well as the prevention of corruption both political and administrative (Hatmodjosoewito, 2010). United Nation Development Program also provides a

definition of governance as synergistic and constructive relationship between the state, private sector and society. Based on previous researchers such as Kaihatu (2006), Sumarni (2010), and Wangui (2012), the best way to define the concept of governance is to adopt the definition provide by OECD (2004) which defined governance is the system by which a business corporation (or a nonprofit organization) is directed and controlled, at its senior level, in order to achieve its objectives, performance and financial management, but also accountability, integrity and transparency (OECD, 2005).

THE PRINCIPLES OF UNIVERSITY GOVERNANCE

The principles of governance in the public sector is almost similar with the corporate governance. However, the public organization or a state, the principles is more extensive (Kaihatu, 2006). According to UNDP (1997), the synergy and constructive relations between the state, the private sector and society. This composed of nine principal characteristics of good governance, namely participation, fairness, transparency, responsiveness, consensus orientation, equity, effectiveness, accountability and strategic vision (Figure 1). World Bank mentioned that a number of characteristics of governance are a strong civil society, transparancy, predictable policy-making, responsible executives, and professional bureaucracy. United Nations Centre for Human Settlements (2000) also provide good governance principles namely, accountability, transparency, efficiency, decentralisation, strategic vision, civil peace.

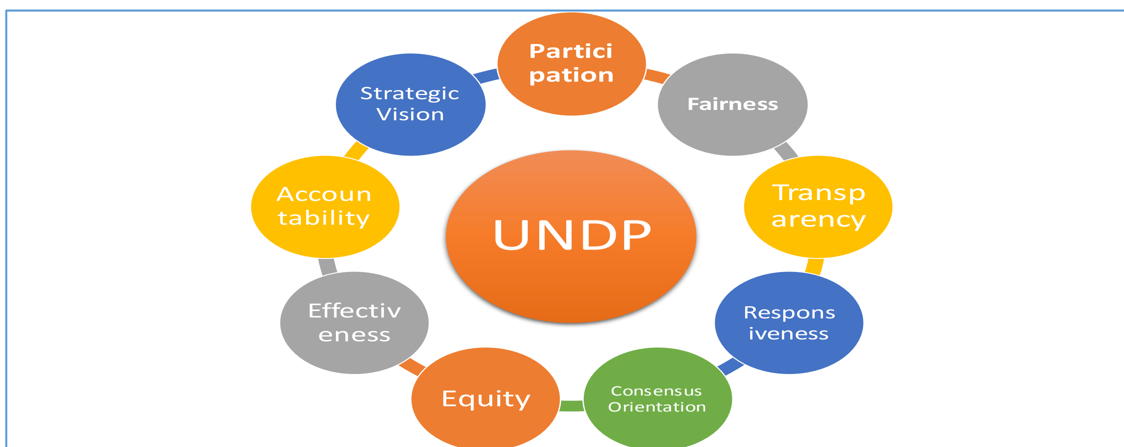

Figure 1. Good governance principles
Source : UNDP (1997)

There are another principles of governance developed in various countries as stated in the several earlier studies, but actually derived from the principle of credibility, transparency, accountability, responsibility, and fairness (Delport, Solms, & Gerber, 2015; Muhi, 2010; Siddiqi, Masud, Nishtar, Peters, Sabri, Bile, & Jama, 2009). According to Eagles (2004), the governance can be characterized as public participation, consensus orientation, strategic vision, responsiveness to stakeholders, effectiveness, efficiency, accountability to the public and stakeholders, transparency, equity, and rule of law.

Moreover, Kaen (2003) and Shaw (2003) noted that there are four key principles in the concept of governance, namely fairness, transparency, accountability, and responsibility. They also added that the fourth principles is important because the implementation of the governance principles has consistently proven to help improve the quality of an organization.

In the context of public sector organization in Indonesia, the Indonesian Institute for Corporate Governance (IICG, 2011) define governance as a structure, systems and

processes used by an organization in order to provide value added to the organization on an ongoing basis in the long-term. According to *Peraturan Pemerintah Republik Indonesia No. 7 Tahun 2000* (Government Regulation of The Republic of Indonesia Number 7 of 2000), good governance is a governance system that is based on the principles of democracy, accountability, transparency, efficient, effectiveness, professionalism and support of the public.

