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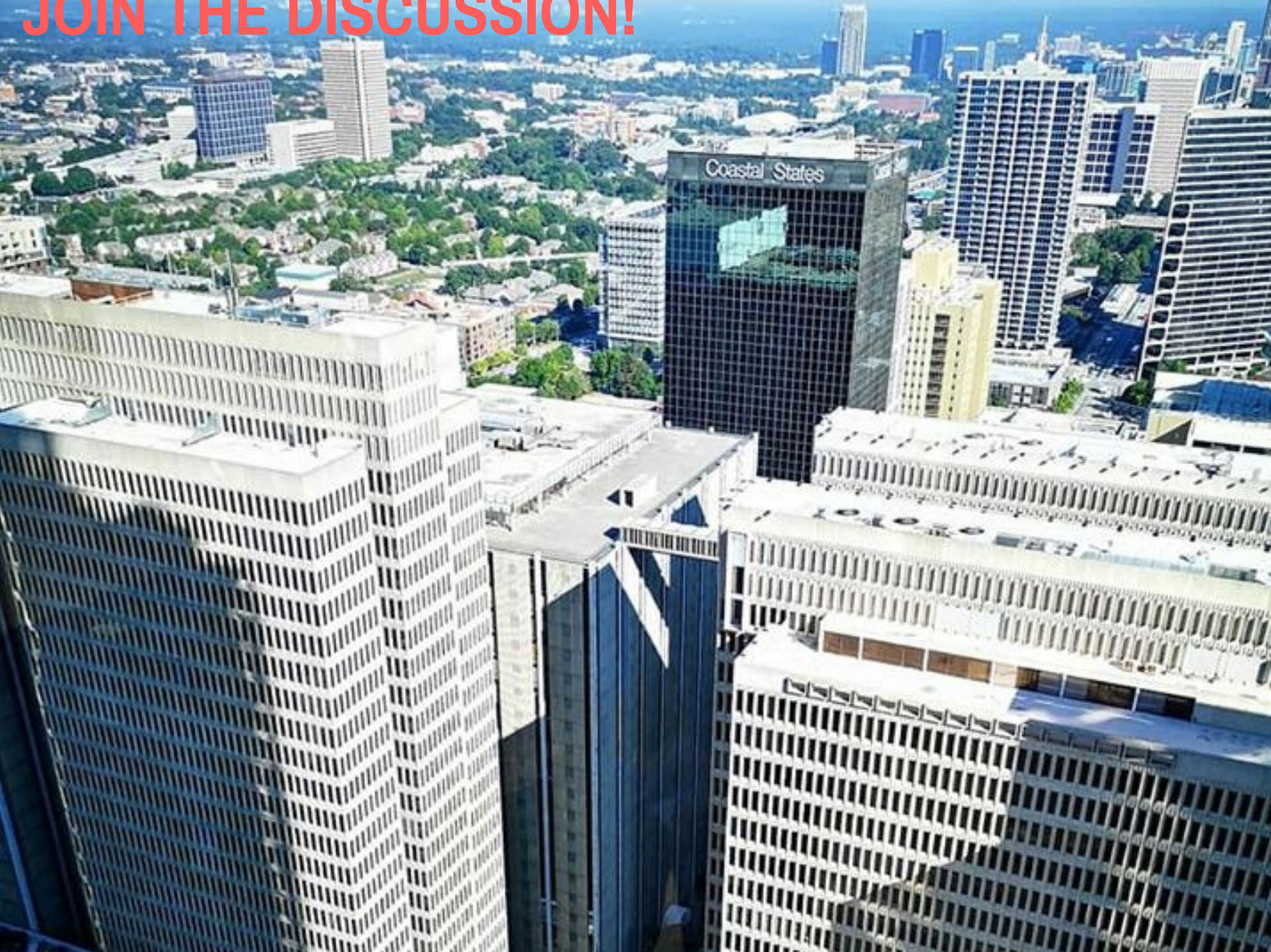
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**МЕНЕДЖМЕНТ ТА ПІДПРИЄМНИЦТВО:
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**TRANSFORMATION OF CASHLESS PAYMENTS IN THE EUROPEAN PAYMENT
CARD MARKET**

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Abstract. The purpose of this study is to examine the current state and perspectives of non-cash payments by using payment cards in Ukraine, Poland, Sweden, Romania and Hungary. The factors of transformation of the term "non-cash payments" into the term "payment system" are considered in the article. Methodology: The theoretical and practical database of the bank cards market is considered as an information base of the research. In the course of the research general, scientific, theoretical and empirical methods were used, among which are the following: analysis and generalization of literature on the research topic, methods of observation and comparison, structural methods, methods of coordination and formalization, graphical and tabular representation of data. The article presents trends in the development of new types of non-cash money, compares the development of the payment card market on a number of criteria and describes the main directions of modern use of payment cards for non-cash payments in the analyzed countries. The European Central Bank (ECB) data set, information from sites National Bank of Ukraine and Central banks of countries were collected for comparative economic research. The research findings show that changes of bank cards market greatly influence the development of non-cash payment in economy. The research findings show that changes in bank cards market greatly influence the development of non-cash payment in economy. The scientific significance of the work is that in article the issue of the factors of transformation of the non-cash settlement system into a payment system. The practical significance of the results is that in article shows in detail the ways to improve the Ukrainian market of bank cards using the experience of other EU countries. This article offers insights on the best European practice and challenges of on the bank cards market during 2015 - 2019 years.

Keywords: non-cash (cashless) settlements, bank, payment cards, POS-terminal, Ukraine, Poland, Sweden, Romania, Hungary.

JEL Classification: G15, G21, O12.

INTRODUCTION

Non-cash payments are important in the financial and economic environment of each country and are the basis for building a global non-cash economy. It allows not only to reduce cash flow, but also to accelerate commercial interaction between agents of economic activity, reduce the level of shadow economy, encourage the development of e-commerce and online technologies and ensure the introduction of new types of financial services. Proliferation of non-cash payments using payment cards is one of the most pressing issues in the development of the global system of non-cash payments and the development of the banking system in general.

During the study of the fettle of non-cash payments using payment cards was conducted the analysis of five European countries. To substantiate the theoretical provisions and independent researches was processed the scientific researches and articles by practitioners, structured the statistical information of the ECB and European Banking Federation (EBF), also it was used the methods of synthesis and comparative analysis, concise and formalized presentation of basic information were used as well.

The aim of the study is to compare the level of the using of non-cash payments in such countries as: Ukraine, Poland, Sweden, Romania, Hungary, in the field of acquiring, and non-cash payments. Firstly, these countries were chosen for comparison with Ukraine, based on the fact that Poland, Romania and Hungary are neighboring countries with which it would be appropriate to equate Ukrainian opportunities. Secondly, the comparison of Ukraine with such developed European country as Sweden was chosen to show the dynamics between the indicators and to identify the existing problems and opportunities for Ukraine's development by the method of comparison.

The scientific importance of the work is that on the basis of the conducted research the specification of the terms "non-cash payments" and "payment system", which are related to the banking system in the field of acquiring and typical banking operations, was made. Of particular importance is the study of the impact of the development of new technologies, best practices in the transition to non-cash payments on digital currency in individual countries under study. Also, the directions of stimulating non-cash payments and accelerating payments and transfers of funds between banks, customers and accounts for Ukraine based on the experience of European countries are outlined.

LITERATURE REVIEW

Over the past five years, non-cash payments and banking have changed substantially in organizational and technological ways, also its role of the economy has changed significantly. Besides, the perception of non-cash payments and payment systems has changed. It is a problem between mutual understanding of clear conceptual representation of non-cash payments.

Many scientists and economists have studied non-cash payments, including I. Novak and L. Goncharenko (2010), V. Kravets (2016), V. Kharchenko and R. Kapralov (2010), and others. At the same time, the tendency to update the essence of non-cash payments, their modernization in the digital economy determines the relevance of this issue today. Elaboration of scientific works of various economists on non-cash money and non-cash payments allowed us to conclude that the definition of "non-cash" does not involve the use of cash, and the term "calculations" characterizes the process of calculating monetary obligations.

The concept of "payment system" studied in such works: Ya. Chaikovskii and Ya. Kovalchuk (2018), S. Zorya (2017), N. Rushchyshyn and Z. Kostak (2018), H. Treiblmaier and A. Floh (2006). As a result of processing their works, it was found that the authors have different approaches to the disclosure of the meaning of the "payment system" and, accordingly, there is terminological confusion due to unconventional interpretations of this concept.

Since 2015, the banking card business has changed significantly in both technological and organizational terms. The banking sector is developing rapidly under the influence of new technologies. The introduction of new technologies allows to make innovative breakthroughs in the banking sector, in particular in the field of cashless payments.

The works of both individual researchers and financial organizations are devoted to the digital transformation. Among the relevant studies are the works of O. Selcen et al. (2019), M. Massimo et al. (2020), J. Cronk (2015), B. King (2017), V. Zharnikova (2019) les by Global Finance, The Economic Times and Zacks, and World Bank reports. Many domestic scholars, such as, in particular, E. Maslennikov et al. (2017), A. Ramskyi et al. (2017), O. Sobolieva-Tereshchenko (2018), S. Reverchuk et al. (2015), O. Sobolieva-Tereshchenko and Y. Zhukova (2020), were engaged in researches of questions of essential organizational changes concerning Integration of Ukraine into the European banking system and institutional transformation. Thereby, it needs to study the market of payment cards in the analyzed countries on a number of criteria and identify trends in the use of payment cards for cashless payments.

PAPER OBJECTIVE

In the current conditions of world economic development, the digital transformation has covered all spheres of the economy, including banking. It provides new opportunities for banks to increase their competitiveness, increase the number of customers and profits. Also, the digital transformation of cashless payments has an impact on the population, business and economy of the country. For citizens, it is the use of convenient, secure and fast payment transactions that prevent the loss of funds. For businesses, it is the simplification of payment transactions, optimization of resource costs to work with cash proceeds, the prospect of conducting part of the business in remote channels. In general, for the country it is a simplified system of social benefits, the struggle against the shadow economy.

Expanding the scope of cashless payments contributes to the transparency of payments and economic growth of the country. The National Bank of Ukraine supports the movement of the country's economy to cashless payments and promotes the development of payment infrastructure. The spread of non-cash payments is being implemented in the framework of the implementation of the Concept of development of the digital economy of Ukraine in 2018-2020 and the Concept of reforming the payment legislation of Ukraine.

The aim of the article is to identify similarities and differences in the use of non-cash payments and the use of payment systems in Ukraine, Poland, Switzerland, Hungary, Romania, to identify problems and methods to improve these issues in our country.

METHODOLOGY

The following research methods are used in the work: abstract-logical; statistical; comparative; of logical generalization; of economic and system analysis; of grouping; of critical analysis and theoretical research generalization.

RESULT AND DISCUSSION

The term “payment system” entered banking terminology in the late 1990s, and it essentially replaced the term “cashless payment system”: that had previously been used. Therefore, in many modern books about money circulation or banking, the definition of “cashless payment system” is completely absent or is replaced by the term “payment system”. Thus, today there is a need of studying the process of transformation of the term “cashless payments” to the term “payment system”, as well as to clarify their terminology.

A comparison of the terms cashless payments and payment systems revealed some differences. First, the difference between these terms is that non-cash money is a record in bank accounts, and payment systems include technical mechanisms for conducting and accounting for these records. Secondly, the concept of payment system is broader and more complex, because it includes not only the object, – money, but also the procedures with this object, and the entities that implement these procedures.

A comparative analysis of the concepts and components of the “cashless payment system” and the “payment system” are presented in Table 1.

Table 1

Comparison of concepts of cashless payment systems and payment systems

Components of the system	System of cashless payments	Payment systems
Definition	Method of payment for goods and services.	An innovative mechanism for transferring funds between banks and institutional entities for goods and services
Subject	Commercial and central banks	Commercial and central banks, specialized companies, intermediaries, regular shops and shopping centers
Form of calculations	Depends on the settlement document, which carries a certain form of calculation and no other	Currently, all settlement documents are presented with the usual details, which are used on the basis of a payment order
Calculation method	The procedure of writing off and accruing funds according to the systems of all parties to the calculation	One-time transaction on customer accounts, transfer of funds, which is very fast in terms of the use of the latest technologies
Calculation tools	Transfer to participants of calculations of certain documents of settlement character which delay process of payment	Current account of the counterparty, or the person in whose favor the transaction is to be made
Document flow	The procedure of submitting all the necessary documents is lengthy	One file with documents, in the network of Internet banking, mobile banking, blockchain technologies

Source: Compiled by the authors according to (J. Cronk, 2015), (V. Zharnikova, 2019), (O. Selcen et al., 2019).

It should be noted that the term “payment system” more fully reflects the system of using non-cash payments and electronic money in modern conditions of building a global non-cash economy. Respectively, in the scientific literature and research there is a tendency to replace the definition of “non-cash payment system” with “payment system”. The transformation of the system of non-cash payments into a payment system took place under the influence of the following factors, which are shown in Figure 1.

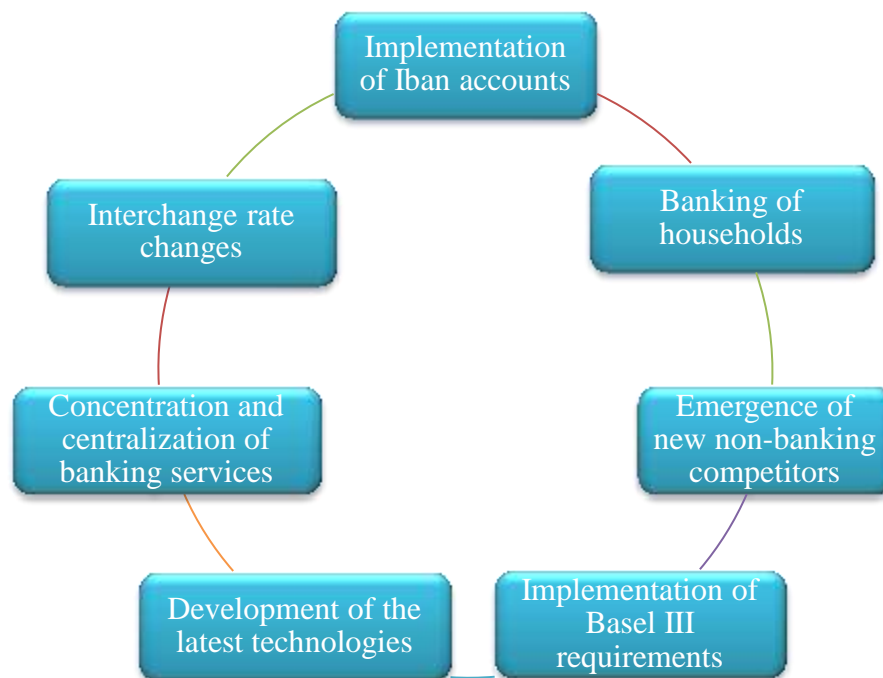


Figure 1. Factors a transformation of the system of non-cash payments into a payment system

Source: Own study.

Thus, the transformation of the non-cash payment system into a payment system was influenced by seven factors: banking of households, emergence of new non-banking competitors, development of new technologies, concentration and centralization of capital, changes in interchanging rates, implementation of Basel III requirements, introduction of IBAN accounts.

“Household banking” is a global phenomenon in the world economy and the economy of the EU. It is manifested in an increase in the share of retail banking in the banking sector of European countries the spread of retail banking is reflected in the increase in banking operations for individuals, small businesses, small and medium enterprises. This was due to the development of the payment card market and led to the transformation of the system of non-cash payments into a payment system.

The general pattern towards the active development of the non-banking financial sector in the form of financial companies and credit unions has helped reduce the role of banks in traditional banking markets and intensified competition between banking institutions and non-banking financial companies. The main competition arose in the field of card business, namely in the field of lending by payment cards and card-to-card transfers, which ultimately contributed to the transformation of the system of non-cash payments into a payment system.

Computerization and development of new technologies are also a very important factor in changes in payment systems and non-cash payments at the global level. Distribution of chip and virtual payment cards, development of remote customer service via Internet and mobile banking, the emergence of digital currencies, cryptocurrencies, e-wallets, which are trying to be implemented in leading European countries, as well as contactless payments using gadgets with NFC function through payment services Apple Pay, Google Pay, Garmin Pay have led to major changes in banking sphere. This factor led not only to the transformation of banking products, but also the transformation of the system of non-cash payments into a payment system.

The reduction of interchanging rates on cards of international payment systems is also a factor in the transformation of the system of cashless payments into a payment system. On the one hand, the reduction of card exchange rates affects the reduction of fees for the use of payment cards and promotes the growth of non-cash payments, which has been confirmed by the experience of Poland and Hungary which introduced changes to the level or manner of setting the interchange fee. On the other hand, lower interchange rates in Ukraine may lead to the destruction of the historical system of non-cash payments and payment systems due to the increase in the payback period of the bank's POS-terminals. Lowering the interchange rate can lead to lower bank profits. Payment system practitioners believe that as a result, many banks will withdraw their terminals from business (primarily small and medium-size) and it will provoke the growth of the shadow economy increase, as many transactions will pass by the box office.

A significant factor in the transformation of the cashless payment system into a payment system was the concentration and centralization of banking services, which affected the transition from one-time services to renewable banking products with the simultaneous introduction of loyalty systems by banks and retailers, from cashback to reward programs. It should be noted that the concentration and centralization of banking services for individuals, small businesses, small and medium enterprises have become possible due to the use of payment cards by banks as a means of identifying customers and the first major banking product. A striking example of such use of payment cards by banks is a universal bank card from Privatbank.

On February 1, 2014, SEPA (Single Euro Payments Area) was introduced throughout the European Union – the only European procedure for non-cash payment transactions. SEPA has replaced the national payment systems of 28 EU member states. SEPA uses the IBAN to identify the bank and account number. IBAN – standard № 13616 of the International Organization for Standardization ISO and the European Committee for Banking Standards ECBS - international bank account number. The use of IBAN has become mandatory in Ukraine since January 13, 2020. The introduction of IBAN made it possible to harmonize the Ukrainian payment space with the European one, and also contributed to the further modernization of the electronic payment system of the National Bank of Ukraine. In general, the use of the IBAN standard made it easier to issue settlement documents, accelerated interbank payments, simplified receipt and automatic processing of payments from EU counterparties, made it easier to identify the payer and recipient of non-cash transfers, facilitated the transformation of non-cash payments into a payment system.

A detailed analysis of the factors transforming the system of non-cash payments into a payment system showed that five of the seven factors mentioned above, namely: banking of households, the emergence of new non-banking competitors, development of new technologies, concentration and centralization of capital, reduction of interchanging rates development of the payment card market.

Payments using payment cards are non-cash. The popularity of non-cash payments by payment cards is constantly growing, as evidenced by the growing number of transactions made with payment cards in Ukraine, Sweden, Poland, Hungary and Romania. Number of bank card payments in European countries on Figure 2.

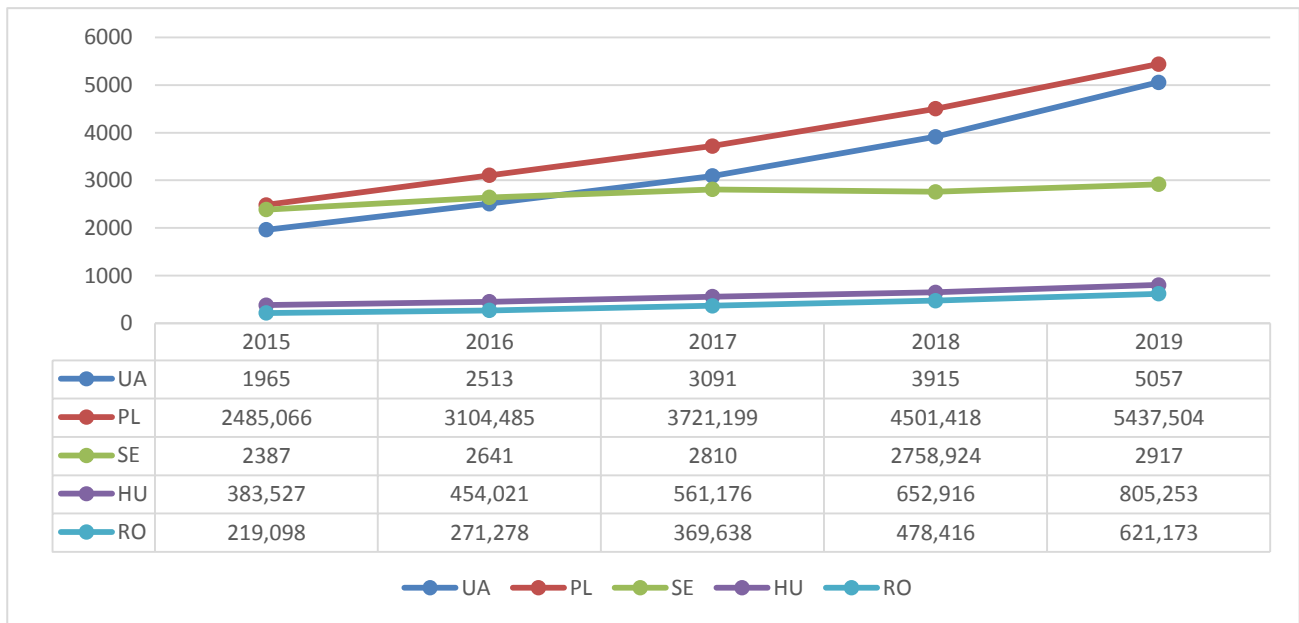


Figure 2. Number of bank card payments in European countries, in million

Source: NBU, ECB, EBF results of data processing.

During the period from 2015 to 2019, the number of transactions using payment cards in the analyzed countries grew every year. Accordingly, the role of cashless payments and payment systems increased during the studied period.

It should be noted that the main factors influencing the number of non-cash payments using payment cards are the population, the number of payment cards and the country's payment infrastructure.

The population of countries is a very important factor, because it is based on the use of non-cash payments and payment systems, so further research it will be conducted on the population of Ukraine, Poland, Sweden, Hungary and Romania, their dynamics and relative deviation over the years.

Poland had the largest number of bank card payments in 2019, amounting to 5,057 million transactions. Compared to Poland, the number of non-cash card payments in Ukraine was 7% less. Such a large number of transactions stems from the significant population of the countries discussed below (Table 2).

Table 2

Population in European countries, thousand people

Year	2015	2016	2017	2018	2019	Relative deviation 2019 from 2015 years, %
UA	42 761	42 585	42 386	42 153	41 902	-2
PL	38 455	38 427	38 422	38 413	38 390	-0,16
SE	9 799	9 923	10 058	10 175	10 279	4,89
HU	9 843	9 814	9 788	9 776	9 771	-0,73
RO	19 822	19 706	19 593	19 477	19 370	-2,28

Source: ECB, EBF results of data processing.

Hungary and Romania had insignificant, compared to other countries, absolute importance of bank card transactions, more than five times less than in Ukraine. Such small figures also follow from the population of these countries.

In 2019, Sweden had 2,917 million non-cash transactions. The country's population is 48% smaller than in Hungary and 7% larger than in Romania. That is, taking into account the indicators of the population, with such indicators of the use of cashless payments and it can be said that Sweden is more developed in terms of non-cash payments and payment systems.

At the same time, not only the population affects the number of non-cash payments. The number of payment cards and the country's payment infrastructure have a significant impact. Important indicators are the ratio of the number of cards to the population of the country and the ratio of the number of cards to the number of POS-terminals for payment by cards (Table 3).