There are several governance principles in the context of public organization in Indonesia. Indonesian Transparency Society has provided a number of governance principles such as transparency, accountability, fairness and equality, and sustainability (Sumarni, 2010). According to *Peraturan Pemerintah Republik Indonesia Nomor 101 Tahun 2000* (Government Regulation of The Republic of Indonesia Number 101 of 2000), governance principles (Figure 2) consist of: 1) Professionalism, improve morale and government administrators capability in order to provide excellent services at an affordable cost; 2) Accountability, enhance the accountability of decision makers in all areas related to public interests; 3) Transparency, create mutual trust between the government and the community through the provision of accurate and reliable information; 4) Excellent service, implementation of public service which includes good procedures, timeliness, accessibility, complete infrastructure and friendly services, and disciplined; 5) Democracy and Participation, encouraging every citizen to use their right in the decision making process related to the public interest either directly or indirectly; 6) The efficiency and effectiveness, ensuring the service to the public by using the available resources optimally and responsible; 7) The rule of law, embodying the rule of law to all parties without exception, and upholding human rights.

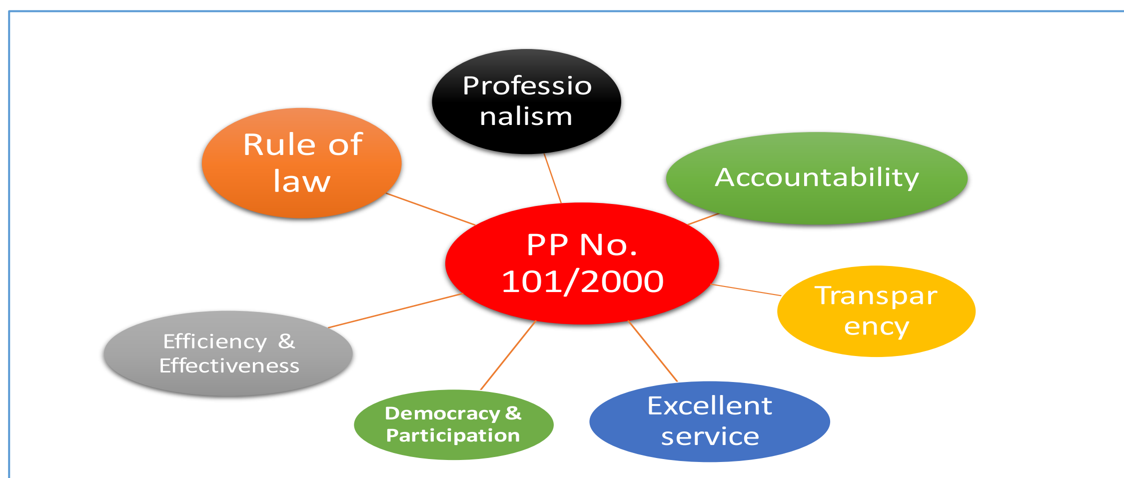

Figure 2. Governance principles in Indonesia
Source : Peraturan Pemerintah Republik Indonesia Nomor 101 Tahun 2000 (PP 101/2000) (Government Regulation of The Republic of Indonesia Number 101 of 2000)

Governance in the management of a public university is slightly different then corporate. This institution has a specific part relating to the noble values, both in terms of academic and social values that should be kept inside (Sadjad, 2004). The definition of governance in higher education can be viewed as a series of mechanisms to guide and control the operations of a university in order to correspond to the stakeholders (government and public) expectations (Sadjad, 2004). University governance also defined as a structure, systems and processes used by the management of the university in order to provide value added and sustainability to the university (Muhi, 2010).

Meanwhile, based on Hussin and Asimiran (2010), university governance is largely about guiding the university towards achieving its vision and goals as an institution of

professionalism. It is also meet the demands of the many stakeholders, particularly the students, academics, industries, and government. From these several definitions, university governance is a system that is guide the university to achieve its goals based on several governance principles to meet the stakeholders' demands.

The adoption of principles of corporate governance on the university governance is not immediately change the management of university become similar to the management of the state or a corporation, because not all the approaches and principles of corporate governance applicable in universities governance context (Anwar & Pratolo, 2012; Henard & Mitterle, 2010; Muhi, 2010; Sadjad, 2004).

According to Henard and Mitterle (2010) there are several university governance principles in the OECD countries (Canada, Ireland, Great Britain and Scotland). Great Britain and Scotland use selflessness, integrity, objectivity, accountability, openness, honesty and leadership principles. In Republic of Ireland, selflessness, integrity, objectivity, accountability, openness, honesty, leadership, transparency, fairness, independence, efficiency, effectiveness, and value for money as university governance principles. Moreover, Canada use impartially, independence, and loyalty to the institution as a principle for university governance.

The principles of governance in university by every country may varied. This is because university governance is never static, it will change from time to time, according to the changes and demands in the surrounding society and global community (Hussin & Asimiran, 2010). Henard and Mitterle (2010) notes that the effectiveness of the university governance principles in various countries has not been fully examine and they suggest the university strategy on the university governance principle. Hussin and Asimirin (2010) also state that university governance should consider the context in which university are located, both external-internal and national-international context, principles, and basic values.

In the context of university governance in Indonesia, there are several principle regulated in *Undang Undang Republik Indonesia No.20 Tahun 2003 Pasal 51* (Law of the Republic of Indonesia Number 20 of 2003, Article 51) regarding National Education System related to that the management of higher education unit implemented based on the principle of accountability, responsiveness, and transparency. Then, *Peraturan Pemerintah No.17 Tahun 2010* (Government Regulation of The Republic of Indonesia Number 17 of 2010) regarding the implementation of education system intended to ensuring the effectiveness, efficiency and accountability in the management of education (Muhi, 2010). According to the Indonesia Directorate General of Higher Education (2014), university governance aims to establish an accountable university based on eight principles (Figure 3), namely: 1) Transparency; 2) Accountability to stakeholders; 3) Responsibility; 4) Independence; 5) Fairness; 6) Quality assurance and relevance; 7) Effectiveness and efficiency; 8) Non-profit.

Figure 3. Good university governance
Source : Indonesia Directorate General of Higher Education (2014)

Transparency

This principle is implemented through the mechanism of checks and balances and aim to avoid conflict of interest as well as multiple position. In order to support the implementation of the principle, the audit unit of university and faculty will control the chancellor and dean of faculty.

Accountability to stakeholders

The principle of accountability provides clarity on the mission and objectives of the university. This mission and objectives must be in line with the mandate of the government (stakeholders) and the organizing body. This principle encourages the establishment of a quality assurance system mechanism, an audit unit and this system must function properly. The principle of accountability also encourages the achievement of performance indicators in strategic plans, work plans, activity and budgets plan.

In order to encourage the implementation of the accountability principle, the university must implement an accounting information system and financial management system that can be audited. The presentation of information such as academic annual reports and annual financial reports audited by public accountants then publish to the public.

Responsibility

The principle of responsibility can be implemented through a university statute, the translation of the position, functions, duties, responsibilities and authority of each element of the organization. There is a clear job description of staff and standard operating procedure (SOP) in the university.

Independence

Based on the principle of independence, the university decision making need to separate from the government or non-profit legal entity that owns it. Moreover, the university as well is not an extension of the bureaucracy.

Fairness

In the implementation of the principles of fairness, the staff recruitment process is based on competence and track record. The application of merit system (incentives and disincentives) that are appropriate in the management of employees.

Quality assurance and relevance

The implementation of quality assurance and relevance is through the internal (quality assurance system) and external quality assurance systems (study program accreditation), professional lecturer certification, feedback from students, tracer studies (graduate), and user survey.

Effectiveness and efficiency

The application of the effectiveness and efficiency principles through a long-term, medium-term (strategic plan) and annual planning system (Annual Activity Plan and Budget).

Non-profit.

In the nonprofit principle, the entire budget for the remaining activities may not be shared. This must be reinvested in improving the quality as well as development of the university institutions.

The university governance reflects the success of the university in order to generate graduates who are qualified and ready to compete in the global world. For this reason, it takes hard work and discipline to educate and teach the cultural and social values of the global community.

CONCLUSIONS AND RECOMMENDATIONS

Education has developed along with technological sophistication. Universities as higher education institutions also develop into a dynamic and modern institutions of knowledge. In order to implement an excellent education and accountable university management, the good university governance is needed. A university or college that has good governance must realize the vision and mission of the university in the finding, discovering and disseminating scientific truth. The mechanism and management of universities organization (higher education institutions) management also need to be regulated in the statute of higher education, which is regulted in *Undang Undang No. 12 Tahun 2012* (Law of the Republic of Indonesia Number 12 of 2012) related to the higher education in Indonesia, *Peraturan Pemerintah No. 4 Tahun 2014* (Government Regulation of The Republic of Indonesia Number 4 of 2014) on the Implementation of higher education and management of higher education in Indonesia, *Peraturan Menteri Pendidikan Dan Kebudayaan No. 49 Tahun 2014* (Regulation of the Minister of Education and Culture of The Republic of Indonesia Number 49 of 2014) regulates the national higher education standards (currently being revised).

Good university governance in Indonesia is basically a management of organizational structures, business processes, programs and activities in a plan to achieve university objectives. In order to achieve the objective, the good university governance provides several essential principles (Indonesia Directorate General of Higher Education, 2014), namely transparency, accountability (to stakeholders), responsibility, independence in decision making, fairness, quality assurance and relevance, effectiveness and efficiency, as well as non-profit. The good university governance principles need to be developed in all academic activities and university management.