Table 3

Number of cards, bank card transactions and POS-terminals in European countries

Year	Number of cards per 1 person (number of cards / population), pcs. for 1 person					Number of bank card transactions per 1 person (number of bank card payments / population), pcs. for 1 person					Number of cards per POS (number of cards / number of POS), pcs. for 1 terminal				
	UA	PL	SE	HU	RO	UA	PL	SE	HU	RO	UA	PL	SE	HU	RO
2015	0,72	0,92	2,54	0,91	0,75	45,9	64,6	243,6	38,9	11,05	177	76	136	80	104
2016	0,76	0,96	2,15	0,91	0,81	58,6	80,7	266,1	46,26	13,8	162	69	83	74	99
2017	0,82	1,02	2,08	0,93	0,84	72,9	96,8	279,4	57,3	18,9	150	63	83	62	85
2018	0,88	1,07	1,91	0,96	0,89	92,8	117,2	271,1	66,8	24,5	132	52	70	60	85
2019	1,01	1,12	1,82	0,96	0,94	120,6	141,6	283,8	82,4	32,06	126	47	74	60	80

Source: Own study and ECB, EBF results of data processing.

According to ECB, EBF results of data processing (European Central Bank and European Banking Federation, 2019-2020), the ratio of the number of payment cards per capita in the studied countries had a growth dynamic in all but Sweden. In 2019, this figure in Sweden was 18,729 thousand units. by 10,279 thousand population, which is 24.87% less than in 2015. But this does not mean that the Swedish banking sector has begun a process of degradation and decline. This trend in Sweden is due to the fact that the country is focused on environmental improvement. The country is gradually abandoning plastic cards and switching to virtual cards in online applications and e-wallets. This factor is also supported by the fact that Sweden uses the latest blockchain technologies and the transition to digital currency to use cryptocurrencies, especially Bitcoin.

In Ukraine, the number of payment cards in 2019 was 41,158,000, which was 33.46% more than in 2015. In Poland in 2019, the number of payment cards amounted to 42,854 thousand units, which was 21.71% more than in 2015. Romania and Hungary also had an increase the number of payment cards for five years by 21.9% and 4.92%, respectively. That is, banks issued a larger number of payment cards of various types, which was caused by an increase in demand for non-

cash payments by cards on the Internet and a relative improvement in the acquiring functions of banks.

In all countries, there is a dynamic increase in the number of POS-terminals in trade during the study period. In Ukraine in 2019, this figure was 333,840 units, and had an increase of 91.53% compared to 2015. This crazy jump is explained by new legislation, which correlates with the introduction of POS-terminals in trade and the transition from cash to non-cash payments. Ukraine and Poland are somewhat similar in terms of indicators, but in Poland the indicators of the number of cards per 1 person and the number of non-cash transactions are higher. Ukraine has the highest number of cards per POS-terminal in trade, which indicates a significant issue of cards, and more progressive operation of terminals, because during the study period, this figure decreased by 28.8% in 2019 compared to 2015.

In Poland in 2019 there were 906,564 POS-terminals, which is 572,724 more than in Ukraine for the same period, this is due to a more developed business area in Poland than in Ukraine, but this is helped by a large proportion of Ukrainians who leave home to look for work. That is, Poland, creating many jobs and opportunities for business development, encourages Ukrainian citizens to work, thereby increasing the number of terminals for payment in trade and reducing the population of Ukraine.

Sweden has the largest coverage of acquiring banking services and the number of transactions per person. In this country, the number of POS-terminals in trade in 2019 was 251,975, which is a very good indicator of their population and increased by 37.28% compared to 2015, which again indicates a transition to non-cash calculation. In Sweden in 2019, there are 1.82 cards per person, and this is the highest figure among the studied countries. It is noteworthy that this figure is higher despite the fact that Sweden has integration into the use of blockchain technologies and reduced use of plastic cards. That is, when other countries switch to non-cash payments, Sweden is already looking to the future and starting to use digital currency payments. The number of bank card transactions is also much higher than in other countries and amounts to 283.8 transactions per person in 2019.

Hungary in 2019 has an average of all countries, the number of cards per person in 2019 was 0.96, and Romania in 2019 in terms of the number of cards per POS-terminal took second place among the analyzed countries and amounted to 80 pieces. Hungary and Romania also tended to increase the number of bank card transactions per capita by 41.26% and 58.9%, respectively. The indicators of Romania and Hungary are lower than Ukraine in some respects, but the population of these countries is 2 or 3 times less than Ukraine.

Thus, Sweden can be called a benchmark for Ukraine in the development of non-cash payments using payment cards. In order to improve public services and accelerate the transition to non-cash payments, Ukraine needs to grow up and learn from at least its Polish counterparts. It is established that the number of cards per person in Ukraine as well as in Poland. At the same time, there are more POS-terminals in trade in Poland, which may mean a more developed level of entrepreneurship and business than in Ukraine.

This is evidenced by the existing problems of the Ukrainian state in the field of business, namely:

- A tax code that has a constant tendency to change and is almost never been permanent;
- Corrupt mechanisms through which certain individuals do not legally obtain land plots and opportunities to conduct their business;
- High interest rates on loans to small and medium-sized businesses (which until 2018 flowed from the discount rate of the NBU, because before that the monetary policy of the National Bank was tougher;
- Temporary problem - COVID-19 pandemic (currently this factor is a problem in all European countries).

An important factor in the development of small and medium-sized businesses in the country, or business in general, is the factor of increasing the number of POS-terminals in trade, which are directly used in calculations of sold products, goods or services other. With the help of payment cards and electronic payments, the world is gradually giving up cash. But different countries have different conditions for this development.

Ukraine has shown quite good results in the use of such banking services related to non-cash payments, acquiring and development of POS-terminals (National Bank of Ukraine, 2020). Non-cash transactions are used in large quantities. The total number of transactions (non-cash and cash receipts) using payment cards issued by Ukrainian banks in 2020 increased by 18.0%, and the amount - by 8.7% compared to the same period in 2019. This trend is primarily due to the growing amount and quantity of non-cash transactions. Their share predominates in the total amount of payment card transactions. Thus, the amount of non-cash transactions amounted to more than 55% of the sum of all card transactions. Last year, following the results of 2019, this figure was less than 50%. The number of non-cash transactions is even higher - 86 out of 100 transactions with payment cards were carried out non-cash. Payment infrastructure in Ukraine continued to expand steadily during 2020. The number of businesses accepting payment cards has increased by almost 32%. In addition, since the beginning of 2020, the number of commercial POS-terminals has also increased - by 7.9%. At the same time, more than 85% of all commercial POS-terminals provide contactless payment.

Of course, this trend correlates not only with the improvement of banks under the leadership of the NBU, but also with changes in legislation in the country. By the way, the POS-terminal can be used for the benefit of the country, in terms of monitoring the correct posting of income by imposing a tax on this income, which then goes to the state treasury. For example, the formation of bank statements and reports of the entrepreneur, using data from POS-terminals, which reflect all the calculations of the population and the receipt of funds in the bank accounts of merchants.

CONCLUSION

Currently, the whole world is switching to cashless payments, which have been popular for many years. Analyzing the prevalence of the most popular banking transactions related to non-cash payments and payment systems in Ukraine, Sweden, Poland, Romania and Hungary, it has been found that Sweden in this work is a benchmark to be compared to all countries compared.

Sweden's banking system is working at a strong level for the current population. The mentality of Europeans, namely the Swiss, to invest in new technologies is very important. The citizens of Sweden themselves opposed the large issue of payment cards, because, firstly, it is dangerous for the environment, and secondly, the population supported the government in organizing the development of payment for goods and services in digital currency, which is now becoming an important tool as a financial mechanism in some countries with developed economies.

Poland also showed good results in this research. In general, the banking system of Ukraine's neighbor is more developed and open to business processes and ordinary banking operations.

The Ukrainian card market is very dynamic, leaders are changing, new products and technologies are appearing. Only one thing remains unchanged - it is rapidly expanding due to new cardholders, issuers and service points.

This study showed Ukraine's capabilities in the field of typical banking services and allowed to compare the level of development of banking services with other European countries. To improve the situation with serving their customers, banks need:

- Attract foreign attention to domestic investors;
- Take experience from foreign colleagues;

- Moderately change the interchange rate;
- Open new service technologies (blockchain, cryptocurrency, mobile banks);
- To improve the environmental situation - to produce bank cards from material that does not harm nature;
- For more active use of electronic means of payment it is necessary to ensure further development of infrastructure, as well as to promote the development of financial literacy.

Assume, the implementation of the above recommendations will allow to expand cashless payments using payment cards in Ukraine, and the results of research will be useful for further research in the market of payment cards in European countries.

The results of the research can be used in the development of non-cash payment processes using payment cards, the introduction of new banking services based on the use of cards and the solution of certain business cases in banking.

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ТРАНСФОРМАЦІЯ БЕЗГОТІВКОВИХ ПЛАТЕЖІВ НА РИНКУ ПЛАТІЖНИХ КАРТОК КРАЇН ЄВРОПИ

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Метою даного дослідження є вивчення поточного стану і перспектив розвитку безготівкових платежів з використанням платіжних карток в Україні, Польщі, Швеції, Румунії та Угорщини. У статті розглядаються фактори трансформації терміну «безготівкові платежі» в термін «платіжна система». Методологія: теоретична та практична база даних ринку банківських карток розглядається як інформаційна база дослідження. В ході дослідження були використані загальнонаукові, теоретичні та емпіричні методи, серед яких: аналіз і узагальнення літератури з теми дослідження, методи спостереження та порівняння, структурні методи, методи узгодження і формалізації, графічне і табличне представлення даних. У статті проаналізовано тенденції розвитку нових видів безготівкових грошей, проведено порівняння розвитку ринку платіжних карток по ряду критеріїв, описані основні напрямки сучасного використання платіжних карток для безготівкових розрахунків в країнах, що аналізуються. В ході порівняльного економічного дослідження були використані статистичні дані Європейського Центрального Банку (ЄЦБ), інформація сайтів Національного банку України та Центральних банків країн. Результати дослідження показують, що зміни на ринку банківських платіжних карток істотно впливають на розвиток безготівкових розрахунків в економіці країн. Наукова значимість роботи полягає у систематизації та характеристиці основних чинників трансформації терміну «безготівкові платежі» в термін «платіжна система». Практична значимість одержаних результатів полягає у визначенні шляхів удосконалення українського ринку банківських карток з використанням досвіду країн Європейського Союзу. Заслужують уваги представлені в статті кращі європейські практики, що використовувались на ринку банківських карток в 2015 - 2019 роках.

Ключові слова: безготівкові розрахунки, банк, платіжні картки, POS-термінал, Україна, Польща, Швеція, Румунія, Угорщина.

ТРАНСФОРМАЦІЯ БЕЗНАЛИЧНИХ ПЛАТЕЖЕЙ НА РЫНКЕ ПЛАТЕЖНЫХ КАРТ СТРАН ЕВРОПЫ

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Целью данного исследования является изучение текущего состояния и перспектив развития безналичных платежей с использованием платежных карт в Украине, Польше, Швеции, Румынии и Венгрии. В статье рассматриваются факторы трансформации термина «безналичные платежи» в термин «платежная система». Методология: теоретическая и практическая база данных рынка банковских карт рассматривается как информационная база исследования. В ходе исследования были использованы общенаучные, теоретические и эмпирические методы, среди которых: анализ и обобщение литературы по теме

исследования, методы наблюдения и сравнения, структурные методы, методы согласования и формализации, графическое и табличное представление данных. В статье проанализированы тенденции развития новых видов безналичных денег, проведено сравнение развития рынка платежных карт по ряду критериев, описаны основные направления современного использования платежных карт для безналичных расчетов в анализируемых странах. В ходе сравнительного экономического исследования были использованы статистические данные Европейского Центрального Банка (ЕЦБ), информация с сайтов Национального банка Украины и Центральных банков стран. Результаты исследования показывают, что изменения на рынке банковских платежных карт оказывают существенное влияние на развитие безналичных расчетов в экономике стран. Научная значимость работы заключается в определении и характеристике основных факторов трансформации термина «безналичные платежи» в термин «платежная система». Практическая значимость результатов заключается в определении направлений усовершенствования рынка банковских карт Украины с использованием опыта стран Европейского Союза. Также внимания заслуживают представленные в статье лучшие европейские практики, используемые на рынке банковских карт в 2015 - 2019 годах.

Ключевые слова: безналичные расчеты, банк, платежные карты, POS-терминал, Украина, Польша, Швеция, Румыния, Венгрия.

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**DOES SALES GROWTH, ASSET STRUCTURE, COMPANY SIZE AND CASH FLOW
STABILITY AFFECT STOCK PRICES?**

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Abstract. This research aims to determine the effect of sales growth variables, asset structure, company size and cash flow stability against stock prices in manufacturing sector companies listed on the Indonesia Stock Exchange for the period 2014-2018. Sales growth variable is measured using sales, asset structure variable is measured using total assets, company size variable is measured using the natural logarithm of total assets and cash flow stability is measured using net income. This research uses secondary data, in the form of financial reports and other related information from the financial industry listed on the Indonesia Stock Exchange for the period 2014-2018. The selection of this study was related to 75 companies in the manufacturing sector, with a sample of 42 companies using purposive sampling method. The data analysis method used is panel data regression analysis (common effect) with a significant level of 0.05. Based on the results, the research conducted shows that, partially the sales growth variable has no effect on stock prices, the asset structure variable has no effect on stock prices, the firm size variable has a significant effect on stock prices and the cash flow stability variable has no effect on stock prices.

Keywords: sales growth, asset structure, company size, cash flow stability, stock price.

JEL Classification: G12, G32, L11.

INTRODUCTION

The manufacturing industry is a business entity that operates machinery, equipment and labor in a process medium to convert raw materials into goods that have sale value. All processes and stages in manufacturing activities are carried out with reference to Standard Operating Procedures (SOP). According to UNIDO data, the added value of the national industry increased to USD 34 billion from 2014 and reached USD 202.28 billion to USD 236.69 billion in 2018. Manufacturing is

also one of the sectors that contributes to the Indonesian economy. And currently Indonesia is in the top 10 of the world as an industrial country with high added value and in Indonesia itself, manufacturing is one of the biggest contributors to GDP (Source: CNBC INDONESIA).

Since 2014-2018 the results of Indonesia's manufactured exports have increased every year, although in 2016 there was a decrease in the value of exports. This is inversely proportional to the stock price in the manufacturing sector, which during the 2014-2018 period decreased every year. For that, we need to know the factors that affect stock prices, considering that stock prices are very important for companies, especially for public companies. There are many factors that affect stock prices, first, non-financial factors, namely in the form of stock trend price movements, which are usually used by investors to make decisions to buy or sell shares. Second, financial factors in the form of information contained in financial reports, such as profitability and rentability. This financial information is used to measure the company's performance, where the company's performance is as a reference for the stock value in the eyes of investors. Financial factors here include ratios which are measures of company performance. Third, external factors are factors other than the above factors, namely things that occur outside the company such as an increase in interest rates which results in market uncertainty, inflation and deflation which results in uncertainty in people's purchasing power, security of the country, government policies and socio-political conditions. In this study four factors that influence stock prices are taken, namely sales growth, asset structure, company size and cash flow stability.

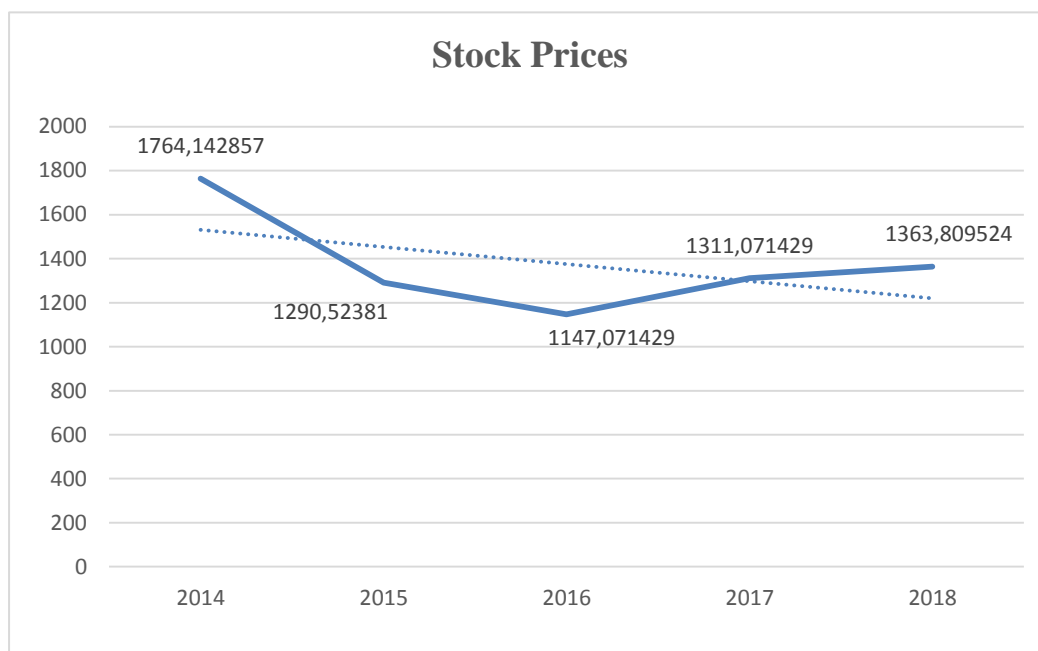


Figure 1. Stock Prices in the Manufacturing Sector for the 2014-2018 period

Source: Modified after Widajatun, V. W. et al. (2020).

LITERATURE REVIEW

Sales Growth

Sales Growth is a ratio that measures the company's ability to maintain its position in the industry and in general economic development (Fahmi, 2012). This growth ratio is seen from various aspects of sales, earnings after tax (EAT), earnings per share, dividends per share, and

market price per share. High sales growth will reflect increased income so that the company's stock price tends to increase. According to (Husnan, S. and Pudjiastuti, 2012), company growth in financial management is measured on the basis of changes in sales, even financially it can be calculated how much growth should be (sustainable growth rate) according to the alignment of investment and financing decisions. The company growth will have consequences on increasing investment in the company assets and ultimately requires provision of funds to purchase assets (Gitman, 2012). Sustainable growth rate is the maximum growth rate that a company can achieve without financing capital but by maintaining the debt to equity ratio.

Sales growth is a component to assess the company's prospects in the future and is measured based on changes in the company's total sales as follows:

$$Sales = \frac{Sales_t - Sales_{t-1}}{Sales_{t-1}}$$

Asset structure

Asset structure according to (Kesuma, 2009) is the wealth or economic resources owned by the company that is expected to provide benefits in the future consisting of fixed assets, intangible assets, current assets, and non-current assets in (Mahapsari, N. R. and Taman, 2013). According to (Thausyah, N. F., 2015), asset structure is the determination of the allocation of funds for each asset component, both current assets and fixed assets. Total assets are the total amount of assets owned by the company consisting of current assets, fixed assets and other assets which, when added together, are equal to total liabilities and equity (Sutrisno, 2013).

The asset structure of a company can be measured by the following formula:

$$Asset\ Structure = \frac{Current\ Assets}{Total\ Assets}$$

Company Size

Company size is a symbol related to the opportunity and ability of a company to enter the capital market and other types of financing that indicate borrowing ability. According to (Husna, R., 2016) states that company size is a scale where the size of the company can be classified. According to (Brigham, E. F. and Houston, 2011) company size is the size of the company is the average total net sales for the year concerned until several years later. Meanwhile, according to (Nugraha, N. M., Hakim, A. A., Fitria, B. T. and Hardiyanto, 2020) the firm size is a measure that describes the size of the company indicated by the company's total assets. Meanwhile, according to (Bani Nugraha, N. and Meiranto, 2015) company size is basically grouping of companies into several categories, including large companies, medium companies, and small companies. Company size is a scale that can be classified by total company assets, total sales, number of employees, stock market value, and others.

The formula used to measure the variable size is:

$$Company\ size\ (size) = \log\ natural\ Total\ Asset$$

Cash Flow Stability

Cash flow is one of the financial reports that must be submitted by companies listed on the Indonesia Stock Exchange (Kasmir, 2014). The cash flow statement provides financial information related to cash income and expenses in an accounting period. The cash flow statement provides

financial information related to cash income and expenses in an accounting period. (Kartikahadi, 2016) states that the cash flow statement is a report that is prepared to explain the amount of cash receipts and payments during a reporting period, the source of revenue and the target for these expenses, and the increase or decrease in the ending cash balance compared to the balance at the beginning of the period. According to (Kieso, 2011) the preparation of a cash flow statement requires four main steps, namely:

- Determining net cash flow from operating activities
- Determining net cash flow from investing and financing activities.
- Determining the change (increase or decrease) in net cash flow during one period.
- Reconciling changes in cash between beginning cash and ending cash.

Cash flow stability of the company can be found by:

$$\text{Cash flow stability} = \frac{\text{Net Profit}_t - \text{Net Profit}_{t-1}}{\text{Net Profit}_{t-1}}$$

Stock Price

Stock price is the value of the shares that occurs as a result of buying and selling these shares on the secondary market. The stock price in transactions in the capital market is the share price that comes from the market mechanism, namely market supply and demand. According to (Sambelay, J. J., Rate, P. V. and Baramulli, 2017), stock price is an indicator of the company management. Successes and returns will provide rational investors with decisions. A high enough stock price will provide benefits, namely in the form of capital gains and a better image for the company, making it easier for management to get funds from outside the company. The price of a stock can fluctuate rapidly in a very fast time, so investors or interested parties are advised to frequently see or check the company's stock price position through existing facilities (Mahapsari, N. R. and Taman, 2013).

The stock price can be calculated as follows:

$$\text{Stock Price} = \text{Closing Stock Price}$$

Based on existing theory and research, a framework is created with the dependent variable stock price and the independent variable consisting of sales growth, asset structure, company size and cash flow stability.

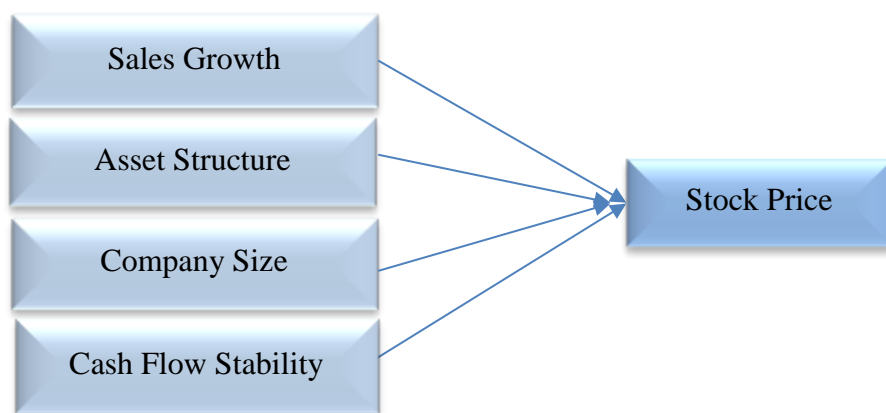


Figure 2. Research Paradigm

Source: Own compilation.

With the paradigm above, the following hypothesis can be formulated:

According to (Deitiana, 2012) sales growth reflects the embodiment of investment success in the past period and can be used as a prediction for future sales growth. Sales growth is also an indicator-of-demand-and competition in the industry. High sales growth will reflect increasing income. This tends to have an impact on dividend payments that are expected to increase. Thus, it will be able to attract investors' attention to buy these shares and of course it can push the stock price to go higher. The research conducted by (Pratiwi, 2017) shows that sales growth has a significant effect on stock prices. This is opposed by the research conducted by (Clarensia, J., Rahayu, S. and Azizah, 2012) which shows that sales growth has no effect on stock prices.

H_1 : Sales growth (X_1) affects the stock price (Y) of the manufacturing industry in the 2014-2018 period.