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The influence of accounting internal control and human resources capacity on reliability and timeliness of regional government financial reporting (a study in Special Region of Yogyakarta Province)

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Abstract

Regional autonomy allows regions to hold the authority to manage their own regions. It also raises the responsibility that must be fulfilled by the regional government, namely financial reporting as a means of accountability. Reliability and timeliness are two important elements in financial information for the right decision making. There are several factors that can influence reliability and timeliness. This study aims to examine the effect of accounting internal controls and human resources capacity on the reliability and timeliness of financial reporting in local governments. The object of this research was the head and staff of the Regional Financial and Asset Agency (BKAD) in the Special Region of Yogyakarta province. Data collection was done through questionnaires, which were then analyzed using multiple linear regression analysis. The results of this study indicate that accounting internal control and human resources capacity have a significant influence on the reliability and timeliness of financial reporting in the local governments in the Special Region of Yogyakarta Province.

Keywords: *Accounting Internal Control, Human Resources Capacity, Timeliness, Reliability, Financial Reporting, Local Governments*

JEL Classification: M42, M48, R50

INTRODUCTION

Regional autonomy is the authority given to regencies and municipalities in a broad, tangible, responsible, and proportional manner to local governments (Mardiasmo, 2002). The implementation of regional autonomy is the delegation of authority from the central government to regional governments which includes the submission and transfer of funding, facilities and infrastructure, and human resources. Such delegation of authority and submission of funds have raised the need for accountability in managing the financial statements of regional governments.

Based on Government Regulation No. 71 of 2010, each reporting entity has an obligation to report on the efforts made and the results achieved in the implementation of activities in a systematic and structured manner during a reporting period. Mardiasmo (2002) defines accountability as the principle of public accountability, which means that the budgeting process from planning, drafting, to implementation must be reported and accountable to the Regional People's Legislative Assembly (DPRD) and the community. Accountability also requires that decision makers behave in accordance with their given

mandate. Thus, it can be said that financial statement is one form of accountability in managing financial statements.

According to the same regulation, financial statements must be relevant, reliable, comparable and understandable. Financial statements are considered reliable if the reports present actual data and are free from misleading information and material errors. Hartono (2009) states that information in financial statements is considered valuable if the information is timely, relevant, and accurate. Timeliness is one important element so that information can be deemed useful and valuable.

Indriasari and Nahartyo (2008) argue that reliability and timeliness are two important elements of information value related to decision making by various parties. Therefore, this study aims to examine several factors that influence the reliability and timeliness of local government financial reporting.

Research on accounting internal controls have been carried out by Indriasari and Nahartyo (2008) and Kosegeran, Kalangi, and Wokas (2016). They found that the internal control system had an effect on the reliability of financial reporting. The same results were also found by research on human resource capacity carried out by Alimbudiono and Mundono (2004), Indriasari and Nahartyo (2008) and Kosegeran, Kalangi, and Wokas (2016).

Based on the background above, this study aims: 1) to examine the effect of accounting internal controls and human resource capacity on the reliability of local government financial reporting; 2) to examine the effect of accounting internal controls and human resource capacity on the timeliness of local government financial reporting.

HYPOTHESIS FORMULATION

According to Purwono (2004), accounting internal controls are organizational plans and methods that aim to secure the assets of the organization and test the extent to which accounting data can be trusted. Mulyadi (2010) explains that internal control is organized based on two system objectives: maintaining the wealth of business entities and checking the accuracy and reliability of accounting information. In its implementation, according to Hartadi (1999), internal control includes plans, procedures, and records that aim to secure assets and achieve reliable financial statements. Research by Indriasari and Nahartyo (2008), Azman (2015), Kosegeran, Kalangi, and Wokas (2016) found that internal control influences financial reporting reliability. With strict internal control, the recording and reporting of financial statements will be carried out more thoroughly so that reports become more reliable. Research by Indriasari and Nahartyo (2008) shows that resource capacity has a positive and significant effect on the timeliness of financial reporting.

H1a: Accounting Internal control has a positive effect on the reliability of local government financial reporting

Research on human resource capacity have been carried out by Alimbudiono and Mundono (2004) and Kosegeran, Kalangi, and Wokas (2016). According to Alimbudiono and Mundono (2004), during financial reporting activities, the government is often faced with the fact that regulations can change at any time. These changes can be in the form of modifications to the accounting system approach, recording procedures, required documents, and even the reporting method. These changes require the support of technology and human resources who have adequate accounting education background. Similarly, a study by Kosegeran, Kalangi, and Wokas (2016) show that human resource capacity has a positive influence on the reliability of financial reporting. By allowing

employees to attend technical assistance and training, it is expected that the reliability of financial reporting can increase.
H1b: Human resources capacity has a positive effect on the reliability of financial reporting of local governments.