Asset structure is the wealth or economic resources owned by the company which is expected to provide benefits in the future consisting of fixed assets, intangible assets, current assets, and non-current assets (Agustini, T., 2015). The company's asset structure has an important role in determining the financing of companies that have high long-term fixed assets, because a high demand for the company products will use a lot of long-term asset debt. If the company has high assets, information asymmetry is unlikely to occur as the valuation of its assets is easier because the company has adequate guarantees for investors. Thereby increasing investors' desire to invest will increase stock prices. The research conducted by (Mahapsari, N. R. and Taman, 2013) shows that there is no positive effect of asset structure on stock prices. While the research by (Novianti, 2018) shows that asset structure has a significant effect on stock prices.

H_2 : Asset Structure (X_2) affects the stock price (Y) of the manufacturing industry in the 2014-2018 period.

For investors, high company size is an indicator that the company is performing very well. According to (Prasetya, P. J., 2016) the company size is the level of identifying the size of the company based on the number of workers, market capitalization, total sales, total asset value. The greater the value of market capability, the more the company is known to the public, the greater the sales, the more circulation of money, and the bigger the assets, the more capital is being held. Based on the research by (Viandita, T. O., Suhadak and Husaini, 2013) the size of the company has a positive and significant effect on stock prices. However, it is different from the research results (Karimah, 2011) which shows that company size has a negative and insignificant effect on stock prices.

H_3 : Company size (X_3) affects the stock price (Y) of the manufacturing industry in the 2014-2018 period.

Cash flow stability has a closely related to stock prices because cash flow stability can reflect the condition of the company. Cash flow is a report that provides relevant information about cash receipts and disbursements of a company in a certain period, by classifying transactions in operating, financing and investment activities. The results of the research by (Changling, 2004) and (Nasir, M. and Ulfah, 2008) proved the effect of cash flow on stock prices, but several other studies by (Daniati, N., 2006), and (Meyti, 2006) indicated that cash flow has no effect on stock prices.

H_4 : Cash flow stability (X_4) affects the stock price (Y) of the manufacturing industry in the 2014-2018 period.

After seeing the existing phenomena and studying the research results of several previous researchers discussed above, the researcher was curious to find out whether sales growth, asset structure, company size and cash flow stability had an effect on stock prices in manufacturing sector companies listed on the Stock Exchange of Indonesia for the period 2014-2018, and then compare the results achieved with the results of previous studies.

PAPER OBJECTIVE

The paper objective is to determine the effect of sales growth variables, asset structure, company size and cash flow stability against stock prices in manufacturing sector companies listed on the Indonesia Stock Exchange for the period 2014-2018.

METHODOLOGY

The research method used is descriptive method, which is a form of nature and the relationship between the phenomena being studied (Nuryaman and Veronica, 2015). According to (Sugiyono, 2017) descriptive statistics are used to analyze the data that has been collected as it is without intending to make general conclusions or generalizations. The type of data used is quantitative data in the form of financial reports and a summary of the company's performance for the 2014-2018 period.

The unit of analysis for this research is manufacturing companies listed on the Indonesian Efek Exchange in the research period of 2014 – 2018. The selection of this study was related to 75 companies. Among those that meet the research criteria using purposive sampling (the desired criteria) there are only 42 companies in various industrial sectors that were sampled in this study. Data collection techniques are carried out by literature study and internet research to collect secondary data in the form of corporate financial reports (Amalia, S. et al., 2020; Octavia, D. and Nugraha, 2020).

According to (Nugraha, N. M. and Riyadhi, 2019; Suyono et al., 2019) before conducting the regression, there are conditions that must be done, namely carrying out the classical assumption test. The regression model must be free from classical assumptions, namely: Normality Test, Multicollinearity Test, Autocorrelation Test, and Heteroscedasticity Test.

The normality test is intended to test whether in the regression model, the dependent and independent variables have a normal distribution or not (Ayunitha, 2020; Nariswari, T. N. and Nugraha, 2020). If the probability > 0.05 then the distribution of the regression model is normal. If the probability < 0.05 then the distribution of the regression model is not normal.

Multicollinearity test means to test the regression model whether there is a correlation between the independent variables (Susanti, N., Widajatun, V. W., Aji, M. B. and Nugraha, 2020). To test whether there is multicollinearity in the regression model, it can be seen from the tolerance value and the correlation coefficient value. If the correlation coefficient value < 0.8 then multicollinearity does not occur. But if the correlation coefficient > 0.8 then multicollinearity occurs.

Autocorrelation test means to test the regression model whether there is a correlation between confounding error in period t (current year) and confounding error in period $t-1$ (previous year) (Sugiyono, 2017; Widajatun, V. W., Rahmadzikrishafira, T. F., Nugraha, N. M., & Susanti, 2020). This test is performed with the Durbin-Watson test by comparing the calculated Durbin-Watson value (dW) with the Durbin-Watson table value, namely the upper limit (dU) and the lower limit (dL). If $dL < dW < 4 - dU$, there is no positive or negative autocorrelation.

Heteroscedasticity test means to test the regression model whether there is an inequality of variants from the residuals of one study to another (Nugraha, N. M. et al. 2020; Sugiyono, 2017). The way to determine whether there is heteroscedasticity or not is due to the Glejser method. If the

probability or absolute value of the residual is > 0.05 , there is no heteroscedasticity problem. But if the probability or absolute value of the residual is < 0.05 , there is a heteroscedasticity problem (Nugraha, N. M. et al. 2020).

Multiple linear regression analysis is to examine the effect of the independent variable and the dependent variable (Angelina, S. and Nugraha, 2020) which shows a one way relationship, namely the effect of sales growth, asset structure, firm size, cash flow stability on stock prices. The form of this multiple linear regression equation is formulated as follows:

$$Y = \alpha + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + e$$

Description :

Y = Stock Price

α = Constant

$b_1 - b_4$ = Independent variable regression coefficient

X1 = Sales Growth

X2 = Asset Structure

X3 = Company Size

X4 = Cash Flow Stability

e = Error

F test is to test whether all the independent variables included in the model have a joint influence on the dependent variable as a basis for decision making, that is, if Prob (F-statistic) > 0.05 then H_0 is accepted and H_a is rejected at $\alpha = 5\%$. But if Prob (F-statistic) < 0.05 then H_0 is rejected and H_a is accepted at $\alpha = 5\%$.

The t test defines how far the influence of one independent variable individually is in explaining the variation of the dependent variable (Widajatun, V. W., Nugraha, N. M. and Ichsani, 2019; Wijaya, J. H. and Nugraha, 2020). As a basis for decision making, that is, if Prob (t-statistic) > 0.05 then H_0 is accepted and H_a is rejected at $\alpha = 5\%$. But if Prob (t-statistic) < 0.05 then H_0 is rejected and H_a is accepted at $\alpha = 5\%$.

RESULT AND DISCUSSION

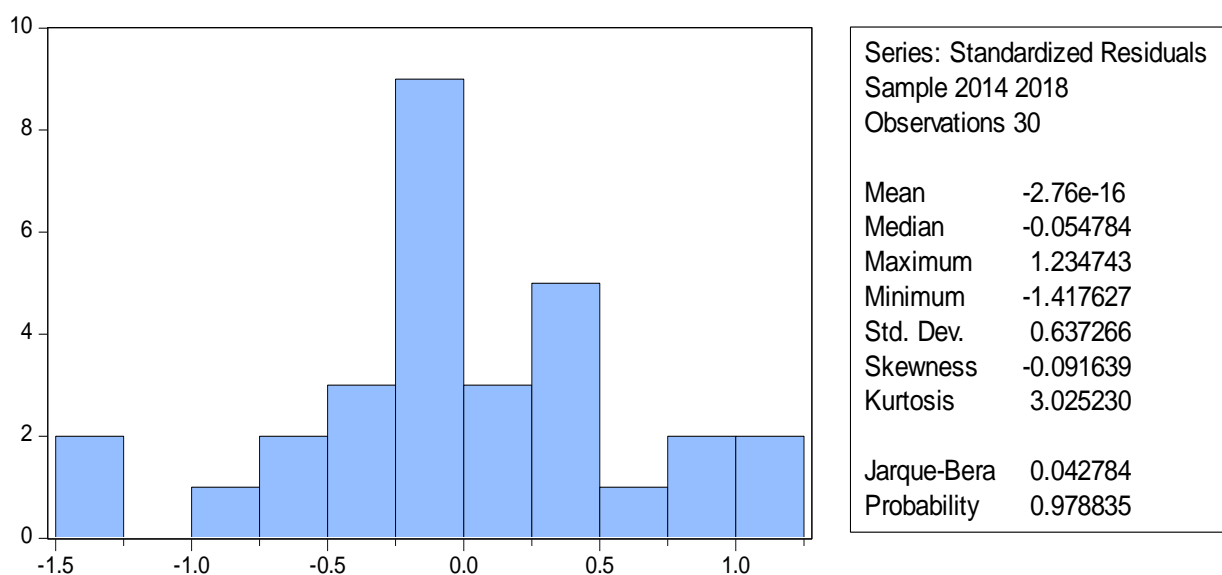


Figure 3. Normality Test

Source: Results of data processing with Eviews.

Based on the picture above, it can be seen that the Jarque-Bera statistical value is significant at the 5% significance level with a probability value of 0.978835. Because the probability value is greater than the error rate of 0.05 or 5%, the data is normally distributed.

Table 1. Multicollinearity Test

	X₁	X₂	X₃	X₄
X₁	1.000000	0.038251	-0.045796	-0.108745
X₂	0.038251	1.000000	-0.310352	-0.025733
X₃	-0.045796	-0.310352	1.000000	-0.048889
X₄	-0.108745	-0.025733	-0.048889	1.000000

Source: Data processing with Eviews.

Based on the table above we can see that between sales growth, asset structure, company size and cash flow stability there is no Multicollinearity because $-0.045796, -0.108745, -0.048889$ and $-0.048889 \leq 0.8$ so we can conclude that H_0 is accepted. Thus, it can be concluded that there is no multicollinearity problem.

Table 2. Autocorrelation

R-squared	0.149151	Mean dependent var	1375.324
Adjusted R-squared	0.132549	S.D. dependent var	3440.963
S.E. of regression	3204.811	Akaike info criterion	19.00622
Sum squared resid	2.11E+09	Schwarz criterion	19.08591
Log likelihood	-1990.653	Hannan-Quinn criter.	19.03843
F-statistic	8.983942	Durbin-Watson stat	0.328050
Prob(F-statistic)	0.000001		

Source: Results of data processing with Eviews.

Based on the table above we can see that the autocorrelation test shows the Durbin Watson number of 0.328050. This means that the Durbin Watson value is between -2 to +2, which means that there is no autocorrelation problem.

Table 3. Heteroskedastisitas Test

F-statistic	0.827140	Prob. F(4,63)	0.5129
Obs*R-squared	3.392958	Prob. Chi-Square(4)	0.4943
Scaled explained SS	3.149166	Prob. Chi-Square(4)	0.5332

Heteroskedasticity Test: Breusch-ferd-godfey

Source: Data processing by Eviews.

Based on the above table we can see that the regression model is free from the problems of heteroscedasticity where the probabilities in the table Prob. Chi-Square (4) is $0.4943 > 0.05$, which means there is no heteroscedasticity problem.

Table 4. Regression Test

Dependent Variable: Y
Method: Panel Least Squares
Date: 05/27/20 Time: 17:59
Sample: 2014 2018
Periods included: 5
Cross-sections included: 42
Total panel (balanced) observations: 210

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-22429.06	4053.634	-5.533075	0.0000
X1	31.66292	128.8842	0.245670	0.8062
X2	714.0270	583.7041	1.223269	0.2226
X3	841.2899	141.4507	5.947586	0.0000
X4	28.09074	39.10558	0.718331	0.4734

Source: Data processing by Eviews.

According to the table above, the multiple linear regression equation is as follows:

$$Y = -22429.06 + 31.66292 X_1 + 714.0270 X_2 + 841.2899 X_3 + 28.09074 X_4$$

From the panel data regression model above, it can be concluded as follows:

The value of the Sales Growth variable has a positive effect on the Stock Price of 31.66292, if the Sales Growth increases by one unit of Sales Growth, the Stock Price can also increase by 31.66292. The value of the Asset Structure variable has a positive effect on the Stock Price of 714.0270, if the Asset Structure increases by one unit of the Asset Structure, the Stock Price may increase by 714.0270. The value of the firm size variable has a negative effect on the stock price of 841.2899, if the size of the company is increased by one unit of company size, the stock price can increase by 841.2899. The value of the Cash Flow Stability variable has a negative effect on the Stock Price of 28.09074, if the Cash Flow Stability increases by one unit of Cash Flow Stability, the Stock Price may increase by 28.09074.

Table 5. F Test Statistics

R-squared	0.149151	Mean dependent var	1375.324
Adjusted R-squared	0.132549	S.D. dependent var	3440.963
S.E. of regression	3204.811	Akaike info criterion	19.00622
Sum squared resid	2.11E+09	Schwarz criterion	19.08591
Log likelihood	-1990.653	Hannan-Quinn criter.	19.03843
F-statistic	8.983942	Durbin-Watson stat	0.328050
Prob(F-statistic)	0.000001		

Source: Results of data processing with Eviews.

F-test is basically done to test whether there is influence between independent variables on the dependent variable simultaneously. Based on the table above, the probability of F-statistic is 0.000001 where the value is smaller than the significant level of 0.05 or $0.000001 < 0.05$, which means that the sales growth variable, asset structure, company size and cash flow stability have a linear relationship with the stock price variable or model used is correct.

Table 6. t Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-22429.06	4053.634	-5.533075	0.0000
X ₁	31.66292	128.8842	0.245670	0.8062
X ₂	714.0270	583.7041	1.223269	0.2226
X ₃	841.2899	141.4507	5.947586	0.0000
X ₄	28.09074	39.10558	0.718331	0.4734

Source: Data processing by Eviews.

Based on the above table we can see bahwa for X₁ (Growth Sales) shows a p-value of 0.8062 with α : 0.05, because $0.8062 > 0.05$ then H₀ is accepted, which means that there is no significant influence between the Sales Growth variable (X₁) on the Stock Price (Y).

The results of this study indicate that sales growth does not have a significant effect on stock prices, one of the reasons is because sales growth is not a benchmark for investors to invest in the company, although sales increase is not always followed by an increase in stock prices. Therefore, sales growth does not attract investors to buy shares in the manufacturing company. Because the investor demand for the company shares is not too much, it causes the company's stock price not to be too high. The results of this study are consistent with the research from (Bailia, F. F. W., Tommy, P. and Baramulli, 2016) which states that sales growth does not have a significant effect on stock prices and is contrary to the research conducted by (Kesuma, 2009).

Based on the table above we can see that X₂ (Asset Structure) shows a p-value of 0.2226 with α : 0.05, because $0.2226 > 0.05$ then H₀ is accepted, which means that there is no significant influence between the Asset Structure variable (X₂) on the Stock Price (Y).

The results of this study indicate that Asset Structure does not have a significant effect on stock prices. Because the higher the asset structure, it means that the fixed assets owned by the company are getting higher or higher which results in the working capital and ability of the company to fulfill the company's obligations that are due to decrease, so the company will need capital from shares, which causes the stock price to decrease as well. The results of this study are in line with the research conducted by (Wijaya, I. P. A. S. and Utama, 2014) where Asset Structure has no effect on Stock Prices, and this study is in contrast to the research (Mahapsari, N. R. and Taman, 2013).

Based on the table above we can see that X₃ (Company Size) shows a p-value of 0.0000 with α : 0.05, because $0.0000 < 0.05$ then H₁ is rejected, which means that there is a significant influence between the variable company size (X₃) on the stock price. (Y).

The results show that company size has a positive and significant effect on stock prices which indicates that the greater the size of the company, there is no doubt that the company is also superior in wealth and performance, so that it will attract investors to trust and want to invest in buying shares, this causes the stock price to move up. As there is more demand, the share price will increase. This is what causes the company's shares to attract investors because investors expect a return on the investment made. The results of this study are in line with tge research conducted by

(Rosita, N. W. A., Isharijadi and Murwani, 2018) which states that company size has a positive and significant effect on stock prices and is in contrast to the research conducted by (Zaki, M., Ishaduddin and Shabri, 2017) and (Yuliana, 2016).

Based on the table above we can see that X_4 (Cash Flow Stability) shows a p-value of 0.4734 with $\alpha: 0.05$, because $0.4734 > 0.05$ then H_0 is accepted, which means that there is no significant influence between the Cash Flow Stability variable (X_4) to stock price (Y).

The results of this study indicate that cash flow stability does not have a significant effect on stock prices, which indicates that the company spends more funds for the needs or operational activities of the company than the revenue for the company's operations. The company is also unable to properly manage the revenue and expenses from the company's operational activities. This also indicates that the interest that must be paid on the loan is higher than the return, causing a decrease in the company's stock price. The results of this study are in line with the research conducted by (Wirawan, 2018) which states that cash flow stability has no effect on stock prices, and this research is in contrast to the research conducted by (Akhyari, 2015).

CONCLUSION

The conclusions of this study are as follows.

Sales growth as measured by sales shows that sales growth has no effect on stock prices, in manufacturing companies listed on the Indonesia Stock Exchange in the 2014 – 2018 period.

Asset structure measured using assets shows that the results of the asset structure have no effect on stock prices, in manufacturing sector companies listed on the Indonesia Stock Exchange in the 2014-2018 period.

Company size as measured by log (log natural total assets) shows that the results of company size have a positive effect on stock prices, in manufacturing companies listed on Indonesia Stock Exchange in the 2014-2018 period.

Cash flow stability measured using net income shows that the results of cash flow stability have no effect on stock prices, in manufacturing sector companies listed on the Indonesia Stock Exchange in the 2014-2018 period.

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ЧИ ВПЛИВАЮТЬ ЗРОСТАННЯ ПРОДАЖІВ, СТРУКТУРА АКТИВІВ, РОЗМІР КОМПАНІЇ ТА СТАБІЛЬНІСТЬ ГРОШОВИХ ПОТОКІВ НА ЦІНИ АКЦІЙ?

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Дане дослідження має на меті визначити вплив змінних темпів зростання продажів, структури активів, розміру компанії та стабільності грошових потоків на ціни акцій у компаніях виробничого сектору, котируваних на Індонезійській фондовій біржі, на період 2014-2018 років. Змінна приросту збуту вимірюється за допомогою продажів, змінна структури активів вимірюється за допомогою сукупних активів, змінна розміру компанії вимірюється за натуральним логарифмом сукупних активів, а стабільність грошових потоків вимірюється за допомогою чистого прибутку. У цьому дослідженні використовуються вторинні дані у формі фінансових звітів та іншої супутньої інформації з фінансової галузі, котируваної на Індонезійській фондовій біржі за період 2014-2018 років. Вибір цього дослідження був пов'язаний із 75 компаніями у виробничому секторі, з вибіркою з 42 компаній, за методом цільового відбору. Методом аналізу даних є панельний регресійний аналіз даних (загальний ефект) зі значним рівнем 0,05. На основі результатів проведеного дослідження показано, що частково змінна зростання продажів не впливає на ціни акцій, змінна структури активів не впливає на ціни акцій, змінна розміру фірми має значний вплив на ціни акцій та змінна стабільності грошового потоку не впливає на ціни акцій.

Ключові слова: ріст продажів, структура активів, розмір компанії, стабільність грошових потоків, ціна акцій.

ВЛИЯЮТ ЛИ РОСТ ПРОДАЖ, СТРУКТУРА АКТИВОВ, РАЗМЕР КОМПАНИИ И СТАБИЛЬНОСТЬ ДЕНЕЖНЫХ ПОТОКОВ НА ЦЕНЫ АКЦИЙ?

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Данное исследование имеет целью определить влияние переменных темпов роста продаж, структуры активов, размера компании и стабильности денежных потоков на цены акций в компаниях производственного сектора, котируемых на Индонезийской фондовой бирже в период 2014-2018 годов. Переменная прироста сбыта измеряется с помощью продаж, переменная структуры активов измеряется с помощью совокупных активов, переменная размера компании измеряется натуральным логарифмом совокупных активов, а стабильность денежных потоков измеряется с помощью чистой прибыли. В этом исследовании используются вторичные данные в форме финансовых отчетов и другой сопутствующей информации по финансовой отрасли, котируемой на Индонезийской

фондовой бирже за период 2014-2018 годов. Выбор этого исследования был связан с 75 компаниями в производственном секторе, с выборкой из 42 компаний, методом целевого отбора. Методом анализа данных является панельный регрессионный анализ данных (общий эффект) со значительным уровнем 0,05. На основе результатов проведенного исследования показано, что частично переменная рост продаж не влияет на цены акций, переменная структуры активов не влияет на цены акций, переменная размера фирмы имеет значительное влияние на цены акций и переменная стабильности денежного потока не влияет на цены акций.

Ключевые слова: рост продаж, структура активов, размер компании, стабильность денежных потоков, цена акций.

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THE NEXUS OF TRANSFORMATIONAL LEADERSHIP, COMPENSATION AND KNOWLEDGE MANAGEMENT TOWARDS EMPLOYEE PERFORMANCE: MEDIATION ROLE OF WORK MOTIVATION

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Abstract. This research aimed to analyze the nexus of transformational leadership (TL), compensation (CM), and knowledge management (KM) on employee performance (EP) through work motivation (WM) on engineering consulting companies in Capital Region of Jakarta. This was a causality research which used survey approach. The analysis unit of this research was some engineering companies represented by the experts of construction planners. They had high qualification and they were the members of National Association of Indonesian Consultant (Inkindo) in Capital Region of Jakarta, Indonesia. The target sample of this research was consulting company organizations represented by permanent experts or skilled manpower who worked in construction planning services. The data collection of this research was primary and secondary by using structural equation modeling with partial least squares method. The total respondent of this research was 106 who were the employees from selected engineering consulting companies in Capital Region of Jakarta. TL had a significant effect towards EP through work motivation. CM had a significant effect towards EP through WM. Lastly KM had a significant effect towards EP through WM. The importance of this research was taken from its context which was conducted in Capital Region of Jakarta, Indonesia. Moreover, this was one of initial efforts to indicate EP by considering TL, CM, and KM and to observe the use of EP for engineering consulting companies in Indonesia. The findings of this research could serve several inputs for organizations in developing the practices between WM dimension and KM expansion among consulting engineering companies in Capital Regional of Jakarta, Indonesia.

Keywords: transformational leadership, compensation, knowledge management, employee performance, work motivation.

JEL Classification: D23, J30.

INTRODUCTION

Human resources are essential assets in organizations and companies. The success of company management is absolutely affected by the quality of human resources in an organization or

a company (Hamid et al., 2017; Zhang, 2016). The ability of employees in encountering organizational needs can affect the achievement of an organization's goals. Employee performance is undeniably proportional for the organization's success in every activity (Siddiqui, 2014; Suharto, Suyanto, and Hendri, 2019). Performance is the result of work achieved by employees based on job requirements (Anyakoha, 2019; Stoilkovska and Serafimovic, 2017; Suthar, Chakravarthi, and Pradhan, 2014). Employees' performance are considered as a result of work that has been achieved by employee from their work behavior in performing work activities (Pradhan and Jena, 2017). Companies must enhance employees' performance in various ways that can be accomplished, such as improving leadership in a team or in an organization, providing appropriate compensation for employees' hard work, and managing knowledge among employees (Suryadharma et al., 2016; Zaini and Agustian, 2019). Furthermore, work motivation represents result of the company's efforts to enhance employees' performance (Beltrán-Martín and Bou-Llusar, 2018; Garg, 2017; Van Iddekinge et al., 2018). Motivation is considered as a driving factor to enhance employees performance due to their job satisfaction obtained from the moment when employees are satisfied with the leadership of organization, compensation, and knowledge management (Ganta, 2014; Shahzadi et al., 2014).

The leadership has been considered as the important ability to encourage and motivate employees for committing and achieving the goal (Tyssen, Wald, and Heidenreich, 2014). Leadership can determine employee's success. Hence, enhancing employee performance is inseparable from the role of the leaders (Cho et al., 2020; Kesari and Verma, 2018; Sandvik et al., 2019). Leadership is a personal ability of influencing employees to achieve company goals (Jyoti and Bhau, 2015; Zohar and Polachek, 2017) since fair leaders can transport mental support and respect which will enhance employees' performance. Thus, work motivation of employees will increase their performance as they feel comfortable with the presence of leaders who are expected to be fair and supportive. Work motivation encourages the employees to be productive and to have a better performance (Priyanto, 2016; Widodo, 2017).

Compensation is defined as paid-award in the form of money and goods for employees' hard work in providing services to the organization (Madhani, 2014; Pepper and Gore, 2015; Shin, 2016). In other words, compensation can also be interpreted as a bonus given by the organization. The bonus aims to increase employees' motivation at work (Andersen et al., 2012; Fatima, 2017; Morrell and Abston, 2018). Employees will feel valued when their best efforts for the organization are appropriately compensated. This will consequently have an effect on employees' motivation to continue their best performance. Expecting to accumulate more compensation based on their work. This can enhance employees' performance since there is a motivational boost from obtaining compensation (Priyanto, 2016; Widodo, 2017).

During an intense competition in the industry, the paradigm needs to be changed from resource-based competitiveness to knowledge-based competitiveness (Novianti, 2019). Knowledge-based competitiveness emphasizes knowledge and technology, as well as the development of the company's human resources (Lendzion, 2015; Perez and Pablos, 2003). To facilitate the development of human resources, the ability to manage and develop knowledge of the organization is required (Castro et al., 2020; Llorens and Battaglio, 2010; Meerwarth, Trotter and Briody, 2008). Knowledge management is defined as an organization's effort to identify, develop, and distribute knowledge for elevating an organization's competitive excellence by recognizing, learning, and reusing it (Nonaka, 1994; Nonaka, Toyama and Konno, 2000). This effort provides an opportunity for employees to develop their knowledge about the organization which is expected to grow work motivation and improve their performance in an organization continuously (Muthuveloo, Shanmugam, and Teoh, 2017; Samsiah, 2018).

Strong motivation in doing work can create organizational success and maximize the work. Work motivation itself has an essential role in terms of enthusiasm growth, passion, and pleasure to work optimally. Motivation is a factor encouraging the other people to perform tasks based on their

Baskoro, B. D., Widjaja, B. T. and Sudarmadji (2020), "The nexus of transformational leadership, compensation and knowledge management towards employee performance: mediation role of work motivation", *Management and entrepreneurship: trends of development*, 1(15), pp. 41-64. Available at: <https://doi.org/10.26661/2522-1566/2021-1/15-03>

roles in an organization. Motivation also supports the process of determining the intensity, direction, and perseverance of individuals in achieving goals (Bronkhorst, Steijn and Vermeeren, 2015; U. T. Jensen and Bro, 2018). The concept of motivation often emphasizes stimulation that arises from an individual (intrinsic motivation) (Auger and Woodman, 2016; Taberero and Hernández, 2011) and outside factors (extrinsic motivation) (King et al., 2013; Reiss, 2012). The employees who have strong work motivation will have much energy to perform activities. In other words, It enhances employees' performance (Hidayat and Heryanto, 2019; Kwapong, Opoku, and Donyina, 2015; Zainuri and Mundakir, 2018)

The problem occurring recently is an achieve performance in project execution which is accomplished by engineering companies. It is under optimal. The final work is still far beyond customer expectations due to delays of project completion. Company delays in work completion shall be subjected to sanctions and fines per Section 1.10 of Special Task Force for Upstream Oil and Gas Management on July 26th, 2017. Besides the technical aspects that affect these delays should be observed from project performance indicating an under optimal employee performance.

The companies practically give appreciation for employees in the form of bonuses in case the project is accomplished on time. The lack of senior employees engineering field, companies require to start the transformation by implementing knowledge management to enhance employees' performance and delivering knowledge to other employees. Management has to ensure that every employee has a secure attachment with the company. Each employee can develop their skill and strive to manage an individual knowledge into organizational knowledge. It will continuously enhance their ability to provide additional values for company and customer.

Research factors that affect employees' performance were aspects consideration of work motivation as mediating variables. The aspects of work motivation are assumed to intervene with the effects of leadership, compensation, and knowledge management on performance. The aspects of work motivation are intended to disclose the effects of leadership, compensation, and knowledge management on employees' performance.

LITERATURE REVIEW

The Effects of Transformational Leadership (TL) towards Employee Performance (EP)

Transformational leadership is an individual activity to drive the other people by leading, guiding, and influencing other people. So, they do something to achieve the expected results (Groves, 2014; Kwan, 2020). That is in accordance with the process of making other people to understand and agree with what needs to be done and how the task is performed effectively as well as a process of facilitating individual and collective efforts to achieve shared goals (Bronkhorst et al., 2015).

Transformational leadership has direct positive effects on employee performance. This hypothesis has been confirmed by previous research (Caillier, 2014; Chammas and Hernandez, 2019).

H1: TL has positive effects towards EP.

Effects of Compensation (CM) towards Employee Performance (EP)

Compensation such as money, direct or indirect goods received by employees are the other form of company services which are returned (Madhani, 2014). The employee compensations are payment or reward given by company due to their performance (Khalid and Nawab, 2018; Yan and Sloan, 2016).

Compensation has direct positive effects towards employees' performance. This hypothesis has been confirmed by Do (2018), Khudhair, Rahman, and Adnan (2020), and Weldon (2012).

H2: CM has positive effects towards EP.

Effects of Knowledge Management (KM) towards Employee Performance (EP)

There are various perspectives in understanding knowledge management provided by different researchers. Knowledge management is organization ways to identify and enhance the knowledge for improving excellence (Nonaka and Toyama, 2003; Nonaka et al., 2000). Knowledge management is inseparable from management function or process. Knowledge management is systematic steps to manage the knowledge in increasing value and supremacy of organization (Chawinga and Chipeta, 2017; Sharma and Mishra, 2007).

Knowledge management has direct positive effects towards employees' performance. This hypothesis has been confirmed by previous research (Andria and Trisyulianti, 2016; Muthuveloo et al., 2017; Praharsi, 2016; Sukarta and Lestari, 2019).

H3: KM has positive effects towards EP.

Effects of Work Motivation (WM) towards Employee Performance (EP)

Motivation is a factor encouraging the other people to perform basic tasks from the roles of organization. Motivation also supports the process of determining the intensity, direction, and perseverance of individuals to achieve goals (Auger and Woodman, 2016; Ganta, 2014).

The concept of motivation from various sources emphasizing stimulation of (intrinsic motivation) and outside factors (extrinsic motivation) (Auger and Woodman, 2016; King et al., 2013; Reiss, 2012).

Motivation has direct positive effects towards employees' performance. This hypothesis has been confirmed by previous research (Juniari, Riana, and Subudi, 2015; Kwapong et al., 2015; Zainuri and Mundakir, 2018).

H4: WM has positive effects towards EP.

Effects of Transformational Leadership (TL), Compensation (CM), and Knowledge Management (KM) towards Work Motivation (WM)

Strategies in increasing employee motivation are part of human resources development and the affecting factors can be analyzed. Previous researches in accordance with employees' work motivation have been conducted for years.

TL has positive effects towards work motivation. This hypothesis has been confirmed by Bronkhorst et al. (2015) and Jensen and Bro (2018). Compensation has a positive effect towards work motivation. This hypothesis has been confirmed by Priyanto (2016) and Widodo (2017). Knowledge management has a positive effect towards work motivation. This hypothesis has been confirmed by Ganjinia, Salimi, and Ghasabsaraei (2014) and Usman and Musa (2012).

H5: TL has positive effects towards WM.

H6: CM has positive effects towards WM.

H7: KM has positive effects towards WM.

Effects of Transformational Leadership (TL), Compensation (CM), and Knowledge Management (KM) towards Employee Performance (EP) through Work Motivation (WM)

Strategies in increasing employee performance are part of HR development when employee performance can be analyzed from those factors. Previous researches in accordance with the development of employees' performance have been conducted for years.

TL has a positive effect towards EP through WM. This hypothesis has been confirmed by previous research (Arman, Wardi, and Evanita, 2020; Priyanto, 2016; Widodo, 2017).

CM has a positive effect towards EM through WM. This hypothesis has been confirmed by previous research (Priyanto, 2016; Widodo, 2017).

The researches related to the effects of knowledge management on employee performance through work motivation have not existed yet in which the subject is interesting to discuss.

H8: TL is positively related to EP through WM.

H9: CM is positively related to EP through WM.

H10: KM is positively related to EP through WM.

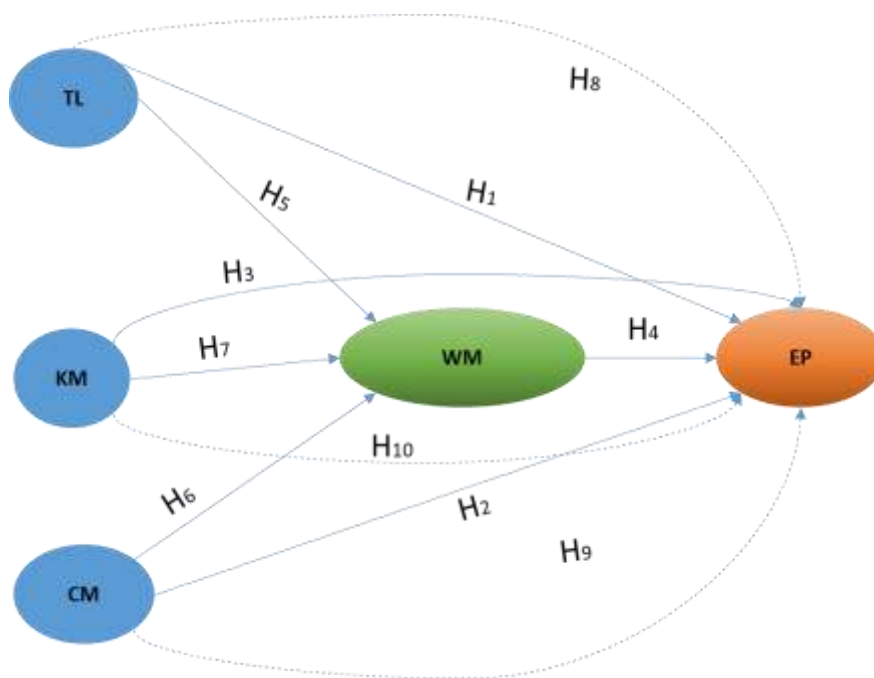


Figure 1. Research Framework

Source: Own compilation.

PAPER OBJECTIVE

This research aims to analyze transformational leadership, compensation, and knowledge management in affecting employees' performance through work motivation as mediating variables.

METHODOLOGY

Sample and Procedure

This was an associative research with the causal correlation and it aimed to indicate correlation between a variable and the other related variables.

This research used quantitative method that produced structured data. Hence, the researcher could perform the process of quantifying data by changing the original data into objective data (Boeren, 2018; Daniel, 2016).

In order to validate the hypothesized model which was shown on Figure 1, the research object was members of construction planners of consulting companies. They were known as National Association of Indonesian Consultant (Inkindo) with high qualification. This research was conducted on January to April, 2020 in Jakarta.

The analysis units of this research were engineering companies represented by the experts of consulting engineering of construction planners. The sample of this research was taken from consulting company organizations.

The types of data used in this were primary and secondary. Primary data of this research was obtained by from questionnaire distribution to 106 respondents out of 150 company representatives who participated in this research. Research measurement used Likert scale. Secondary data in this research was obtained from project performance reports, employee management, and data of employees' attendance. In this research, the method of processing and analyzing the data was SEM based on component or variance with partial least squares (PLS) using SmartPLS 3.2.8.

The sample used in this research could reach the minimum model of 100 samples Hair, Ringle and Sarstedt (2011) and Hair et al. (2014) for structural equation modeling (SEM) analysis.

Data Collection Measurement

The data used in this research included data on TL, CM, KM, WM, and EP collected from questionnaires design which used Likert scale. In this scale, the submission statement included five alternative answers. These statements were TL, CM, KM, WM, and EP and they used Likert scale. The details were as follows SD (Strongly Disagree) = 1, D (Disagree) = 2, N (Neutral) = 3, A (Agree) = 4, and SA (Strongly Agree) = 5.

Seven items of TL scale based on Carless, Wearing, and Mann (2000). Ten items of CM scale based on Rahman and Singh (2019). Twenty-two items of KM scale based on Darroch (2003), Lee and Wong (2015), and Wang et al. (2008). Nine items of WM scale based on Weinstein and Ryan (2010). Five items of EP based on Williams and Anderson (1991).

RESULT AND DISCUSSION

Measurement Model

Evaluation of measurement model (outer model) was performed to determine the validity and reliability which related to the indicator of latent variable. There were three criteria of data analysis techniques which used SmartPLS 3.2.8 to evaluate outer model such as convergent validity, discriminant validity, composite reliability, and average variance extracted (AVE) (Cepeda-Carrion et al., 2019; Hair et al., 2019).

Convergent validity of measurement model with reflective indicators was evaluated by using correlation between item and component scores of PLS software. Personal measurement was in a high level, if the correlation was above 0.70 with constructive measurement (Hair et al., 2014).

In this research, a number of limiting factors of 0.70 were used. There was still an outer loading value under. Because it had low convergent validity value, the statement items under needed to delete. Four indicators on TL needed to delete; they were TL2, TL4, TL5, and TL15. In the CM construct, three indicators needed to delete; they were, CM2, CM9, and CM10. In the KM construct, 14 indicators needed to delete; they were, KM1, KM2, KM3, KM4, KM5, KM6, MP9, KM11, KM13, KM15, KM16, KM17, KM19, and KM22. In the WM construct, four indicators needed to delete; they were WM4, WM5, WM7, and WM10. In the EP construct, there were four indicators that needed to delete; they were EP5, EP6, EP8, and EP11. The results of data processing on loading values under which were deleted are shown in Figure 2.

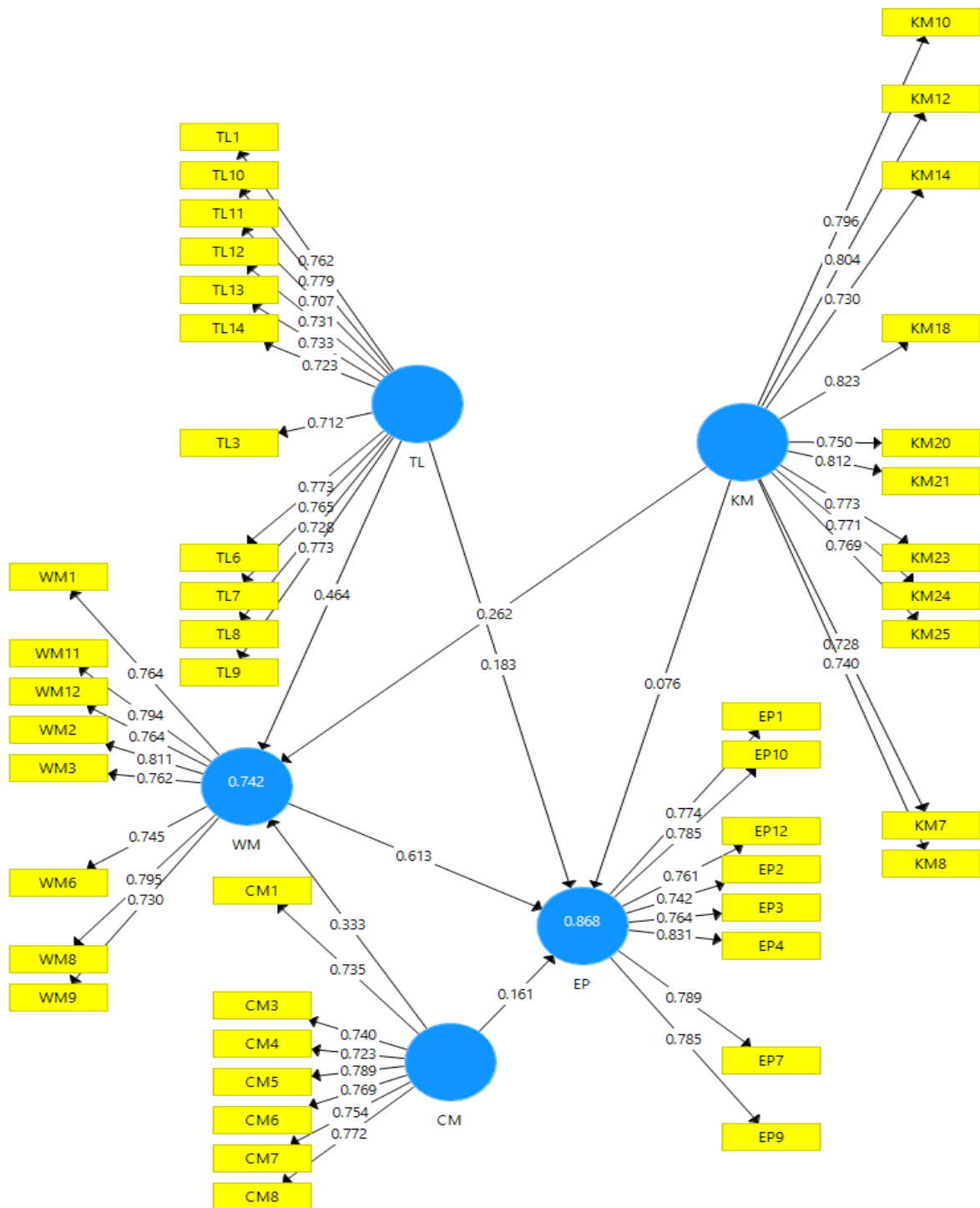


Figure 2. Results of the Structural Equation Modeling

Source: Own compilation.

Discriminant Validity Analysis

After ensuring all indicators which were from the latent variables, there were constructs of the latent variables. The next step was to test the discriminant validity. Discriminant validity also needed to finish. Thus, the scale did not have to comprise two same constructs.

To indicate the correlation of constructs, it must be under 0.90. If the correlation between constructs was 0.90 or more and multicollinearity between constructs which occurred (Hair et al., 2014). The results of discriminant validity testing were shown in Table 1.

As shown in Table 1, there was no multicollinearity between variables because each construct measured the different subject. This was an evident from the correlation value among constructs that were less than 0.90.

Table 1.

Discriminant Validity

	TL	EP	CM	KM	WM
TL	0.802				
EP	0.745	0.814			
CM	0.724	0.755	0.772		
KM	0.298	0.481	0.287	0.773	
WM	0.771	0.779	0.744	0.496	0.783

Source: Own compilation.

Reliability Evaluation and AVE

The validity and reliability criteria could also be observed from the reliability value of a construct and the AVE value of each construct. It can be said that the constructs have high reliability, if the reliability value was 0.70 and AVE value was above 0.50 (Hair et al., 2014). The CR indices of each scale were all higher than the level of 0.70 recommended by Fornell and Larcker (1981). Table 2 presents Cronbach's alpha, composite reliability (CR), and AVE values for all variables.

Table 2.

Internal Consistency and Reliability

Constructs/Indicators	Factor loading	Cronbach's alpha	CR	AVE
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
TL1	0.762	0.919	0.932	0.554
TL10	0.779			
TL11	0.707			
TL12	0.731			
TL13	0.733			
TL14	0.723			
TL3	0.712			
TL6	0.773			
TL7	0.765			
TL8	0.728			
TL9	0.773			
CM1	0.735	0.874	0.903	0.570
CM3	0.740			
CM4	0.723			
CM5	0.789			
CM6	0.769			
CM7	0.754			
CM8	0.772			
KM10	0.796			
KM12	0.804	0.933	0.942	0.597
KM14	0.73			
KM18	0.823			
KM20	0.750			
KM21	0.812			
KM23	0.773			
KM24	0.771			
KM25	0.769			
KM7	0.728			
KM8	0.740			

Table continuation is on the next page

Baskoro, B. D., Widjaja, B. T. and Sudarmadji (2020), "The nexus of transformational leadership, compensation and knowledge management towards employee performance: mediation role of work motivation", *Management and entrepreneurship: trends of development*, 1(15), pp. 41-64. Available at: <https://doi.org/10.26661/2522-1566/2021-1/15-03>

Table continuation

1	2	3	4	5
WM1	0.764			
WM11	0.794			
WM12	0.764			
WM2	0.811	0.902	0.921	0.595
WM3	0.762			
WM6	0.745			
WM8	0.795			
WM9	0.730			
EP1	0.774			
EP10	0.785			
EP12	0.761			
EP2	0.742	0.907	0.925	0.607
EP3	0.764			
EP4	0.831			
EP7	0.789			
EP9	0.785			

Source: Own compilation.

As shown in Table 2, TL, CM, KM, WM, and EP had composite reliability above 0.80 and a Cronbach's alpha value above 0.70. Hence, it can be concluded that the indicators used in every variable have good reliability or able to measure its construct (Hair et al., 2014). However, Cronbach's alpha value generated by PLS is slightly underestimated. Therefore, it is recommended to use the composite reliability value (Peterson and Kim, 2013). Likewise, with AVE value, TL, CM, KM, WM, and EP have an AVE value above 0.50. Therefore, it can be said that each variable has high discriminant validity.

Structural Model

Inner model or structural model testing is conducted to observe the correlation between the constructs, significance value, and R^2 of the research model (Hair et al., 2019). The dependent construct of t-test of structural model was evaluated by using R^2 as well as the significance of structural path parameters coefficient. The assessment of a model with PLS started by looking at the R^2 for each latent dependent variable. Table 3 shows the results of R^2 estimation using SmartPLS.

Table 3

R-square results

Variable	R^2	R^2 adjusted
EP	0.868	0.863
WM	0.742	0.734

Source: Own compilation.

Table 3 shows the R^2 value for EP obtained at 0.868 and for WM obtained at 0.742. These results indicated that 86.8% of EP could be affected by TL, CM, KM, and WM; the rest were influenced by other variables that were not included in the research. However, 74.2% of WM was influenced by TL, CM, and KM; the rest was influenced by other variables that are not found in the research.

Furthermore, the total value of R^2 (see Table 2) was used for predictive relevance (Q^2). The predictive relevance (Q^2) and the effect Q^2 or effect of exogenous constructs were measured by blindfolding approach on endogenous constructs (Henseler, Ringle, and Sinkovics, 2009). As shown in Table 2, the value of Q^2 in this research could be measured by the following calculation:

$$Q^2 = 1 - (1 - R1^2) (1 - R2^2)$$

$$Q^2 = 1 - (1 - 0.868) (1 - 0.742)$$

$$Q^2 = 1 - (0.132) (0.258)$$

$$Q^2 = 0.965944$$

The predictive value of relevance (Q^2) for the structural model in this research was 0.9659 or 96.59%. It meant that the model was able to explain the phenomenon of performance associated with several variables, such as; TL, CM, KM, and WM. Therefore, it can be said that the model had an impressive predictive value. In conclusion, the model could be used for hypothesis testing.

Hypothesis Testing

Based on the hypothesis testing path diagram in Figure 3, all indicators on each variable had a higher statistical value than 1.66 (T-statistic). To test the correlation between variables (hypothesis testing), the statistical value of the SmartPLS output was compared to the value of the table. Table 4 provides the results of the correlation between constructs (variables).

Table 4

Direct effect

Relationship	Beta	T-statistic	P-value	Comments
TL → EP	0.183	2.030	0.021	Support
TL → WM	0.464	5.063	0.000	Support
CM → EP	0.161	2.323	0.010	Support
CM → WM	0.333	4.048	0.000	Support
KM → EP	0.076	1.254	0.105	Not Support
KM → WM	0.262	3.967	0.000	Support
WM → EP	0.613	5.638	0.000	Support
TL → WM → EP	0.285	3.469	0.000	Support
CM → WM → EP	0.205	3.911	0.000	Support
KM → WM → EP	0.161	2.753	0.003	Support

Source: Own compilation.