However, until now, there has been no research on the effect of internal accounting control on timeliness. Internal control shows that planning, procedures, and records are appropriately controlled, so that financial reporting can be carried out in accordance with the specified timeframe. Therefore, it is presumed that the application of accounting internal controls will ensure reporting timeliness.
H2a: Accounting internal control has a positive effect on the accuracy of financial reporting of the regional governments.

Furthermore, human resource capacity is also often associated with timeliness. Indriasari and Nahartyo (2008) found that resource capacity has a positive and significant effect on the timeliness of financial reporting. Someone who has adequate resource capacity will be able to finish the job faster (on time) and better. According to Hevesi (2005), employees who do not have an adequate understanding of their duties will experience obstacles such as waste of material, time, and energy. Conversely, the higher the employee's understanding of their duties and functions, the fewer obstacles they face, which can reduce the time needed to complete the task.
H2b: Human resources capacity has a positive effect on the timeliness of financial reporting of Local Governments

METHODS

Population of this study was employees of the local governments in the Special Region of Yogyakarta (DIY). Local governments in DIY were chosen because they carried out public accountability professionally based on the results of Government Agency Performance Accountability Systems (SAKIP). In 2017, these governments became the only local governments that succeeded in obtaining the A title (the highest achievement) in Region III. In total, they have been awarded the same title for four times (Tribun Jogja, 2018). The sampling uses purposive sampling, a sampling method using the criteria set by researchers (Cooper and Schindler, 2014). The criteria used in this study are the head or staff who carry out the accounting/financial administration function in the DIY local governments.

This study uses primary data, data obtained directly from the source. Data collection was done through questionnaires to the respondents, namely the section head, operational staff, and accounting / administration staff. This research was carried out in the Special Region of Yogyakarta which included the Regional Financial and Assets Agency (BKAD) of Yogyakarta City, Sleman, Kulonprogo, Gunung Kidul, and Bantul regencies, and the Regional Revenue, Financial, and Asset Management of Special Region of Yogyakarta province.

This study measures four aspects, namely accounting internal controls, human resource capacity, reliability, and timeliness of financial reporting. Table 1 contains the operational definitions of each variable. This study uses a five-point Likert scale model, namely a) Strongly Disagree b) Disagree c) Hesitate d) Agree e) Strongly Agree. The questionnaire used refers to a questionnaire developed by Indriasari and Nahartyo (2008). A summary of the indicators is shown in appendix.

Table 1. Operational definition of variables

Variables	Operational Definitions
Internal accounting control	Organizational plans and methods that aim to secure organizational assets and test the extent to which accounting data can be trusted (Purwono, 2004).
Human resources capacity	The ability of an individual, an organization (institution), or a system to carry out its functions or authority to achieve its objectives effectively and efficiently. Capacity must be seen as the ability to achieve performance and to produce outputs and outcomes (Indriasari dan Nahartyo, 2008).
Reliability	The ability of information to instill confidence that the information is true or valid (Indriasari and Nahartyo, 2008). Information is considered reliable if information is free from misleading and material errors, honestly presented, and can be verified (Government Regulation No. 71 of 2010)
Timeliness	Availability of information for decision makers when needed before the information loses its power to influence decisions (Kieso, Weygandt, dan Warfield, 2011).

This research uses validity test, reliability test, classic assumption test (normality, heteroscedacity, autocorrelation, and multicollinearity test), and hypothesis testing. Data analysis was performed using multiple linear regression analysis to determine the effect of independent variables on the dependent variable. The regression equation to test the proposed hypotheses is as follows:

$$\gamma_1 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon_i \quad (1)$$

$$\gamma_1 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon_i \quad (2)$$

Notes:

γ_1 = Reliability
γ_2 = Timeliness
α = Constant
β = Regression coefficient
X_1 = Accounting internal control
X_2 = Human resource capacity
ε = *Error term*

RESULTS AND DISCUSSION

Table 2 shows the number of questionnaires and samples in this study obtained from six agencies.

Table 2. Sampling

Detail	Quantity
Number of questionnaires distributed	120
Number of questionnaires returned	115
Number of incomplete and illegible questionnaires	2
Number of valid and usable questionnaires	113

Source: data processed (2018)

Survey is done by distributing questionnaires as many as 120 questionnaires to six agencies in province of DI Yogyakarta and questionnaires returned are 115. However, there are 2 incomplete and illegible questionnaires to be used so the final population of this study amounted to 113.