In Figure 3, the analysis of path coefficients and level of significance shows that all direct paths were significant except the one between KM and EP. Besides, the result discovered that KM had no significant effect towards EP ($\beta = 0.076$, $p = 0.105$). Table 3 showed that all paths were significant on indirect effect. We made bootstrap contest with 5.000 sub-samples to estimate the t -values and to assess the level of significance for specific indirect effect as shown in Table 5.

Table 5

Specific Indirect Effect

Relationship	Beta	T-statistic	P-value	Comments
TL → WM → EP	0.285	3.469	0.000	Support
CM → WM → EP	0.205	3.911	0.000	Support
KM → WM → EP	0.161	2.753	0.003	Support

Source: Own compilation.

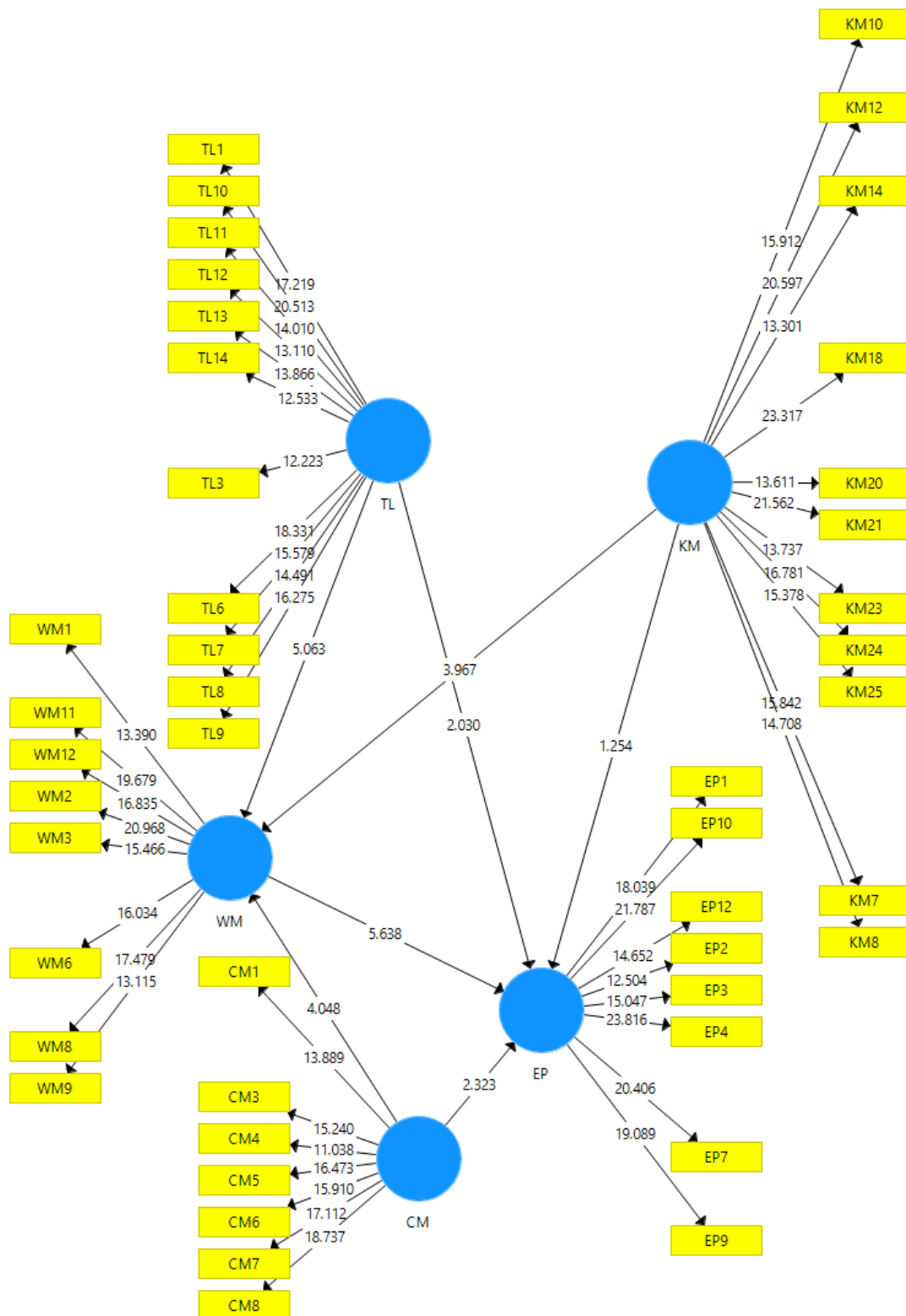


Figure 3. Hypothesis Testing Path

Source: Own compilation.

Based on the path parameter coefficients obtained in Table 4 and Table 5 and the explanation above, the formed research equation model can be explained in Figure 4.

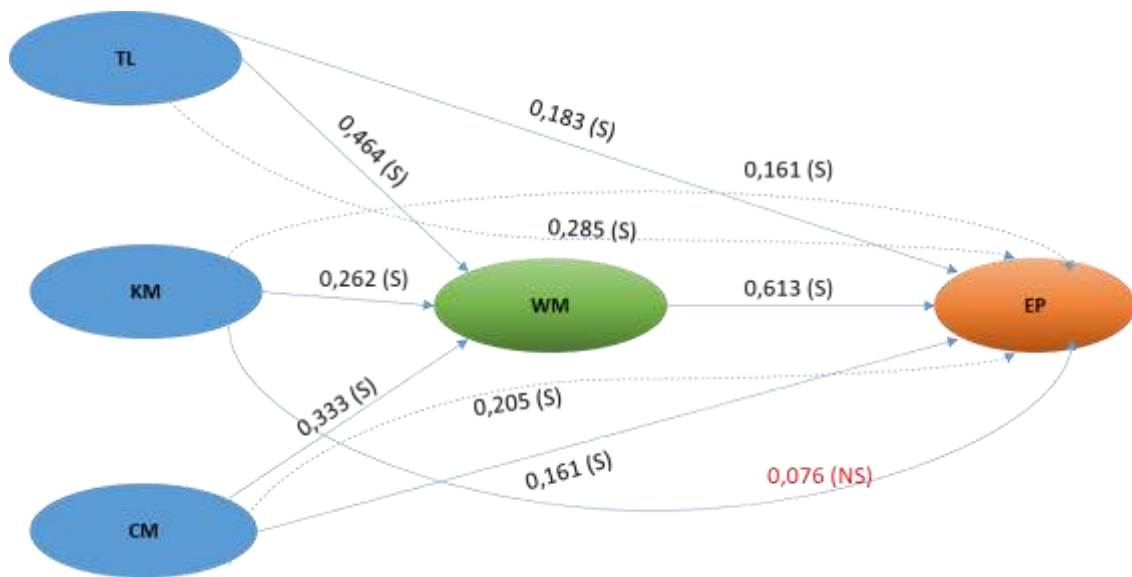


Figure 4. Research Model

Source: Own compilation.

In the research model, the effect of KM towards EP had a smaller coefficient than the subjects of TL and CM. It meant that TL and CM had higher effects towards EP than on KM.

Mediation Effect Test

Influence analysis was implemented to analyze the strength of influence between variables, both direct and indirect, and the total effects. The immediate effect was nothing but the coefficients of all coefficient lines with one ended an arrow. This research model illustrated that TL, CM, KM, and WM had a direct effect towards EP.

Indirect effects were the effects that arose through an intermediate variable. In this research model, WM provided an indirect effect towards EP. Table 5 shows the indirect effects in this research. As shown in Table 5, the results of the indirect effect of TL towards EP through WM with p-values of $0.000 < 0.05$ were significant. The results of indirect effects of CM towards EP through WM with p-values of $0.000 < 0.05$ were significant. The results of indirect effect of KM towards EP through WM with p-values of $0.003 < 0.05$ were significant.

Discussion

The results of hypothesis testing on effect direction of TL towards EP are significant. It is supported by the previous research (Jensen, Potočnik, and Chaudhry, 2020; Ng, 2017) which shows that TL has affected EP. The implication of this research is that TL can affect individual performance. Supervisors can affect employees to struggle more or to strive in achieving organizational goals. Supervisors who are -task and relationship- oriented persons, are consistent, responsible, and concern to the employees in their jobs. This situation shows that good leadership can enhance employees' performance.

The results of hypothesis testing on the effect direction of CM towards EP are significant. It is supported by previous researches (Sukarta and Lestari, 2019; Weldon, 2012) which stated that compensation affects employees' performance. This research implies that compensation can affect individual performance. Compensation for employees are usually given monthly in the form of financial and non-financial compensation (Malinda, Dewi, and Gamayuni, 2019). The situation

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shows that the amount of payment provided can affect employees' performance. A sound compensation system will have double effects in the company, which are, the result of operational costs and the effect of work behavior (Do, 2018; Khudhair et al., 2020; Madhani, 2014; Weldon, 2012).

The results of hypothesis testing on the effect direction of KM towards EP are not significant. It is not consistent with the previous research (Andria and Trisyulianti, 2016; Muthuveloo et al., 2017; Praharsi, 2016; Sukarta and Lestari, 2019). Thus, this result is consistent with the research conducted by Afqarina and Dihan (2019), which stated that negative influence on employees' performance come from knowledge management. By conducting this research, the correlation between knowledge management and employees' performance hypothesis are clear. In this case, organization has to find more methods to increase employees' performance.

The results of hypothesis testing on the effect direction of WM towards EP are not significant. It is consistent with the previous research (Juniari et al., 2015; Kwapong et al., 2015; Zainuri and Mundakir, 2018), which stated that work motivation has a significant effect on employees' performance. Motivation is the supporting factor in performing an activity and has a significant effect on employees' performance. Employees' performance is a comparison between the input and output or the ratio of results obtained from resources (employees) since employees are the essential factors of production. To optimize the employees' work, supervisors, it needs to motivate their employees. Motivating employees can be conducted in several ways; for example, the existence of positive motivation such as providing gifts, bonuses, awards, and job promotions. By contrast, allocating negative motivation can be conducted by providing warnings or penalties for employees who commit mistakes. Employees' performance is also a factor that determines the whole company's performance.

The results of hypothesis testing on the effect direction of TL towards WM are significant. They are consistent with the researches by Priyanto (2016) and Widodo (2017), stated that leadership affects work motivation. The leadership factor plays an essential role since the leaders are the individuals to move and direct the organization in achieving goals. At the same time, this is not an easy task as they have to understand each employee's different behavior. Employees can be affected in the same way as they can be motivated to work effectively and efficiently. To enable employees for increasing the volume and quality of their work, it is the responsibility of the leaders of organization to motivate them.

The results of hypothesis testing on the effect direction of CM on WM are significant. They are consistent with the previous researches (Andersen et al., 2012; Forest, 2008; Morrell and Abston, 2018; Priyanto, 2016; Widodo, 2017). Compensation is the primary source of income for employees to support themselves and their families. An adequate compensation is the most powerful motivational instrument for companies to encourage employees to work properly (Andersen et al., 2012; Morrell and Abston, 2018). Inadequate compensation will make them less interested in working hard and allowed them to work uneasily. Organizations need to re-confirm whether the compensation which they have given to employees is appropriate. It is essential to be noted as it affects the motivation of work, in accordance with the results of this research.

The results of hypothesis testing on the effect direction of KM towards WM are significant. They are consistent with the previous researches (Ganjinia et al., 2014; Usman and Musa, 2012). The information technology application in managing knowledge at the company will ease the employees to learn independently. The knowledge management portal can be accessed by all employees from the private office. The company's leaders strive to facilitate employees' curiosity regarding learning from previous projects. During project execution, employees are required to fill in digital forms in the portal as a knowledge from other disciplines, in accordance with Bandera et al. (2017), Nonaka (2009), and Nonaka et al. (2000), where knowledge acquisition and knowledge creation can be performed by individuals working in organizations. It relates to the company's

commitment in building intellectual capital and creating an environment for collaborative knowledge sharing as well.

The results of hypothesis testing on the effect direction TL towards EP through WM are significant. They are consistent with the researches by Priyanto (2016) and Widodo (2017), which stated that motivation mediates the effects of leadership on employees' performance. The results of hypothesis testing find the evidence that work motivation significantly mediates the effects of leadership on employees' performance. Based on the results of hypothesis testing, the coefficient value of leadership indirect effect on employees' performance was higher than the coefficient value of leadership direct control on employees' performance. The direct effect of leadership on performance is 0.183, whereas the indirect effect through motivation is 0.285. It is illustrated that in TL and EP, achievement that is prioritized more than mediated by WM. Hypothesis testing results also indicates that leadership has an indirect effect on employees' performance through work motivation. Work motivation becomes a mediating variable between leadership and achievement. It is explained that the right direction is able to affect employees in performing their duties voluntarily and to accept their effects by their expectations. Moreover, a high motivation will make employees more focused and attentive to struggle in achieving consistent work results and satisfied the company's expectations (Groening and Binnewies, 2019; Kiuru et al., 2020), to develop the better employees' performance (Eide, Saether, and Aspelund, 2020). Another good effect is that project completion performance shall be accomplished on time.

The results of hypothesis testing on the effect direction of CM towards EP through WM are significant. They are consistent with the previous researches (Priyanto, 2016; Widodo, 2017). The results of hypothesis testing find evidence that work motivation significantly mediates the effect of compensation on employees' performance. Based on the results of hypothesis testing, the coefficient value of compensation indirect effect on employees' performance is higher than the compensation direct effect on employees' performance. The direct effect of compensation on performance is 0.161, whereas the indirect effect through motivation is 0.205. It is illustrated that in compensation and employees' performance, achievement that is prioritized more than mediated by work motivation. Hypothesis testing results illustrated that compensation is a subject that must be considered by the company as an effort to increase work motivation. Employees who are motivated by the amount of salary and benefits will work earnestly and energetically (Andersen et al., 2012; Fatima, 2017; Weldon, 2012), eager to do the tasks given by the company. The provision of salaries and benefits that are considered as appropriate will affect the company's performance. However, it is the fact that employees have to comprehend the conditions of compensation level conducted by the company. It has been two years that the company has not evaluated the compensation internally. This condition makes the employees aware of company's ability to provide compensation in the form of wage or salary.

The results of hypothesis testing on the effect direction of KM towards EP through WM are significant. The results of hypothesis testing find evidence that work motivation significantly mediates the effect of knowledge management on employees' performance. Based on the results of hypothesis testing, the coefficient value of knowledge management indirect effect on employees' performance is higher than the knowledge management from the direct effect on employee performance. The compensation direct effect on performance is 0.076, whereas the indirect effect through motivation is 0.161. It is illustrated that in knowledge management and employee performance, achievement that is prioritized more than mediated by work motivation.

Organizations and companies that focus on knowledge management enable the employees to be more productive and encouraged to grow and share their knowledge (knowledge sharing) (Bureš and Stropková, 2014; Shujahat et al., 2019; Torabi and El-Den, 2017). Knowledge sharing is the process of disseminating and exchanging information, ideas, experiences, and knowledge through communication and social interaction performed by individuals and other individuals, individuals and groups, and between the inside groups and outside companies to acquire new knowledge

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(Bandera et al., 2017; Farnese et al., 2019; Nonaka et al., 2014). Increasing knowledge can produce innovations which will improve the employees' performance (Audretsch and Belitski, 2020; Ballestar et al., 2020).

The application of knowledge management is not optimized at this moment, but in some pilot projects, it has been implemented quite well. The desire of employees in archiving all findings and suggestions in the knowledge management portal makes the customers familiar with the company. It is proven from the function of knowledge management portal to help the employees identifying similar problems that may occur in the next project. Moreover, it can increase the speed and performance of project completion.

CONCLUSION

This research analyzes the effects of direct and indirect TL, CM, and KM through WM towards EP. Statistics shows that leadership and compensation affect employees' performance directly and indirectly through work motivation. Thus, knowledge management only has an indirect effect on employees' performance.

It can be said that work motivation has its own role in encouraging the company's efforts. It is specifically to encourage employees' performance by enhancing leadership, compensation, and knowledge management, in terms of quality resources improvement. Leadership with clear and correct directions and goals can easily affect employees to perform their duties voluntarily and accepted the leaders' effects with their expectations. These can increase the employees' motivation. Furthermore, compensation motivates employees to perform the tasks assigned by the leaders appropriately. Knowledge management can develop the desire of knowledge sharing. Also, it can encourage employees' work motivation.

In conclusion, these variables encourages employees' work motivation in increasing employees' capacity, productivity, and performance.

The efforts which improve performance are mainly determined by leadership. Therefore, management at engineering consulting companies should further enhance the leadership role. It can be achieved by explaining the company's objectives and trusting the ability of their employees.

Knowledge needs to be managed properly, including employees, information technology, and collaboration. Work motivation should be enhanced by providing different methods in order to make the employees' better performance.

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The author confirms that the data supporting the findings of this study are available within the article.

ЗВ'ЯЗОК ТРАНСФОРМАЦІЙНОГО ЛІДЕРСТВА, КОМПЕНСАЦІЇ ТА УПРАВЛІННЯ ЗНАННЯМИ ЩОДО ЕФЕКТИВНОСТІ РОБОТИ СПІВРОБІТНИКІВ: ПОСЕРЕДНИЦЬКА РОЛЬ МОТИВАЦІЇ ПРАЦІ

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Дане дослідження мало на меті проаналізувати взаємозв'язок трансформаційного лідерства (TL), компенсації (СМ) та управління знаннями (КМ) щодо ефективності роботи співробітників (ЕР) через мотивацію роботи (WM) в інженерних консалтингових компаніях в столичному регіоні Джакарти. Дане дослідження причинно-наслідкових зв'язків використовувало підхід опитування. Об'єктом аналізу цього дослідження були деякі інженерні компанії, представлені експертами проектувальників будівництва. Вони мали високу кваліфікацію і були членами Національної асоціації індонезійських консультантів (Інкіндо) в столичному регіоні Джакарти, Індонезія. Цільовою вибіркою цього дослідження були організації консалтингових компаній, представлені постійними експертами або кваліфікованою робочою силою, які працювали в службах планування будівництва. Збір даних цього дослідження був первинним та вторинним за допомогою моделювання структурних рівнянь методом часткових найменших квадратів. Кількість загальних респондентів дослідження – 106 осіб, які були працівниками обраних інжинірингових консалтингових компаній столичного регіону Джакарти. TL мав значний вплив на ЕР через мотивацію праці. СМ мав значний вплив на ЕР через WM. Нарешті, КМ мав значний вплив на ЕР через WM. Важливість цього дослідження виходить з контексту його проведення в столичному регіоні Джакарти, Індонезія. Більше того, це була одна з перших спроб вказати ЕР, враховуючи TL, СМ та КМ та спостерігати за використанням ЕР для інжинірингових консалтингових компаній в Індонезії. Результати цього дослідження можуть послужити декільком вкладом для організацій у розробці практик між виміром WM та розширенням КМ серед консалтингових інжинірингових компаній у столичному регіоні Джакарти, Індонезія.

Ключові слова: трансформаційне лідерство, компенсація, управління знаннями, продуктивність працівника, мотивація праці.

**СВЯЗЬ ТРАНСФОРМАЦИОННОГО ЛИДЕРСТВА, ВОЗНАГРАЖДЕНИЯ
И УПРАВЛЕНИЯ ЗНАНИЯМИ С ЭФФЕКТИВНОСТЬЮ СОТРУДНИКОВ:
ПОСРЕДНИЧЕСКАЯ РОЛЬ ТРУДОВОЙ МОТИВАЦИИ**

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Данное исследование было направлено на анализ взаимосвязи трансформационного лидерства (ТЛ), вознаграждения (СМ) и управления знаниями (КМ) с производительностью сотрудников (ЕР) через трудовую мотивацию (WM) в инженерно-консалтинговых компаниях в столичном регионе Джакарта. Это исследование причинно-следственной связи использовало метод опроса. Единицей анализа данного исследования выступили несколько инжиниринговых компаний в лице специалистов проектировщиков строительства. У них была высокая квалификация, и они были членами Национальной ассоциации индонезийских консультантов (Инкиндю) в столичном регионе Джакарта, Индонезия. Целевой выборкой данного исследования были организации консалтинговых компаний, представленные постоянными экспертами или квалифицированными кадрами, работающими в службах планирования строительства. Сбор данных этого исследования был первичным и вторичным с использованием моделирования структурных уравнений с методом частных наименьших квадратов. Всего респондентами этого исследования стали 106 сотрудников выбранных инженерных консалтинговых компаний в столичном регионе Джакарта. ТЛ оказал значительное влияние на ЕР через мотивацию работы. СМ оказал значительное влияние на ЕР через WM. Наконец, КМ оказал значительное влияние на ЕР через WM. Важность этого исследования вытекает из контекста его проведения в столичном регионе Джакарта, Индонезия. Более того, это была одна из первых попыток обозначить ЕР с учетом ТЛ, СМ и КМ и наблюдать за использованием ЕР для инженерных консалтинговых компаний в Индонезии. Результаты этого исследования могут послужить некоторым вкладом для организаций в разработку практик между измерением WM и расширением управления знаниями среди консалтинговых инженерных компаний в столичном регионе Джакарта, Индонезия.

Ключевые слова: трансформационное лидерство, компенсация, управление знаниями, эффективность сотрудников, трудовая мотивация.

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APPLICATION OF MODERN METHODS OF SERVICE QUALITY ASSESSMENT FOR DIAGNOSTICS OF HIGHER EDUCATION INSTITUTION CORPORATE CULTURE

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Abstract. The sphere of education is one of the domestic economy development drivers. Its development is impossible without the formation of a stable and adaptive organizational culture of educational institutions. To form the corporate culture of a higher education institution, a necessary step is to diagnose its current state. The purpose of this study is to adapt the modern SERVQUAL method of assessing the service quality to diagnose the state of higher education institution corporate culture. Methodology: In the study the student's expectations and their perception of the received educational service quality according to the indicators of the adapted SERVQUAL method. The application of the SERVQUAL method to diagnose the level of higher education institution corporate culture has revealed existing problems and appropriate areas for improvement. The research findings show that among the main problems are the lack of free and quality access to Wi-Fi at the university; provision of bases of practices and insufficient level of cooperation with potential employers to provide opportunities for further employment after graduation; understanding of the problems and difficulties faced by students during their studies by the teaching staff. As measures to help improve the higher education institution corporate culture, it has been proposed: to hold various competitions between departments, teachers and students; organization of joint cultural and educational events for students and teachers of the faculty; development of programs of financial stimulation of scientific and creative activity of students.

Keywords: educational services, corporate culture, higher education institution, service quality, quality diagnostics.

JEL Classification: M14, L15, I25.

INTRODUCTION

The service sector is one of the key structural elements of the domestic economy. In the structure of domestic GDP, the share of services is constantly growing: there are new types of services, as well as organizations that provide them. This leads to increased competition in this area and makes it necessary to ensure of appropriate quality of services provided to consumers.

Organizations operating in the service sector are faced with the need to constantly measure the quality level of services offered.

LITERATURE REVIEW

Methods for assessing the service quality have been studied by leading economists. The most common tool for assessing the service quality is the model of service quality or the model of differences in service quality, proposed by W. Zeitzaml, A. Parasuraman and L. Berry (1985). This method is widely used in applied research. Yu. V. Demyanenko uses the model to assess the level of social capital of enterprises in the service sector; Stadnik VG applies this model to assess the quality system of the freight forwarding company, .Kostrubaska, V.S. Kovalchuk evaluate the quality of banking services.

The works of R.A Logua (2012) and N.I. Ivashkova (2015) are devoted to the improvement and expansion of analytical capabilities of this model. The practical aspects of using the model are studied in the works of V.E. Novatorova and V.D. Novitskaya (2012) and others. A.V. Bazilyuk, I.O. Khomenko (2013) extended the application of the SERVQUAL method to assess the logistics services quality. O.O. Golovan, O.M. Oliynyk, S.V. Markova, A.I. Kornienko (2016) determine the adaptation directions of the customer loyalty assessment mechanism for the supermarket chain Silpo in the context of ensuring its market position and propose the ways to improve the SERVQUAL method, which make it possible to apply it not only to assess the bank customers loyalty, but also to other sectors, in particular for the retail. V.I. Okhota, V.Ya. Brych (2020) systematize and characterize the main indicators of the tourism industry services quality at the methodological and empirical levels.

Despite the significant theoretical and methodological development of the service quality assessment problem, the definition of quality criteria that affect the customer's choice service sector organizations, customer service quality assessment and competitiveness of companies in this sector remain insufficiently studied, particularly in the sector of higher education.

The sphere of education is one of the domestic economy development drivers. Its development is impossible without the formation of a stable and adaptive organizational culture of educational institutions. In modern conditions, higher education institutions in order to ensure high competitiveness should create a positive image in the social environment, involving all entities that have their own interests in the education field.

The problem of forming corporate culture as a necessary condition for the development of an educational institution and a precondition for ensuring its competitiveness is relevant one for Ukrainian universities. Peculiarities of the educational institutions organizational culture have been studied in the works of L. Karamushka (2015), N. Nakonechna (2020), I. Blokhina (2012), T. Koycheva (2014), Zavats'ka N. Ye., Mitichkina O. O. (2013) and other scientists.

To form the corporate culture of a higher education institution, a necessary step is diagnostics of its current state. Therefore, there is a need to adapt the SERVQUAL method to assess the diagnostics of the service quality in the education sector and higher education institution corporate culture.

PAPER OBJECTIVE

The purpose of this study is to adapt the modern SERVQUAL method of assessing the service quality to diagnose the state of higher education institution corporate culture.

METHODOLOGY

To substantiate the theoretical positions and reasoning of the conclusions general scientific

methods are used, including system, abstract-logical approach, as well as methods of formalization, analysis and synthesis of information, comparative analysis and expert assessments, graphical visualization of factual information.

RESULT AND DISCUSSION

The concept of higher education institution corporate culture is based on the definition of corporate culture of the enterprise / organization, taking into account the specifics of the educational institution, which is the implementation of the educational process aimed at training future professionals.

The most common definitions of corporate culture are shown in Figure 1.

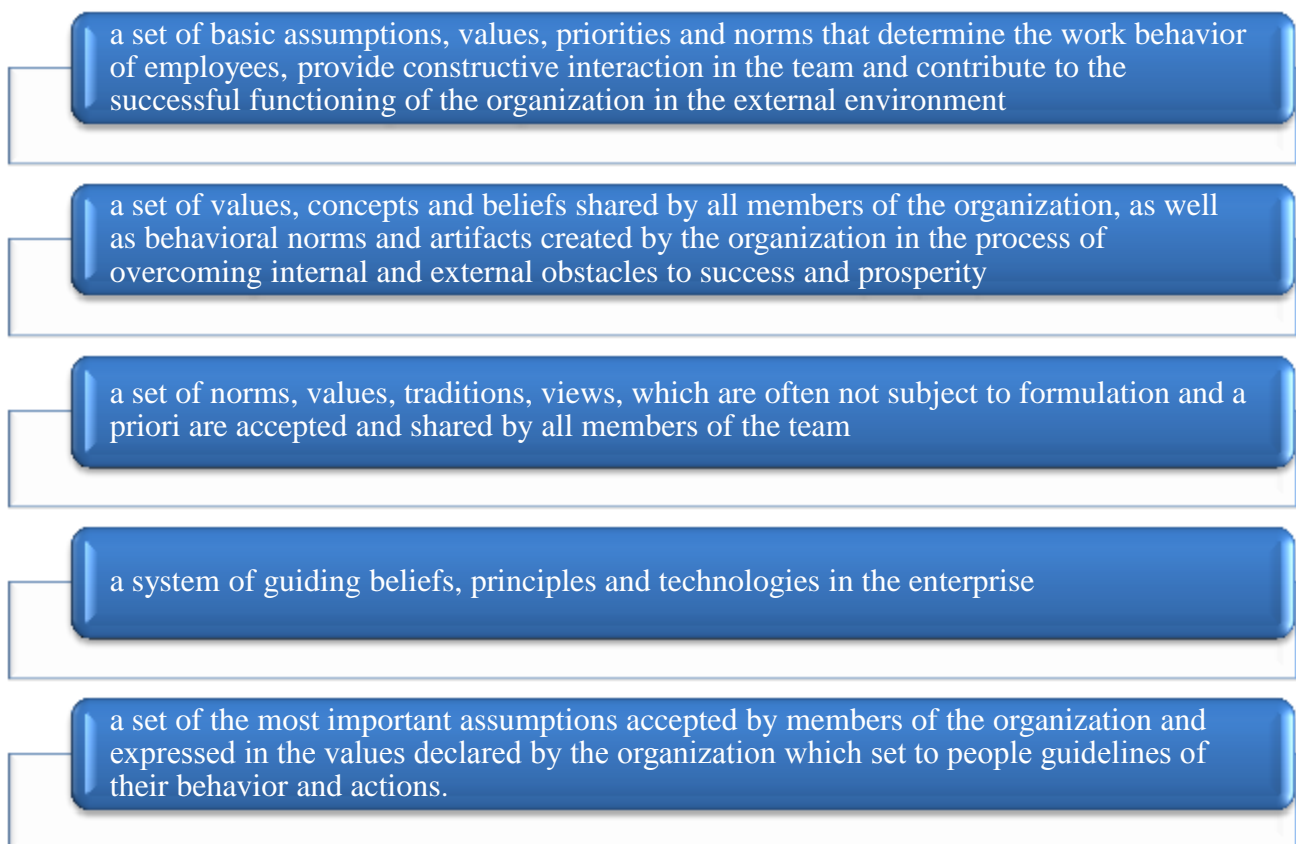


Figure 1. Approaches to the definition of corporate culture,

Source: Modified after Hnezdilova, K. M. (2013).

Summarizing all approaches, we can assume that the corporate culture of a higher education institution is a set of norms, values and traditions shared by all persons involved in the activities of this institution, and on the basis of which the relationship between all participants in the educational process is regulated, in particular, between teachers, faculty and students, faculty and administration.

The structure of the corporate culture of the organization may contain different components, considered at several levels. The model of O. Andomin of higher educational institution corporate culture systematizes the elements of culture and means of its achievement (Table 1).

Table 1

Elements of O. Andomin model of higher education institution corporate culture

Elements of corporate culture	Means of achievement
Philosophy of a higher education institution	University charter, Code of Corporate Culture
Organizational values	Mission, policy of a higher education institution
Norms, rules of conduct	Rules of procedure
History, traditions	Museum, veterans council, graduates club
Psychological climate	Personal relationships between employees
Corporate communications	Access to information, means and methods of communication
Management style	Organization and structure of a higher education institution
The image of a higher education institution	The image of the university in the eyes of the public, the design of the classrooms, attributes, clothing of employees

Source: Modified after Hnezdilova, K. M. (2013).

At the present stage of reforming the higher education system in Ukraine, the modernization of higher education institutions requires a change in their corporate culture. An important step in forming the strategic goals of an educational institution is to assess the current state of its corporate culture, existing problems and possible consequences as a result of the implementation of changes. Thus, the study of higher education institution corporate culture pursues the goal of comparing the real and desired model (how staff and students would like to see their university).

The process of formation of higher education institution corporate culture can be represented in the form of the following stages (Figure 2),

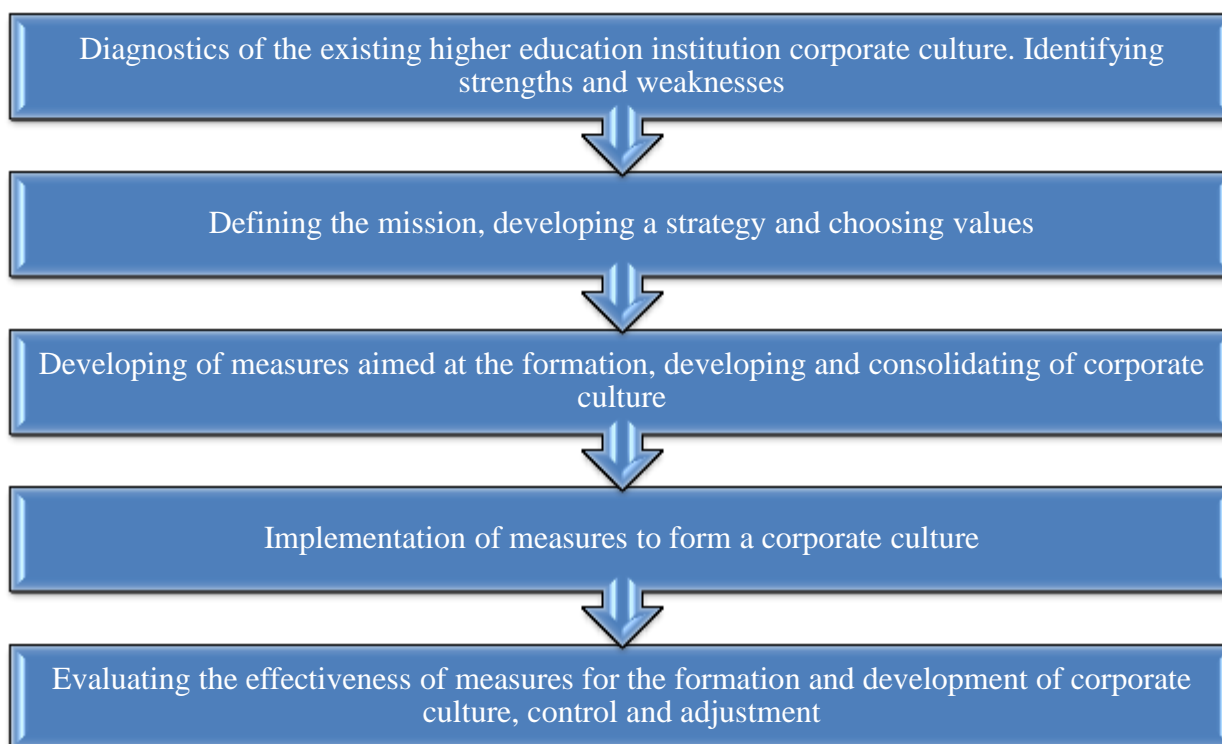


Figure 2. Stages of formation of higher education institution corporate culture

Source: Modified after Kubko, V. (2014).

Consider in more detail the first two stages of corporate culture.

1. Diagnostics of the existing corporate culture.

There are many tools for assessing and analyzing the corporate culture of organizations, but the OCAI method is more often used. This method is based on the theoretical model "Framework of competing values", developed by Cameron, K. S., Quinn, R. E. (2011). OCAI method makes it possible to diagnose the organization's culture for competing values at different stages of its development.

Under market conditions, higher education institutions in Ukraine are forced to form an entrepreneurial corporate culture in order to have financial stability and be relatively independent of public funding. When diagnosing the higher education institutions corporate culture, tools and approaches are used taking into account the specifics of their activities. Thus, in contrast to organizations engaged in production, trade or service activities, the main task of a higher education institution is to provide educational services, to meet human needs for professional education. A large number of professors and employees of the university take part in the providing of educational services, thanks to the coordinated activity of which the result is ensured.

A specific characteristic of the corporate culture of the university is also the uniformity of the professional activities of its employees. Unlike production organizations, where there is a division of labor, there is actually no professional division in higher education, as most employees are professors with the same professional responsibilities. The common tasks of professional activity should be perceived as an important factor in the formation of corporate culture of the university, which contributes to the unity of professors and their ability to form common values of corporate culture.

A specific feature of the corporate culture of a higher education institution is also its

heterogeneity. The manifestation of heterogeneity is due to the fact that the administration of the institution is small in number compared to other organizations, but the formation of corporate culture is carried out by it. Thus, the university administration is interested in implementing measures to form a corporate culture, but professors may remain uninvolved in this process, as corporate relations between employees are formed naturally through business and interpersonal communication between them.

Due to the fierce competition between higher education institutions, universities are forced to actively fight for entrants, using methods and approaches that were not previously inherent in the field of education, but used by business organizations.

The SERVQUAL method is the most common tool for assessing the customer service quality in service organizations, which has proven its effectiveness. His students are clients for higher education institutions.

This technique involves the use of basic questionnaires “Expectations” and “Perceptions” to measure customer expectations and their perception of the service received quality. All questions in the questionnaires are grouped into blocks according to five quality indicators:

- 1) tangibles – all material objects used in the process of providing the service (equipment, appearance of classes and employees, printed materials, etc.);
- 2) reliability – the ability to provide the promised service;
- 3) responsiveness – the willingness of the organization's staff to help consumers provide services;
- 4) assurance – the competence of staff and hence customer confidence in the organization;
- 5) empathy – the degree of individual attention to customers, Toporova P. K. (2015).

Assessing customer satisfaction with the service quality helps the organization find out their expectations and requirements for providing high quality services and take into account all the mistakes and shortcomings in order to improve the level of service and, consequently, customer satisfaction.

The SERVQUAL method is a universal tool for assessing the service quality from the point of view of service consumers. Since higher education institutions provide educational services, we consider it appropriate to use this tool to assess student satisfaction with the education quality, which directly affects the image of higher education institution, which is an element of its corporate culture.

Indicators of the quality of the SERVQUAL method for the provision of educational services and their criteria are given in Table. 2.

To diagnose the image of a higher education institution using the SERVQUAL method, it is necessary to determine the expectations E_{g_k} and perceptions P_{g_k} of educational services quality by university students for each criterion g_k of quality indicator k ($k = 1, 2, \dots, 5$):

$$E_{g_k} = \frac{1}{s} \sum_{i=1}^s m^E_{g_k(i)}, \quad P_{g_k} = \frac{1}{s} \sum_{i=1}^s m^P_{g_k(i)}, \quad (1)$$

where E_{g_k} – a level of student’s expectations of the educational services quality;

P_{g_k} – a level of student’s perception of the educational services quality;

i – number of the student who took part in the survey ($i = 1, \dots, s$);

s – the total number of students who participated in the survey;

$m^E_{g_k(i)}$ – the expected assessment of the educational services quality, which is set by the student i according to the criterion g_k ;

$m^P_{g_k(i)}$ – the perception assessment of the educational services quality, which is set by the student i according to the criterion g_k ;

g_k – is the criterion of the k -th quality indicator ($g_k = 1, \dots, h_k$).

Table 2

Indicators of the educational services quality according to the SERVQUAL method

№	Quality indicator	Criterion
1	Tangibles	Appearance of buildings and campus; interior and equipment of classrooms; free Wi-Fi on the territory of the university; modern computer classes and multimedia classrooms; information support of the educational process.
2	Reliability	Fulfilling promises to provide educational services in a timely manner (even in a pandemic); providing quality educational services for training specialists; provision of bases of practices; cooperation with employers; employment guarantee.
3	Responsiveness	Quick response to requests (requests) of students; trust and understanding on the part of the teaching staff; willingness to help students in any situation; active work of curators of academic groups, etc.
4	Assurance	High reputation of the university; availability of scientific schools; discipline and politeness of employees, respect for students, etc.
5	Empathy	Individual approach to each student, including in solving his problems (the presence of academic debt, monthly tuition fees); focus on the needs of students; convenient study schedule for students, etc.

Source: Own compilation.

Assessment of the expected quality E_k and the perceived quality P_k of educational service by university students for each quality indicator k ($k = 1, 2, \dots, 5$) is calculated by the formulas:

$$E_k = \frac{1}{h_k} \sum_{g_k=1}^{h_k} E_{g_k}, \quad P_k = \frac{1}{h_k} \sum_{g_k=1}^{h_k} P_{g_k}, \quad (2)$$

where h_k is the number of criteria for the k -th quality parameter.

Assessment of students' satisfaction with the quality of higher education institution is determined either by quality coefficients Q_{g_k} for each individual criterion g_k ($g_k = 1, \dots, h_k$) of quality indicator k ($k = 1, 2, \dots, 5$), or by generalized quality coefficients Q_k for each k -th quality indicator according to the formulas, Lohua R. A. (2012):

$$Q_{g_k} = P_{g_k} - E_{g_k}, \quad (3)$$

$$Q_k = P_k - E_k. \quad (4)$$

With the help of the education quality assessments obtained by the SERVQUAL method, specific recommendations are developed for improving the educational services quality, which affects the image of the university and its corporate culture.

Confirmation of expectations regarding the educational services quality increases the level of student loyalty to the university, which, in turn, leads to an increase in the influx of applicants, as students who are satisfied with the education quality recommend the higher education institution to their relatives and friends; university graduates after some time recommend it to their children for professional education.

Evaluations of the educational services quality by students using the SERVQUAL method can be interpreted as follows:

1. If the quality coefficient for any quality indicator is zero ($Q_{gk} = 0$ or $Q_k = 0$), then the level of quality expectations and the level of the actual quality perception of this indicator coincide.

2. Negative values of quality coefficients ($Q_{gk} < 0$ or $Q_k < 0$) indicate that the level of the quality expectation of educational services exceeds the level of perception.

3. Positive values of quality coefficients ($Q_{gk} > 0$ or $Q_k > 0$) mean that the actual quality perception of study is higher than the level of expectation.

If the quality coefficients are zero or positive, they are considered successful; negative coefficients that approach zero are considered satisfactory, and negative coefficients that are significantly different from zero are considered unsatisfactory.

To assess the level of educational services quality according to the SERVQUAL method, along with absolute values, one can use relative values, taking as a basis for comparison, for example, the average level of service quality expectations or the maximum assessment of student expectations.

The calculation of the education quality coefficients in relation to student expectations and the ideal assessment of expectations can be done by the formulas, Toporova P. K. (2015):

$$Q_1 = \frac{E-P}{E} \cdot 100\%, \quad (5)$$

$$Q_2 = \frac{Q_{max}}{Q_{max} \cdot 100\%}, \quad (6)$$

where Q_1 – service quality coefficient relative to expectations;

Q_2 – service quality coefficient relative to the ideal;

E – average assessment of the expected quality level for all indicators;

P – the average assessment of the perceived quality level for all indicators;

Q_{max} – maximum assessment of education quality expectations.

The smaller the values of the coefficients Q_1 and Q_2 , the higher the quality of educational services.

In this study the education quality at Zaporizhzhya National University was determined with the help of SERVQUAL method. The survey was conducted among the students of different courses of the Management Faculty.

Students were asked to assess the education quality according to 17 quality criteria, which are given in Table. 3, using a 7-point rating scale.

Table 3

Criteria for assessing the education quality in ZNU according to SERVQUAL method

No	Criterion of educational service quality
Tangibles	
1	T1. Appearance of buildings and campus
2	T2. Excellent interior and equipment for classrooms
3	T3. Modern computer classrooms and multimedia classrooms
4	T4. Free Wi-Fi at the university
Reliability	
5	H5. Fulfilling promises to provide educational services in a pandemic
6	H6. Providing quality educational services
7	H7. Provision of bases of practices, cooperation with employers
8	H8. Employment guarantee
Responsiveness	
9	R9. Rapid response of the university administration to student requests
10	R10. Trust and understanding on the part of the teaching staff
11	R11. Willingness to help students in any situation
Assurance	
12	A12. High reputation of the university
13	A13. Availability of scientific schools
14	A14. Discipline and courtesy of employees, respect for students
Empathy	
15	E15. Individual approach to each student in solving his problems with academic debt or monthly tuition fees, etc.
16	E16. Focus on the needs of students
17	E17. Convenient study schedule for students

Source: Own compilation.

Using formulas (1) and (3), the assessment of the expected education quality and the assessment of the educational services perception, as well as the education quality coefficients in ZNU were determined. The results of the study are given in Table 4.

Table 4

Assessments of the education quality in ZNU according to SERVQUAL method

Quality criterion	Expectation E_{g_k}	Perception P_{g_k}	Quality coefficient $Q_{g_k} =$ $P_{g_k} - E_{g_k}$	Importance
1	2	3	4	5
Tangibles				
T1. Appearance of buildings and campus	6,87	6,75	-0,12	6,52
T2. Excellent interior and equipment for classrooms	6,48	4,56	-1,92	6,65
T3. Modern computer classrooms and multimedia classrooms	6,74	5,22	-1,52	6,87
T4. Free Wi-Fi at the university M4	6,35	4,28	-2,07	6,91
Reliability				
H5. Fulfilling promises to provide educational services in a pandemic	6,45	5,60	-0,85	5,7
H6. Providing quality educational services	6,37	5,13	-1,24	6,92
H7. Provision of bases of practices, cooperation with employers	6,65	4,25	-2,40	6,23
H8. Employment guarantee	6,05	3,67	-2,38	5,87
Responsiveness				
R9. Rapid response of the university administration to student requests	6,41	4,53	-1,88	6,12
R10. Trust and understanding on the part of the teaching staff	6,76	4,15	-2,61	6,93
R11. Willingness to help students in any situation	6,32	4,33	-1,99	7,00
Assurance				
A12. High reputation of the university	6,20	5,27	-0,93	7,00
A13. Availability of scientific schools	5,48	4,32	-1,16	5,03
A14. Discipline and courtesy of employees, respect for students	6,86	5,27	-1,59	7,00

Table continuation is on the next page

Table continuation

1	2	3	4	5
Empathy				
E15. Individual approach to each student in solving his problems with academic debt or monthly tuition fees, etc.	6,28	5,16	-1,12	6,84
E16. Focus on the needs of students	6,35	5,56	-0,79	6,42
E17. Convenient study schedule for students	6,06	6,48	0,42	6,78

Source: Own compilation.

Acceptable results of the procedure of customer satisfaction assessment according to the SERVQUAL method are considered to be the values of quality coefficients $Q_{g_k} > -1$. From Table 4 it can be seen that 5 of the 17 criteria, namely criteria T1, H5, A12, E16 and E17, satisfy this condition.

The largest gap between the expected and perceived educational services quality is observed for the criteria T4 (free Wi-Fi at the university), H7 (provision of practice bases, cooperation with employers), H8 (employment guarantee) and R10 (trust and understanding of the teaching staff). composition). It should be noted that these service quality criteria are important for students because they have received a high weight. A low score on these criteria for the quality of students' education at the university reveals the existing problems associated with the available resources of educational activities, namely material-technical, human and social potential.

Based on the results of the diagnosis of the corporate culture state, the administration of higher education institutions need to pay additional attention to the development of high academic culture of employees. As can be seen from Table 4, all the criteria included in the quality indicator "Responsiveness", students consider important in the study process, but their perceived quality was quite low. Among the reasons are the lack of readiness of some university departments staff to solve quickly students' problems, as well as lack of understanding on the part of some university professors of the need to adapt methods and approaches to teaching materials according to time; insufficient level of introduction of dual education in the institution, due to which students are forced to combine the studying process with the acquisition of practical skills in the workplace without the issuance of appropriate permits, etc.

Along with the criteria included in the quality indicator "Responsiveness", students noted the importance of the following criteria: T2 (excellent interior and equipment of classrooms); T3 (modern computer classes and multimedia classrooms); T4 (free Wi-Fi at the university); H6 (providing quality educational services); A12 (high reputation of the university), A14 (discipline and courtesy of employees, respect for students); E15 (individual approach to each student in solving his problems with academic debt or monthly tuition fees) and E17 (convenient study schedule for students).

In Table 5 the average assessments of educational services expectations and perceptions are presented.

Table 5

Average assessments of educational services expectations and perceptions

Quality indicator	The average level of quality expectation, E_k	The average level of quality perception, P_k
1. Tangibles	6,61	5,20
2. Reliability	6,38	4,66
3. Responsiveness	6,50	4,34
4. Assurance	6,18	4,95
5. Empathy	6,23	5,73
Average score for all parameters	$E = 6,38$	$P = 4,98$

Source: Own compilation.

Education quality coefficients relative to expectations and to the ideal have been calculated by formulas (5) - (6).