Table 3 shows the characteristics of respondents which include their education level and position title.

Table 3. Respondents' characteristics

Agency	%	Education level	%	Position Title	%
BKAD Yogyakarta	17.7	SMA/SMK	13,6	Head of (section, sub-division, division)	26.5
BKAD Sleman	17.7	D1	1	Staff	73.5
BKAD Bantul	17.7	D3	8,7		
BKAD Gunung Kidul	16.8	D4/S1	52,4		
BKAD Kulonprogo	17.7	S2	24,3		
DPPKAD Yogyakarta	12.4				

Source: data processed (2018)

Survey is done by distributing questionnaires to respondents from six agencies. They are BKAD Yogyakarta, BKAD Sleman, BKAD Bantul, BKAD Gunung Kidul, BKAD Kulonprogo, DPPKAD Yogyakarta. The questionnaires are distributed to accounting and administration section. The number of respondents in each agency is as follows: BKAD Yogyakarta, BKAD Sleman, BKAD Bantul, and BKAD Kulonprogo are 20 questionnaires or 17,7%. While at BKAD Gunung is 19 questionnaires or 16,8% because there is one questionnaire not returned. Then, the number of respondents at DPPKAD Yogyakarta is 14 questionnaires or 12,4% because there are five incomplete questionnaires and one questionnaire not returned.

The respondents have a various educational background. There are 13,6% from Senior High School (SMA/SMK). Furthermore, the least graduates are from Diploma 1 Program (D1) which is equal to 1%. In contrast, most of them are from undergraduate program (S1/D4), more than half, namely 52,4%. Then, respondent who graduated from Diploma 3 (D3) program is 8,7% and from Master Program (S2) is 24,3%.

Questionnaires are distributed to head of section, sub-division, division, and Staff in each agency. Most of respondents are staff, amounting to 73,5% and the rest are head of section, head of subdivision, and head of division with 26,5%.

Validity and reliability test results

Based on the results of the validity test, one question must be excluded, namely the question on the accounting internal control variable (number 7) because the question had a calculated r count < r table that is (-0.106 <0.195), which indicates invalidity. Reliability test results indicate that the Cronbach alpha value for each variable is > 0.6. This shows that the four variables studied are reliable.

Table 4. Reliability test

Detail	Cronbach Alpha
X1 – Accounting internal control	0,889
X2 – Human resources capacity	0,884
Y1 – Reliability	0,961
Y2 – Timeliness	0,712

Source: data processed (2018)

Classical assumption test results

Normality

The results of statistical tests with Kolmogorov-Smirnov show that data is normally distributed. This can be seen from the one-sample Kolmogorov-Smirnov test which produced the value of Asymp. Sig (2-tailed) > 0.05, which was 0.200 for reliability and 0.08 for timeliness, so it can be concluded that the data is normal.

Autocorrelation

The Durbin-Watson test on reliability produced a value of 1.860 using two independent variables and 113 samples, and thus resulting in a value of dL = 1.634 and

dU = 1.715. It can be concluded that the dW value located in the dU < dW < (4-dU), namely 1.715 < 1.860 < 2.285 (4-dU) has proven that the regression is free from the autocorrelation problem and is viable to use.

On timeliness, the Durbin-Watson test on reliability produced a value of 1.990 using two independent variables and 113 samples, and thus resulting in dU < dW < (4-dU), namely 1.715 <1.990 < 2.285 (4-dU). It can be concluded that the regression is free from the autocorrelation problem and is viable to use.

Multicollinearity

Multicollinearity test is indicated by *tolerance* and *Variance Inflation Factor* (VIF) values. The results of the multicollinearity test can be seen in the table below.

Table 5. Multicollinearity test

Variables	Collinearity statistics tolerance	VIF
X1 – Accounting internal control	0.640	1.562
X2 – Human resources capacity	0.640	1.562
Dependent variable: Y1 Reliability		
X1 – Accounting internal control	0.640	1.562
X2 – Human resources capacity	0.640	1.562
Dependent variable: Y2 Timeliness		

Source: data processed (2018)

Assuming VIF <10 and tolerance > 0.1, it can be concluded that there is no multicollinearity among independent variables, which means that the independent variables do not correlate significantly.

Heteroscedasticity

The heteroscedacity test results can be seen by the Glaser test. If the significance value of p is greater than 0.05, it can be concluded that the data does not experience heteroscedacity. The complete test results can be seen in the table below.