The education quality coefficient relative to expectations is equal to

$$Q_1 = (6,38 - 4,98) / 6,38 * 100\% = 21,94\%$$

The education quality coefficient relative to the ideal is equal to

$$Q_2 = (7 - 4,98) / 7 * 100\% = 28,86\%$$

The coefficients show that the deviation of the average level of the education quality perception in the higher education institution in relation to the expected and ideal levels is more than 20%.

CONCLUSION

Thus, the application of SERVQUAL method to diagnose the level of higher education institution corporate culture has revealed existing problems and appropriate areas for improvement. Among the main problems should be noted the lack of free and quality access to Wi-Fi at the university; provision of practice bases and insufficient level of cooperation with potential employers to provide opportunities for further employment after graduation; understanding of the problems and difficulties faced by students during their studies by the teaching staff.

Dialogue with students is an important and, at the same time, complex component of the process of forming the university corporate culture. The importance of the student community corporate culture of the higher education institution is that it allows without pressure from the administration to choose the most effective models of student behavior, promotes the development of their activity and creative abilities. The university corporate culture ensures the unity of students on the basis of common values, which helps maintain a high reputation of the university, maximum motivation of students by creating a favorable psychological climate, moral satisfaction and opportunities for self-development and self-realization.

In this regard, the work of deans and curators of academic groups is important in the direction

Holovan, O., Oliynyk, O. and Markova, S. (2021), "Application of modern methods of service quality assessment for diagnostics of higher education institution corporate culture", *Management and entrepreneurship: trends of development*, 1(15), pp. 65-79. Available at: <https://doi.org/10.26661/2522-1566/2021-1/15-04>

of acquainting students with the norms and values of the university, their rapid adaptation to living conditions, traditions of the institution; prevention of possible negative phenomena in student groups, which are caused either by interpersonal relations or by ethnic, religious reasons.

As measures that will promote the establishment and improvement of relations between students of the faculty, students and teachers, as well as aimed at the formation and development of corporate culture in higher education, we can offer the following:

- holding competitions between departments, teachers and students to determine the best curator of the year, the best lecturer of the year, a teacher with the best sense of humor, a leader among students in success, etc.;

- organization of joint cultural and educational events for students and teachers of the faculty: quests, trainings, tourist trips, etc.;

- development of financial stimulation programs of students research and creative activity.

Thus, the adapted SERVQUAL method for assessing the service quality, used to diagnose the higher education institution corporate culture state, allowed to identify existing problems and suggest ways to improve the elements of higher education institution corporate culture.

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**ЗАСТОСУВАННЯ СУЧАСНИХ МЕТОДИК ОЦІНЮВАННЯ
ЯКОСТІ ОБСЛУГОВУВАННЯ ДЛЯ ДІАГНОСТИКИ СТАНУ
КОРПОРАТИВНОЇ КУЛЬТУРИ ЗАКЛАДУ ВИЩОЇ ОСВІТИ**

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Сфера освіти – один із драйверів розвитку вітчизняної економіки. Її розвиток неможливий без формування стійкої адаптивної організаційної культури закладів освіти. Для формування корпоративної культури закладу вищої освіти необхідно провести діагностику

його поточного стану. Метою дослідження є адаптація сучасної методики оцінки якості послуг SERVQUAL для діагностики стану корпоративної культури закладу вищої освіти. Методологія: В ході дослідження були вивчені очікування студентів та їх сприйняття якості одержуваних освітніх послуг за показниками адаптованої методики SERVQUAL. Застосування методу SERVQUAL для діагностики рівня корпоративної культури закладу вищої освіти виявило існуючі проблеми та відповідні напрямки для поліпшення. Результати дослідження показують, що серед основних проблем – відсутність безкоштовного і якісного доступу до Wi-Fi в університеті; бази практики і недостатній рівень співпраці з потенційними роботодавцями для забезпечення можливості подальшого працевлаштування після закінчення закладу вищої освіти; розуміння проблем і труднощів, з якими стикаються студенти під час навчання, педагогічним колективом. Як заходи щодо підвищення корпоративної культури закладу вищої освіти запропоновано: проведення різних конкурсів між кафедрами, викладачами та студентами; організація спільних культурно-просвітницьких заходів для студентів та викладачів факультету; розробка програм фінансового стимулювання наукової та творчої діяльності студентів.

Ключові слова: освітні послуги, корпоративна культура, заклад вищої освіти, якість послуг, діагностика якості.

ПРИМЕНЕНИЕ СОВРЕМЕННЫХ МЕТОДОВ ОЦЕНКИ КАЧЕСТВА УСЛУГ ДЛЯ ДИАГНОСТИКИ КОРПОРАТИВНОЙ КУЛЬТУРЫ УЧРЕЖДЕНИЯ ВЫСШЕГО ОБРАЗОВАНИЯ

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Сфера образования – один из драйверов развития отечественной экономики. Ее развитие невозможно без формирования устойчивой адаптивной организационной культуры образовательных учреждений. Для формирования корпоративной культуры вуза необходимо провести диагностику ее текущего состояния. Целью исследования является адаптация современной методики оценки качества услуг SERVQUAL для диагностики состояния корпоративной культуры вуза. Методология: В ходе исследования были изучены ожидания студентов и их восприятие качества получаемых образовательных услуг по показателям адаптированной методики SERVQUAL. Применение метода SERVQUAL для диагностики уровня корпоративной культуры вуза выявило существующие проблемы и соответствующие направления для улучшения. Результаты исследования показывают, что среди основных проблем – отсутствие бесплатного и качественного доступа к Wi-Fi в университете; базы практики и недостаточный уровень сотрудничества с потенциальными работодателями для обеспечения возможности дальнейшего трудоустройства после окончания вуза; понимание проблем и трудностей, с которыми сталкиваются студенты во время учебы, педагогическим коллективом. В качестве мер по повышению корпоративной культуры вуза предложено: проведение различных конкурсов между кафедрами, преподавателями и студентами; организация совместных культурно-просветительских мероприятий для студентов и преподавателей факультета; разработка программ финансового стимулирования научной и творческой деятельности студентов.

Ключевые слова: образовательные услуги, корпоративная культура, вуз, качество услуг, диагностика качества.

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**ANALYSIS ON THE EFFECT OF WORK-LIFE BALANCE AND CAREER
DEVELOPMENT ON TURNOVER INTENTION FOR MILLENNIAL GENERATIONS**

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Abstract. Millennial generation has unique and different characteristics, become significant human resources which expected to be able to change the condition of an organization to be more productive. Millennial generation employees are more concerned on the aspects of work life balance and self-actualization, such as opportunities to develop their career at work. The fulfillment of work life balance and career development aspects provide the employee of millennial generation last longer within their current jobs and reduce their intention to change an occupation. This research aims to examine various previous literatures study that analyzes the effect of work life balance and career development on turnover intention of millennial generation. The analysis of this research was done by literature study method that collects previous findings related to the effect of work life balance and career development on turnover intention. The results of the literature review indicated that there is a negative influence on work life balance and career development on turnover intention of the millennial generation of changing their job. It can be concluded that Millennial generation employees are realistic on the fact that they have to move up through the corporate ladder to achieve their career aspirations and more likely to take an active role in their career planning and execution.

Keywords: work life balance, career development, turnover intention.

JEL Classification: O150, P470, J540.

INTRODUCTION

Effective and efficient human resource management will help to optimize the performance of company, both in terms of income and expenditure. To achieve a good performance system and competitive companies, human resources (employees) include as a dominant character and carry out a significant role in order to support the company goals. However, when an employees decided to leave their job (turnover) it will damage the company whether from the aspect of expense or interrupt the sustainability of organization. The turnover intention is the best predictor to observe an early signal on the existence of employee turnover (Slattery in Srivastava, 2013).

Several millennial generations came to the companies and become important human resources who are expected to be able to encourage an organization to be more productive. Millennial

generations who have unique and different characteristics grow up within the rapid development of technology and communication. The existence of technology and communication rapid development means that millennial generation can do their work from home, did not necessarily work from the office to manage the balance between work and their personal lives (Meier, Austin and Crocker, 2010). Millennial generation is a generation that pays more attention to aspects of work life balance compared to previous generations. Work life balance is a construct that explains the individual's perception of balance that occurs within an employee in terms of work life and personal life (Hayman, 2005). Millennial generation needs their relationships with friends and family, and more interested in jobs that accommodate their personal lives (Spiro, 2006).

The results of a survey was conducted by Sheahan (2008) show that millennial generation employees in Asia Pacific region have the shortest working tenure compared to employees of other generations, because they have an average work period of 18 months. The millennial generation has a tendency to easily move their jobs. Gallup (2019) found that 21% of millennial generation changed workplaces in less than a year. It is realized that the behavior of millennial that are likely to move jobs starting to become a threat to companies.

Turnover intention is a problem faced by almost every company. Several reasons can be used as the basic of employee leaving the company. Employee movement from a workplace to another is a problem that should be carefully concerned, considering that it does not only affect the determination of business strategy in company, but also special consideration in developing employee talent. Several organizations have started to respond to the high amount of turnover intention by designing various career development programs for employees. Provide an effective career development and support employee career development will assist the organization to recruit and satisfy the employees in their jobs (Barnett and Bradley, 2007). Thus, the more opportunities for employees to develop their careers, the greater employee's job satisfaction. The higher employee job satisfaction, the possibility of turnover intention will decrease.

LITERATURE REVIEW

Millennial Generation

Meier, Austin and Crocker (2010) in his research suggest that millennial generation or Y generation is a generation that was born between 1980 and 2000. Millennial generation have a tendency to socialize and learn new thing based on the internet, consume and produce digital information, seek for work according to personal standards and seek recognition from others (Karakas, Manisaligil, and Sarigollu, 2015). Millennial generation likes challenges and work-life balance of work (Gilbert, 2011). Obtaining a lot of money is tendency that is less important for millennial generation compared to the tendency of social contribution; enjoy life at most and balanced lifestyle (Hassan, Ibrahim and Lim, 2011). The millennial generation wants a company that has system that can develop themselves within a clear coaching process from their superiors.

Work life balance

Work life balance defined as individual ability to fulfill their duty and their family commitment and their other non-work responsibilities (Caesar and Fei, 2018). *Work life balance* refers to a person's ability to be able to carry out a proper work and life responsibilities at the same time (Wheatley, 2012). Frone (inside Peiró and Tetrick, 2011) stated that *work life balance* is the absence of conflict between an individual family role and their work matter. Career and family has the same important values for humans.

Career Development

Career can be defined as a high-value job and lifestyle that should be balanced, equal, progressive and rational (Gysbers, Heppner and Johnston, 2009). Career development is the process

of increasing individual employability to achieve the desired career path (Rivai, 2013). In Delery and Doty's theory (Delery and Gupta, 2016), career development defined as the degree which employees perceive a career planning program to help members achieve their goals. The career development system should appropriate the needs of individuals in organization. Every people has their own needs, career stages, hierarchical levels, and many other things, therefore career planning management should be broad enough to meet several of individual needs. (Chen, Chang and Yeh, 2004).

Turnover intention

The meaning of intention is a motive or desire that arises from an individual to do something and turnover is the employee voluntary stopping from his / her place of work (Nathalia, 2010). *Turnover intention* can be defined as mental decision between work attitudes and decisions to stay or leave the job. This mental decision considered as direct antecedent of employee's outgoing behavior (Jacobs and Roodt, 2011). According to Zeffane, *turnover intention* is the tendency for individual feelings or intentions of individuals who have the desire to quit their job. Robbins and Judge (2015) believe that the main impact of turnover intention for companies is cost. High turnover rates will causes the increase recruitment, selection, and training costs (Mobley, 2011). Excessive turnover will have an impact on performance of organization in the long-term because the time that should be used for production runs out to conduct training for new employees.

From the explanation above, this is an impetus for researchers to make a research regarding the effect of work life balance and career development on turnover intention of millennial generation. This research aims to examine the turnover intention of millennial generation which is influenced by work and life balance and career development, and then from the conclusion it can be a recommendation of an organization to take the next step to maintain their millennial employee.

PAPER OBJECTIVE

We can say that the existence of technology and communication rapid development means that millennial generation can do their work from home. Therefore, this research is to investigate the turnover intention of millennial generation which is influenced by work and life balance and career development, to know the effect of various previous studies in work and life balance and career development for millennial generation.

METHODOLOGY

This research uses qualitative approach within the method of literary study which was carried out by recording previous findings, then combining the findings obtained and analyzing these findings coherently and clearly (Sugiyono, 2016). In this research, secondary data were obtained from the previous literature. The data source was collected from previous research books and journals.

The data analysis technique is a qualitative descriptive analysis technique. This analysis technique was chosen to describe the problems that cause turnover intention of millennial generation employees which then reviewed, in order to produce relevant input for the organization and able to retain millennial generation employees, thus they do not lose any productive human resources. The results of this research can assist organizations in making their strategic decisions to manage their human resources and achieve the organizational effectiveness. It is interesting to study the millennial generation and their views on work life balance it will help to develop human resource policies related to the millennial generation, such as policies for recruitment, retention, and employee motivation in workplace (Twenge, Campbell, Hoffman and Lance, 2010).

RESULT AND DISCUSSION

This study combined the results of several previous studies regarding work life balance and career development variables to analyze it effects on turnover intention. The results and discussion related to research problems explained as below.

Tabel 1

Comparison Influence of work life balance toward turnover intention between two journals

Variable	Javed, Khan, Aamir and Ahmed (2014)	Sang, Ison and Dainty (2009)	Suifan, Abdallah and Diab (2016)	Malik, Gomez, Ahmad and Saif (2010)	Parkes and Langford (2008)
Influence of work Life Balance toward turnover intention	Work life is low, but turnover intention increase	Work life is low, but turnover intention increase	It has negative effect of work life balance toward turnover intention	Work-life balance negatively affects the desire to leave the organization (turnover intention)	life balance contributes to employee engagement

Tabel 2

Comparison influence of career development toward turnover intention between two journals

Variable	Martinez (2014)	Weng and McElroy (2010)	Hafiz, <i>et al</i>
Influence of Career Development toward turnover intention	Negative effect	Career development is negatively related to turnover intention and work commitment	career development has negative and significant impact on turnover intention

Table 3

The Relation between variables

The relation between variables		Research Result	Decision
Work Life Balance (X1)	Turnover Intention (Y)	three of the related research indicated negative effect, only a research indicated positive contribution	Work life Balance has negative impact on turnover intention
Career Development (X2)	Turnover Intention (Y)	All of the related research indicated negative effect on turnover intention	Career Development has negative impact on turnover intention

Source: Related research.

The influence of *work life balance* toward *turnover intention*

Several previous studies have explained that work-life balance has negative effect on *turnover intention*. This was based on the consequences of not fulfilling work-life balance, such as disruption of employee's personal and family life relations due to work. If it happens continuously, it will cause the intention of employees to find other jobs that suitable for their personal and family lives.

A research that was done by Javed, Khan, Aamir and Ahmed (2014) revealed that there is negative influence between work life balance and turnover intention. The results of his research concluded that if work-life balance is low, the turnover intention will increase, and vice versa. Almost similar opinion was stated by Sang, Ison, and Dainty (2009) regarding the influence of *work life balance* toward the possibility of *turnover intention* in architectural services industry although borough, UK which concluded that the balance of time and energy that was spent at work and outside of work will affects employees' intention to leave the company.

Another study that discusses the relationship between work-life balance and turnover intention carried out by Suifan, Abdallah, and Diab (2016) at Jordan in private health service industry which shows a negative effect of work life balance toward turnover intention. Another research of the influence of work life balance and turnover intention was done by Malik, Gomez, Ahmad, and Saif (2010). The study was conducted by distributing 250 questionnaires to doctors in Pakistan and it was concluded that work-life balance negatively affects the desire to leave the organization (turnover intention). Parkes and Langford (2008) also said that work life balance contributes to employee engagement (job satisfaction and organizational commitment) which contributes to higher productivity and lower organizational turnover.

The influence of Career Development toward *turnover intention*

Research on the effect of career development on turnover intention has been widely conducted and concluded that there is a negative effect on career development on turnover intention. Martinez (2014) stated that the negative effect of career development turnover intention indicates that career development is a factor that affects turnover intention. The existence of promising career development is a reason that can reduce employee turnover intention.

The research that was done by Weng and McElroy (2010) describes career development and its impact on employment, commitment and intention to turnover. Career development is negatively related to turnover intention and work commitment. The next research is a research that was done by Hafiz, *et al.* toward the employee of BFI Finance Palembang, it is obtained the similar result that career development has negative and significant impact on turnover intention. Turnover decisions involve an ongoing evaluation of career advancement opportunities of individual current workplace to his or her expectations for opportunities to develop career in other organization.

The Organizations that unable to provide career development programs and meet personnel career needs will causes an increased on personnel dissatisfaction, which increased turnover intention (Chen et al., 2004). Career development is important for organization, because career is a need that should be continues to be developed an employee and motivate employees to improve their performance.

CONCLUSION

Millennial generation is a generation that has conditional loyalty and can leave work for better jobs in other companies (Gursoy and Christina, Geng-Qing Chi Ersem, 2013). The retention and turnover of millennial generation is a challenge for managers because millennial generation is the majority group of work. To maintain millennial generation employees, an organization needs to make a strategy regarding the training method, career development, compensation, rewards,

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employee engagement programs, and pay attention to the balance of employees' personal lives and work.

Based on a literature review of previous research related to turnover intention that was influenced by work life balance, it can be concluded that there is negative influence on work life balance toward turnover intention of millennial generation. Millennial generations are significantly more interested in a job within the high work-life balance thus they will not consider about leaving their job (Buzza, 2017). Millennial generation willing to work hard and they demand a good compensation, have the opportunity to develop themselves, and able to pay attention regarding work-life balance. Millennial generation will assume that there is a mistake in choosing a job if they do not find any work life balance in their work environment.

The further conclusion obtained regarding turnover intention which is influenced by career development is that there is negative effect of career development on turnover intention of millennial generation. Millennial employees are realistic regarding the fact that they should move up the corporate ladder to achieve their career aspirations and more likely to take an active role in their career planning and execution. If companies are unable to provide them with the opportunity to fully develop skills, high levels of dissatisfaction will arise and the intention to change their current jobs will increase.

Millennial generations are looking for faster career advancement opportunities in organizations than previous generations. Millennial generation tend to be more flexible in terms of career choices and financial obligations. For this generation, having a qualified job and career satisfaction is more important than a good salary. Millennial generation have high expectations and very proud of themselves. Millennial generation believe that if they make a good contribution to the organization, they expect to get promotion and faster career development. When the career path in an organization is clear, millennial generation will increase the interest to contribute and achieve their organizational goals.

Based on the conclusions of research results, it is suggested that organizations should pay more attention and understand the millennial generation workforce because they are different from the previous generation. And Organizations should be able to face the challenges to manage the diverse characteristics of millennial workforce and achieve the long-term organizational success. The results of this study suggest that organizations should understand what motivates or encourages millennial generation employees and what factors influence the decision of millennial generation employees to leave their companies. The results indicated that several factors which affect the turnover intention of millennial generation employees include work-life balance and career development. Therefore, organizations need to prepare strategies and policies of work to obtain the work-life balance of millennial generation employees and provide a clear career development path. Therefore, millennial generation employees will stay in its organization environment. Work life balance benefits for organizations include a reduction in absenteeism, increased productivity, and increased employee retention.

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АНАЛІЗ ВПЛИВУ БАЛАНСУ ТРУДОВОГО ЖИТТЯ І РОЗВИТКУ КАР'ЄРИ НА ПРОЦЕСИ ПЛИННОСТІ КАДРІВ ДЛЯ ПОКОЛІНЬ-МІЛЕНІАЛІВ

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Покоління мілленіалов володіє унікальними і різними характеристиками, вони стали значними людськими ресурсами, які, як очікується, зможуть змінити стан організації, зробивши її більш продуктивною. Співробітники покоління мілленіалов більше стурбовані аспектами балансу між роботою та особистим життям і самореалізацією, такими як - можливості розвитку своєї кар'єри. Реалізація аспектів балансу між роботою та особистим життям і кар'єрного зростання дозволяє працівникам покоління мілленіалов довше залишатися на своїй нинішній роботі і зменшувати їх намір змінити професію. Це дослідження спрямоване на вивчення різних попередніх наукових досліджень, в яких аналізується вплив балансу між роботою та особистим життям і розвитком кар'єри на плинність кадрів покоління мілленіалов. Аналіз цього дослідження було проведено за допомогою методу вивчення літератури, що стосується впливу балансу між роботою та особистим життям і розвитком кар'єри на намір зміни професії. Результати огляду літератури показали, що існує негативний вплив на баланс між роботою та особистим життям і кар'єрне зростання на намір зміни професії покоління мілленіалов. Можна зробити висновок, що співробітники покоління мілленіалов реалістично ставляться до того факту, що вони повинні

просуватися по кар'єрних сходах, щоб досягти своїх кар'єрних устремлінь, і з більшою ймовірністю будуть брати активну участь у плануванні та реалізації своєї кар'єри.

Ключові слова: баланс роботи та особистого життя, кар'єрний ріст, плінність кадрів.

АНАЛИЗ ВЛИЯНИЯ БАЛАНСА ТРУДОВОЙ ЖИЗНИ И РАЗВИТИЯ КАРЬЕРЫ НА ПРОЦЕССЫ ТЕКУЧЕСТИ КАДРОВ ДЛЯ ПОКОЛЕНИЙ-МИЛЛЕНИАЛОВ

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Поколение миллениалов обладает уникальными и разными характеристиками, они стали значительными человеческими ресурсами, которые, как ожидается, смогут изменить состояние организации, сделав ее более продуктивной. Сотрудники поколения миллениалов больше озабочены аспектами баланса между работой и личной жизнью и самореализацией, такими как – возможности развития своей карьеры. Реализация аспектов баланса между работой и личной жизнью и карьерного роста позволяет работникам поколения миллениалов дольше оставаться на своей нынешней работе и уменьшать их намерение сменить профессию. Это исследование направлено на изучение различных предшествующих научных исследований, в которых анализируется влияние баланса между работой и личной жизнью и развитием карьеры на текучесть кадров поколения миллениалов. Анализ этого исследования был проведен с помощью метода изучения литературы, касающейся влияния баланса между работой и личной жизнью и развитием карьеры на намерение смены профессии. Результаты обзора литературы показали, что существует отрицательное влияние на баланс между работой и личной жизнью и карьерный рост на намерение смены профессии поколения миллениалов. Можно сделать вывод, что сотрудники поколения миллениалов реалистично относятся к тому факту, что они должны продвигаться по карьерной лестнице, чтобы достичь своих карьерных устремлений, и с большей вероятностью будут принимать активное участие в планировании и реализации своей карьеры.

Ключевые слова: баланс работы и личной жизни, карьерный рост, текучесть кадров.

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**THE INDICATIONS LEVEL OF BANKRUPTCY
BY ALTMAN Z-SCORE CALCULATION METHOD
(CASE STUDY ON SUBSIDIARIES OF PT KERETA API INDONESIA PERSERO)**

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Abstract. This study aims to observe the condition of several companies that are affiliated as subsidiaries of PT Kereta Api using the Altman Z-Score to predict the indication of bankruptcy. The indication of bankruptcy is a way to the company to make a decision regarding the strategy that needs to be taken. In this research, the indication of bankruptcy commonly used the category that is included in the Altman Z score model. This includes quantitative research with a goal to detect and analyze the object of the research which is based on the secondary subject of Financial Reporting about the sign of bankruptcy of the company by using Altman Z-Score model. This research method used descriptive and quantitative approach. The research results show that from six Subsidiaries Companies of PT Kereta Api Indonesia (Indonesian railway companies) that are analyzed as the sample in this research, there are 3 companies that are regarded as "healthy companies" (companies that has a stable condition), a company that is included in grey area (predicted to experience a bankruptcy) and two companies that are included in more dangerous area or indicated as companies that have almost experienced a bankruptcy.