Table 6 Heteroscedacity test

Variables	Sig	Criteria
X1 – Accounting internal control	0.974	No heteroscedacity
X2 – Human resources capacity	0.131	No heteroscedacity
Dependent variable: Y1 Reliability		
X1 – Accounting internal control	0.902	No heteroscedacity
X2 – Human resources capacity	0.944	No heteroscedacity
Dependent variable: Y2 Timeliness		

Source: Data processed (2018)

Hypothesis testing

Simultaneous testing is used to find out whether the independent variables are able to simultaneously explain the dependent variable together. This test is carried out by the F test.

Table 7. Hypothesis testing (F test)

Variables	**Adjusted R Square**	**Simultaneous testing**	
		F-stat	**Sig**
X1, X2 – Y1	0.619	91.852	0.000
X1, X2 – Y2	0.555	70.714	0.000

Source: Data processed (2018)

Based on the table above, it shows that the result of F test is 91,852 with degree of significant 0,000 (<0,005) for variable Y1 (reliability) and 70,714 with degree of significant 0,000 (<0,005) for variable Y2 (timeliness). So it can be concluded that accounting internal control and human resource capacity simultaneously have a positive and significant influence on the reliability and timeliness of local government financial reporting.

Meanwhile, partial hypothesis testing is done to test whether the independent variables are able to explain the dependent variable. This test is carried out using T test.

Table 8. Hypothesis testing (t test)

Model	Unstandardized Coefficients		Standardized Coefficients	Partial testing		Results
	B	Std. Error	Beta	T	Sig.	
1 (Constant)	,452	,302		1,495	,138	
X1 – Accounting internal control	,626	,076	,602	8,260	,000	H1a accepted
X2 – Human resources capacity	,299	,082	,266	3,644	,000	H1b accepted
Dependent Variable: Y1 (Reliability)						
2 (Constant)	,710	,298		2,384	,019	
X1 – Accounting internal control	,326	,075	,345	4,375	,000	H2a accepted
X2 – Human resources capacity	,503	,081	,491	6,224	,000	H2b accepted
Dependent Variable: Y2 (Timeliness)						

Source: Data processed (2018)

Based on table 8 above, accounting internal control (X1) has t count (8,260) amounting to 8,260 with degree of significant 0,000 < 0,005. It means hypothesis 1a (H1a) is accepted. It can be concluded that H1a: *Accounting internal control has a positive effect on the reliability of local government financial reporting*. Then, human resource capability has t value that is 3,644 with degree of significant 0,000 <0,005. It means hypothesis 1b (H1b) is accepted. It can be concluded that H1b: *Human resource capability has a positive effect on the reliability of local government financial reporting*.

Furthermore, hypothesis 2a (H2a) and hypothesis 2b (H2b) have accepted because each of variables has t value is 4,375 and 6,224 with degree of significant 0,000 < 0,005. So it can be concluded that H2a: *Accounting internal control has a positive effect on the timeliness of local government financial reporting* and H2b: *human resource capacity has a positive effect on the timeliness of local government financial reporting*

Discussion

Influence of accounting internal control on financial reporting reliability

Based on the testing results, it can be seen that accounting internal control has a positive and significant effect on the reliability of financial reporting. This means that the more stringent internal controls - such as separation of duties, authorization from the authorities in each transaction, valid transaction evidence on each transaction, and recording of each transaction -, the higher the level of truth or validity of financial statements that can be presented. Thus, it can be said that the report is reliable, which is free from presentation material errors, free from misleading information, and can be verified. These results are consistent with the research conducted by Indriasari and Nahartyo (2008), Azman (2015), and Kosegeran, Kalangi, and Wokas (2016) which state that internal control has a positive and significant influence on the reliability of financial reporting. In other words, internal control encourages someone to carry out their duties more thoroughly and carefully so that more reliable financial reports can be presented.

Influence of human resources capacity on financial reporting reliability

Based on the testing results, it can be concluded that human resources capacity has a positive and significant effect on the reliability of financial reporting. If the capacity increases, the level of reliability will also increase, and vice versa. By having staff or sub-sections with high capacity, financial reporting will become more reliable. High capacity can be indicated by staff who have sufficient qualifications, education levels and majors, suitability between tasks and functions, training and development, and the availability of funds to allow them to participate in these activities. Reliability can also be improved by supporting staff or subsections for further studies, facilitating them to attend training, development, workshops, and seminars, and providing a budget for training employees, purchasing equipment, or supporting facilities. This is in accordance with the research conducted by Kosegeran, Kalangi, and Wokas (2016) which shows that human resource capacity has a positive influence on the reliability of financial reporting.

Influence of internal accounting control on financial reporting timeliness

Based on statistical tests, it can be concluded that internal control has a positive and significant effect on the timeliness of financial reporting. Recording every transaction keeps the report updated. Thus, staff work will not accumulate at the end of the period, which can cause late reporting. With internal control, staff in carrying out their duties are able to assert full control, from planning, procedures, to recording so that they are able to present financial reports in accordance with the specified timeframe.

Influence of human resources capacity on financial reporting timeliness

Based on statistical tests, it can be concluded that human resources capacity has a positive and significant effect on the timeliness of financial reporting. The higher the staff's understanding of their duties and functions, the fewer obstacles they face, and hence can reduce the time needed to complete the task so that timeliness can be achieved. This shows that staff who have adequate abilities will finish the task more quickly. This is consistent with the research of Indriasari and Nahartyo (2008) and Hevesi (2005).

CONCLUSION AND RECOMMENDATION

Conclusion

This study found that accounting internal control and human resources capacity have a positive effect on the reliability of financial statements. If each transaction is supported by authorization from relevant persons and valid evidence, the transaction report will be reliable, free from presentation material errors. Likewise, staff who have sufficient capability will be able to present reliable financial reports.

In addition, accounting internal control and human resource capacity has a positive effect on the timeliness of financial statements. If every transaction is always recorded, the record will remain updated, and will make it easier for staff to complete the report on time. If this is done, the work will not be stacked at the end of the period which causes excessive workload (overload) and time delay. Likewise, staff who have adequate abilities will complete the work more promptly and on time because they already understand the job description.

Recommendation

Further research can be conducted by including other variables that have an influence on the reliability and timeliness of financial reporting such as the use of information technology, financial report supervision, and Government Accounting Standards.

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APPENDIX: Questionnaries

Items
Accounting Internal Control
1. Your financial / accounting subdivision organizes the accounting systems that include:
a. Accounting procedure for cash receipts
b. Accounting procedures for cash expenditure
c. Accounting procedures for asset
d. Accounting procedures for except cash
2. Chart of account of local government is available and used.
3. Transactions cannot be carried out without authorization from the authorities
4. Every transaction that occurs must be supported by valid transaction proof
5. Every transaction is recorded in an accounting notebook
6. Accounting records are kept to up-to-date.
7. Financial reports are reviewed and approved in advance by the head of the finance / accounting subdivision before being distributed
8. The existing accounting system allows an audit / transaction trail.
9. There is a separation of duties in the context of implementing the Regional Budget (APBD).
Human Resource Capacity
1. Your financial / accounting subdivision has a sufficient number of qualified staff.
2. At least 10 percent of your financial / accounting subdivision staff are accounting D3 graduates or higher.
3. Your financial / accounting subdivision has a clear description of roles and functions.
4. The roles and responsibilities of all your financial / accounting subdivisions employees are clearly defined in the regional regulations.
5. The description of your financial / accounting subdivision duties is in accordance with the actual accounting function.
6. There are guidelines regarding accounting procedures and processes.
7. Your financial /accounting sub-section has carried out the accounting process.
8. Your financial / accounting subdivision has sufficient operational support resources.
9. Training to assist mastery & development of skills in the tasks carried out.
10. Funds are budgeted to obtain the resources, equipment, training needed.
Reliability
1. Transactions and other events that are supposed to be presented or which can reasonably be expected to be presented are honestly illustrated in the financial statements.
2. Balance sheet is presented.
3. The budget realization report or APBD calculation report is presented.
4. Notes to financial statements are presented.
5. Information presented in financial statements can be tested.
6. Reconciliation is carried out periodically between accounting records and bank records or external party records that require confirmation or reconciliation.
7. Information is directed at general needs and does not favor the needs of certain parties.
Timeliness
1. Information needed is immediately available when requested.
2. Reports are often provided systematically and regularly, for example: daily reports, weekly reports, monthly reports, semester reports, and annual reports (if reports are rarely available, give a sign on number one).
3. The following reports are submitted systematically and regularly:
a. First semester realization report
b. Budget realization report or APBD calculation report
c. Balance Sheet
d. Notes to Financial Statements

Source: Indriasari and Nahartyo (2008)

Author Guidelines

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- Trinity College
- University of Alberta
- University Library
- BASE (Bielefeld Academic Search Engine
- CiteFactor
- Open Access Library (OALIB)
- Scholarsteer
- JournalTocs
- Worldcat
- CORE
- Research Bible
- Academickeys
- Citeulike
- JOURLIB
- Global Impact Factor
- Jifactor
- General Impact Factor
- e-Journal Portal BKS PTN Wilayah Barat
- Cosmos Impact Factor
- OneSearch
- International Innovative Journal Impact Factor (IIJIF)
- Journal Factor
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