Keywords: Altman Z-score, bankruptcy, financial reporting.

JEL Classification: C63, D59, G33.

INTRODUCTION

Developing companies and Developed companies often did not realize how the condition of company sustainability especially in long-term plan that should be owned by every company and used as a basis for further progress and growth, especially in order to be able to fairly compete in the future global markets era (Marsden and Wilkinson, 2018).

Company that consider as large at the opening could not be escaped in the term bankruptcy if they did not able to adapt to the demands of existing market situation or within the poor management on the aspect of company management itself (Teece, 2010). An obvious example can be used as a lesson related to the case of bankruptcy inside the air transportation service company, which the main point is that there is a mismanagement of the company or human error that occurs inside the management system of company, and it caused a large amount of debt, Thus, an

unfortunate incident happen and the company should be closed permanently. Based on the described condition, it is necessary to know the indications and information regarding predictions that could lead to the company bankruptcy (Karas and Režňáková, 2018). Information about bankruptcy predictions is important for several involved parties (Munawir, 2010) as for investor, it can lead to the Information on prediction of potential bankruptcy that provides input for investors in investing their capital gains, whether they will still continue to invest or decided to stop/cancel their investment to a company, however investors certainly did not want any losses due to their mistakes on investing any capital. For the Government, prediction of bankruptcy is used by government to determine the policies in field of taxation and other policies related to the relationship between government and companies. For Banks and Credit Institutions, information regarding the possibility of bankruptcy faced by their customer companies and their prospective customers is needed to determine the determination of whether a loan submission should be granted or not, further negotiation of loan repayment need to be regenerated and other policies related to loan or credit approval.

Adnan and Eha (2000) inside their analysis regarding the Stability conditions of Companies to Predict Potential Bankruptcy by Altman Approach which was taken from ten companies in Indonesia, more likely explained regarding the relationship between company stability condition and the potential for bankruptcy by comparing the banking and non-banking companies. The obtained result concluded that the bankruptcy level of company can be decided two years before it happen.

Another study was done by Ayu (Chairunisa, 2017) inside the analysis of Analysis on Bankruptcy Rate of Coal Mining Companies that Listed on Indonesia Stock Exchange, using 2 models of Altman Z-Score and Zmijewski in predicting indications of bankruptcy in coal mining companies. This research focuses more to find out the indication of bankruptcy in a subsidiary of PT Kereta Api Indonesia (Persero) which is mainly engaged in rail-based transportation services. It is resulted that the method can used to predict whether the condition of company is stable or not. The use of Altman model to predict the condition of a company and the financial health of a company, and it needs to be carefully used (Marcelinda, Paramu and Puspitasari, 2014)

Based on the explanation above, this research focuses on sixth subsidiaries company of PT Kereta Api Indonesia (Persero) which consist of: PT Reska Multi Usaha, PT Railink, PT Kereta Commuter Indonesia, PT Kereta Api Logistik, PT KA Properti Manajemen and PT Kereta Api Pariwisata, to observe if there are indications that will lead into bankruptcy or not.

In short, the purpose of this study is to determine the indication of bankruptcy in company by using the Altman Z score calculation method and to find out whether the use of Altman Z score calculation method can be effectively used in companies as the indications of bankruptcy.

LITERATURE REVIEW

Bankruptcy

The definition of Bankruptcy (Brigham, F and Houston, 2011) is a failure that occurs in a company which can be interpreted as below:

- *Economic Distressed*, which is a condition where the company loses money or where the company's revenue is unable to cover its own costs, in other word, the rate of return is less than the cost of capital gains or the present value of company's cash flows is less than the liabilities. Failure occurs when the actual cash flow of company is far below the expected cash flow.

- *Financial Distressed* is a company condition where the difficulty occur either in condition of funds, cash or in sense of capital gains. As the part of asset liability, management took a significant role in the arrangement to prevent financial failure. Financial failure can also be defined as insolvency that distinguishes between cash flows and stock policies.

According to Lesmana and Surjanto (2004) a company that will experience bankruptcy or

financial difficulties in the future has following signs as below:

1. There was a significant decrease in sales number and revenue
2. Profit or cash flow from operations has decreased
3. Decrease in total assets
4. There was a significant decrease in close price
5. High probability of industrial failure, or a high risk industry
6. There was a large dividend cut
7. Young company

Financial Reporting

Financial Reporting or often called as Financial Statement, is a report that states the company's current financial condition and in a future period (Kasmir, 2014). Other definition was stated by (Riyanto, 2010) which stated that provide business regarding financial condition of a company, there are two components consist of *Neraca (Balance Sheets)* defined the asset value, debt and own capital gain at certain times and *income statement* states the results that have been achieved during specified period, generally covering a period of a year.

PAPER OBJECTIVE

This research has an aim to observe the condition of several companies. The chosen several companies is the companies that affiliated as subsidiaries of PT Kereta Api within the indication of bankruptcy that applied through Altman Z-Score in order to predict the indication of bankruptcy that could happen to the future condition of the company.

It is important to know the indication of bankruptcy as anticipation for future condition. This bankruptcy could be seen through condition within a company. The using of Altrman-Z Score to calculate the indication of bankruptcy might be effective and easy for company.

METHODOLOGY

The research method used in this research is descriptive method within the quantitative approach by supporting data in form of financial reports. Descriptive research is a research method that is aimed to describe the present or past phenomenon. Descriptive Quantitative aimed to describe the phenomenon within the number (Sugiyono, 2016). In this case, the number included from financial reports.

Data Sources

Types and sources of data used in this study was secondary data of financial reports that have been audited by independent accountant in order to obtain accurate and reliable figures, which consist of:

- a) Income Statement from 2017 to 2018
- b) Balance Sheet Statement from 2017 to 2018

Data Collection Technique

As supporting material of case studies, data collection techniques are carried out in several ways:

1. Documentation Technique

This technique is the retrieval of data obtained through documents (Akbar and Usman, 2011). This documentation technique is used because the data source in this study is company financial reports that have been audited by an independent accountant

2. Literature Study

Conduct an in-depth analysis using existing theories to be applied in this research

Data Analysis Technique

The analysis technique used in this research includes:

1. Calculate the company ratios based on the variables in Altman model (Z-Score)
2. Calculate the company's Z-Score by Altman model equation (Z-Score)
3. Calculate the condition of company based on predetermined cut off point
4. Compare the results of Altman (Z-Score) application model in listing companies and the application of delisting companies as research sample
5. Provide the conclusions regarding company's financial performance and bankruptcy predictions based on the analysis of existing data

RESULT AND DISCUSSION

Altman Z score Analysis

Hanafi (2008) defines the Altman Z score as multivariate formula that has functions to measure the financial stability of company and a powerful diagnostic tool to predict the possibility of a company bankruptcy. Altman initially entered 22 financial ratios into his research model, Altman focused on 5 categories representing 4 financial ratios including liquidity, profitability, leverage / solvency, and performance. Hereby the formula of Altman model (Z-Score):

$$Z = 1,2X1 + 1,4X2 + 3,3X3 + 0,6X4 + 1,0X5$$

Source : After Gilrita, 2015.

By the information as below:

- Z = bankruptcy index
X1 = capital gain/total assets
X2 = retained earnings / total assets
X3 = Earnings before Interest and Tax
X4 = total equity / total liabilities
X5 = revenue / total assets

And the results will be divided into 3 groups as following below:

1. Z-Score > 2,99 categorized as a very healthy company therefore it can be categorized as a non-bankrupt company
2. 1,81 < Z-Score < 2,99 is in a vulnerable area where the company cannot be determined whether it is a bankrupt company or not
3. Z-Score < 1,81 categorized as a company that has enormous financial difficulties and is at risk of bankruptcy.

There are 5 categories of Altman Z score model that was used to indicate bankruptcy in a company as following below:

1. Working capital to total assets → (X1)

$$X1 = \frac{\text{Current asset} - \text{current liabilities}}{\text{Total assets}}$$

This variable is used to measure the company's ability to fulfill its short-term liabilities and measure the level of liquidity of company's assets. The difference between current assets and current liabilities represents working capital

2. Retained earnings to total assets → (X2)

$$X2 = \frac{\text{retained earnings}}{\text{Total assets}}$$

This variable is a measurement of company's cumulative profitability or retained earnings that reflects to the company's age and company's earnings strength.

3. Earnings before interest and taxes/EBIT to total assets) → (X3)

$$X3 = \frac{\text{EBIT}}{\text{Total assets}}$$

The variables included in this profitability ratio have a function to Measure Company's ability to generate the profits from the assets or it can be said as a measure of company's assets productivity.

4. Market value of equity to book value of total liabilities → (X4)

$$X4 = \frac{\text{Total equity}}{\text{Total liability}}$$

This variable is used to describe the solvency (leverage) in form of company's long-term financial capability and to find out the amount of company capital used to the debt burden.

5. Sales to total assets → (X5)

$$X5 = \frac{\text{Incomes}}{\text{Total assets}}$$

This variable has a function to measure management's ability to use assets, generate sales and describes the turnover rate of every company assets.

Based on the discussion above, the results of calculation by Altman Z score method for each company in 2017-2018 are explained as following below:

Table 1

Almant Z Score test result

Company Subsidiary	2017	2018
PT RMU	3,75	3,60
PT RAILINK	0,66	0,89
PT KCI	4,79	3,92
PT KALOG	2,14	2,63
PT KAPM	2,10	1,75
PT KAWISTA	3,13	4,04

Source: Excel processed data.

Categories:

> 2,99 = stable

< 2,99 = vulnerable

< 1,81 = unstable/ bankrupt

Classification of Company Condition

Based on the results of calculations in table 1, the company's stability condition can be classified as follows:

Table 2

Details of the company's stability condition in 2017-2018

Company Subsidiary	2017	2018
PT RMU	stable	stable
PT RAILINK	unstable	unstable
PT KCI	stable	stable
PT KALOG	vulnerable	vulnerable
PT KAPM	vulnerable	unstable
PT KAWISTA	stable	stable

Source: Excel processed data.

Rizkiansyah, A. and Falikhatun (2021), "The indications level of bankruptcy by Altman Z-Score calculation method (case study on subsidiaries of PT Kereta Api Indonesia Persero)", *Management and entrepreneurship: trends of development*, 1(15), pp. 89-97. Available at: <https://doi.org/10.26661/2522-1566/2021-1/15-06>

Based on the table above, it can be seen that PT RMU with an acquisition of more than 2,99, which is 3,75 in 2017 and 3,60 in 2018, is categorized as a stable company. For PT RAILINK, because the Altman Z Score is less than 1,81, the company's condition which categorized as unstable or almost experience a bankruptcy. PT KCI within the high value of 4,79 and 3,92 is categorized as a stable company, PT KALOG experienced a vulnerable condition because it obtain value below 2.99 but still above 1,81. In 2017, PT KAPM was categorized as vulnerable, but in the following year the decline became unstable or bankrupt. And the last one is PT KAWIST which obtain 3,13 and 4,04 included as stable.

CONCLUSION

Based on the results and discussion above, it is obtained the conclusion as below:

PT Railink has been in unstable condition category for 2 consecutive years which means it has enormous financial difficulties and is at risk of bankruptcy. Meanwhile, PT KAPM in 2017 was in vulnerable condition, even in 2018 it was in an unstable condition. Moreover, For PT Kalog still in the vulnerable category, there is no indication of bankruptcy yet. However, if there is a slight mismanagement or other mismanagement, it can be fatal. Subsidiaries other than PT Railink, PT KAPM and PT Kalog are classified as stable; therefore it is still safe for company sustainability conditions.

It can be concluded that not every companies can apply the Altman Z score calculation method to indicated the indication of bankruptcy due to the type and scope of business that have different characters from one another.

SUGGESTION

Based on the results, discussion and conclusions, there are several suggested point as below:

1. For companies that currently indicated to be bankrupt, it should immediately determine further steps and carry out more innovative strategies. Therefore; they can improve existing financial ratios, conduct studies in terms of mergers or acquisitions for the sake of business continuity.
2. For companies that currently in vulnerable category, it needs to pay more attention to the ratios that can help to improve the future conditions of company, therefore on its implementation of company stability; the company can continue to be stable.
3. For companies that currently indicated as stable, it should not consider as an excuse to be relaxed, the companies should always build the new creativity and other innovative finding, because it is easy for a company to slip into a bad category, especially if the management progress is not good.

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**РІВЕНЬ ПОКАЗНИКІВ БАНКРУТСТВА МЕТОДОМ ОБЧИСЛЕННЯ
ОЦІНКИ АЛЬТМАНА Z (НА ПРИКЛАДІ ОЦІНКИ ДОЧІРНИХ ПІДПРИЄМСТВ
PT KERETA API INDONESIA PERSERO)**

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Дане дослідження спрямоване на спостереження за станом декількох компаній, які є дочірніми підприємствами PT Kereta Api, з використанням Z-оцінки Альтмана для прогнозування ознак банкрутства. Ознака банкрутства – це спосіб компанії прийняти рішення щодо стратегії, яку необхідно прийняти. У цьому дослідженні для позначення банкрутства зазвичай використовується категорія, включена в модель Z-оцінки Альтмана. Даний метод включає кількісне дослідження з метою виявлення і аналізу об'єкта дослідження, заснованого на вторинному предмет фінансової звітності про ознаку банкрутства компанії з використанням моделі Z-оцінки Альтмана. У цьому методі дослідження використовувався описовий та кількісний підхід. Результати дослідження показують, що з шести дочірніх компаній PT Kereta Api Indonesia (індонезійські залізничні

компанії), які аналізуються в якості вибірки в цьому дослідженні, є 3 компанії, які розглядаються як «здорові компанії» (компанії зі стабільним станом); компанія, яка включена в сіру зону (прогнозується банкрутство), і дві компанії, які включені в більш небезпечну зону або вказані як компанії, які майже пережили банкрутство.

Ключові слова: Z-оцінка Альтмана, банкрутство, фінансова звітність.

УРОВЕНЬ ПРИЗНАКОВ БАНКРОТСТВА ПО МЕТОДУ РАСЧЕТА Z-ОЦЕНКИ АЛЬТМАНА (НА ПРИМЕРЕ ДОЧЕРНИХ КОМПАНИЙ PT KERETA API INDONESIA PERSERO)

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Данное исследование направлено на наблюдение за состоянием нескольких компаний, которые являются дочерними предприятиями PT Kereta Api, с использованием Z-оценки Альтмана для прогнозирования признаков банкротства. Признак банкротства – это способ компании принять решение относительно стратегии, которую необходимо принять. В этом исследовании для обозначения банкротства обычно используется категория, включенная в модель Z-оценки Альтмана. Данный метод включает количественное исследование с целью выявления и анализа объекта исследования, основанного на вторичном предмете финансовой отчетности о признаке банкротства компании с использованием модели Z-оценки Альтмана. В этом методе исследования использовался описательный и количественный подход. Результаты исследования показывают, что из шести дочерних компаний PT Kereta Api Indonesia (индонезийские железнодорожные компании), которые анализируются в качестве выборки в этом исследовании, есть 3 компании, которые рассматриваются как «здоровые компании» (компания со стабильным состоянием); компания, которая включена в серую зону (прогнозируется банкротство), и две компании, которые включены в более опасную зону или указаны как компании, которые почти пережили банкротство.

Ключевые слова: Z-оценка Альтмана, банкротство, финансовая отчетность.

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**MANAGEMENT OF LABOUR PRODUCTIVITY AT THE ENTERPRISES
OF THE AGRICULTURAL INDUSTRY OF UKRAINE**

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Abstract. The agro-industrial complex is one of the main budget-forming sectors of the national economy of Ukraine; agribusiness opens up prospects for leadership for our state in the world market. Therefore, an important step for unlocking the export potential of Ukrainian agricultural products is to analyse urgent problems and find ways to strengthen Ukraine's competitive positions in the world market, including by increasing labour productivity, which is one of the most important criteria for assessing the performance of any economic system. The article aims to study the current level of labour productivity in the national agro-industrial sector and to find ways to increase it by eliminating the main barriers to the development of the agro-industrial complex of Ukraine. The basic principles of the research are systematic and comparative methods, institutional and structural-functional approaches have been used. The research results highlight the reasons for low productivity and propose priority areas of state policy for the development of the national agro-industrial complex.

Keywords: agro-industrial complex, export potential, labour productivity, agriculture, methods of productivity increase.

JEL Classification: D24, J43, O13.

INTRODUCTION

The efficiency of the economic activity of an enterprise in any sphere and industry largely depends on the quality of management of labour productivity and labour resources. For Ukraine, which is at a critical stage in its economic development, today it is extremely important to build an effective model of human potential management in order to stimulate economic growth, on the one hand, and attract qualified workers to work at domestic enterprises, on the other. Therefore, the relevance of the research is that the modification of methods to increase productivity is of great economic importance for Ukraine, because it opens more opportunities for sales of national agricultural enterprises not only domestically but also on the world market and maximizes the efficiency of human resources, provides an increase in production and sales of agricultural products. That is why there is a need to identify ways and reserves to increase it.

LITERATURE REVIEW

A significant contribution to the study of the problem and the search for methods to increase labor productivity was made by domestic researchers: V. K. Garkavy (1995), V. I. Lukashevich (2004), V. Vitvitsky, Z. Metelskaya and V. Yudina (2006), S. F. Pokropivny (2008), A. L. Spesivtsev (2011), M. G. Akulov (2012) and others. Some issues of determining the level of productivity and analysis of the phenomenon in general are covered in the works of such foreign scientists as: Florence P.S. and Dale E. (1949), Weil R. (1978), Landen D. (1981), Cuthbert N.H., Hawkins K.H. and Sparkes J. R. (1981), Prasad S. (1993), Zwick T. (2004), Barna T. (2009), Sarbu M. (2013), Vergeer R. and Kleinknecht A. (2014), Khakimova K. R. and Kotov D.V. (2016), Collewet M. and Sauermann J. (2017), Ivanov A.O. (2020) and others.

PAPER OBJECTIVE

The aim of the article is to study the current level of labour productivity in the national agro-industrial sector, to make a comparative analysis of productivity management methods in Ukraine and developed countries, as well as to find ways to increase productivity in agriculture by eliminating major barriers to agricultural development.

METHODOLOGY

Developing the research, general scientific theoretical and empirical methods were used, such as: analysis and generalization, methods of observation and comparison, analytical, grouping of data. The basic principles of the research are systematic and comparative methods, institutional and structural-functional approaches have been used. The study also benefited from the Official State Statistics Committee of Ukraine's statistic data when researching the agro-industrial complex of Ukraine and its position on the world market.

RESULT AND DISCUSSION

The agro-industrial complex is a component of the country's economy, which includes the production of agricultural products, their logistics and processing. The agro-industrial complex also unites industries that produce means of labour and services and industries for storage, processing and sale of agricultural products.

Today, exports of Ukrainian agricultural products are estimated at \$ 18.6 billion, which is 39.4% of total exports, and agricultural production is 10.1% of national GDP. Ukraine is a leading country in the export of sunflower oil and meal to the world market. The country also rose from third to second place in the sale of rapeseed on the foreign market and entered the top three in the export of walnuts. Over the past four years, Ukraine has increased its rapeseed exports by 16% and soybeans by 18%. Of the processed products, the leadership is still held by sunflower oil, whose exports have grown by 16% over the past 4 years. Ukraine is also one of the five leading countries that export agricultural products to the European Union. In addition, Ukraine ranks first in terms of growth of imports of agricultural products from EU countries (*Ukrains'ka Pravda*, 2019).

Of the total exports of Ukrainian agro-industrial complex products for the 2018/19 marketing year, grain crops accounted for 38.4%. The ten largest importers of Ukrainian grain include China, Saudi Arabia, Indonesia, Italy, the Philippines, Morocco and Tunisia (Figure 1).

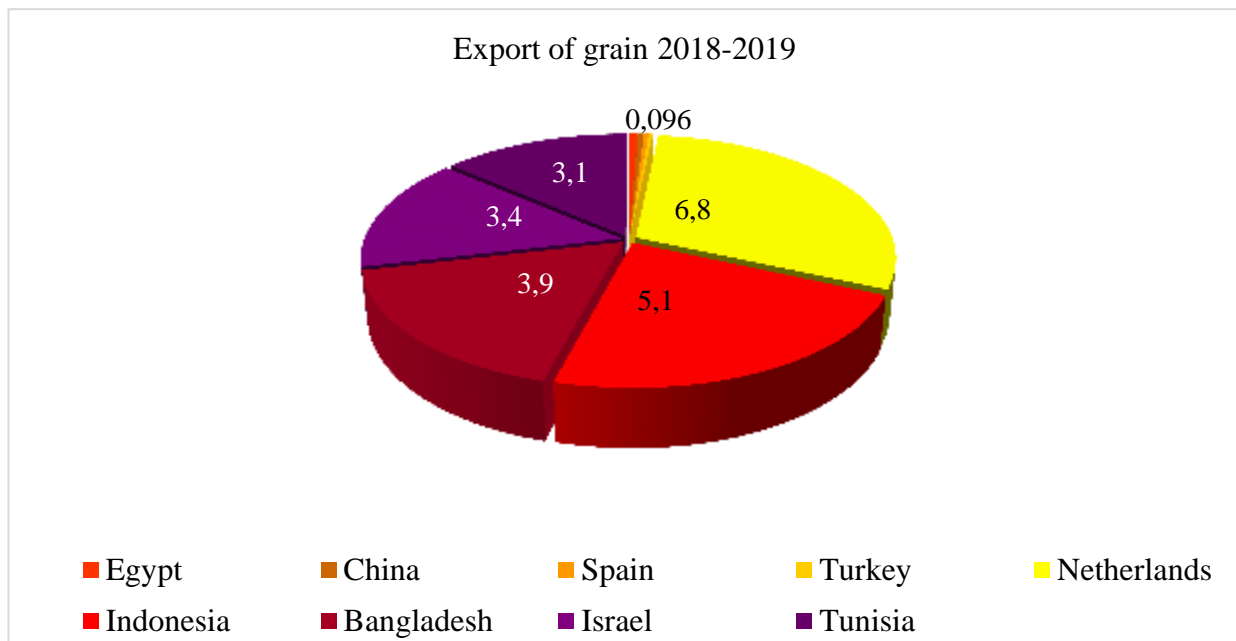


Figure 1. The share of grain-importing countries in the national exports of Ukraine, %

Source: Adapted from *Ukrains'ka Pravda* (2019).

Thus, since the beginning of 2018-2019, a total of 44.3 million tons of grain has been exported from Ukraine. The world leaders in grain exports are China, the United States, the EU, India, Brazil, Russia, Argentina, Ukraine, Canada and Indonesia. Although our country has considerable export potential, according to the results of the last marketing year, Ukraine ranks 8th among the leading countries in the production of grain.

Any modern agro-industrial enterprise is a complex system consisting of many interconnected units (crop control, labour organization, logistics, storage, supply of products and raw materials, warehousing) and inefficient operation of even one of them can minimize the result. Today, such a negative factor influencing the business success of the agro-industrial sector of Ukraine is the low level of labour productivity.

An important step in revealing the export potential of Ukrainian agricultural products is the analysis of current problems and finding ways to strengthen Ukraine's competitive position in the world market, in particular by increasing productivity, which is one of the most important criteria for assessing any economic system.

Today, the main factor in the success of world leaders is not significant amounts of natural resources, but a high level of productivity. Therefore, paying special attention to the issue of labour efficiency, management systems in economically developed countries have created special institutions for research and constant modification of technologies to increase its productivity. That is why, using foreign experience, the urgent issue is the formation of their own methods and tools to increase productivity.

In the practice of management labour productivity at the scale of society, region, industry, organization, enterprise, shop, production site, team and individual employee is distinguished. Therefore, the growth of labour efficiency can occur on two levels. Thus, at the micro level, it is a fundamental factor in increasing the competitiveness of the enterprise, industry, or even the whole country, opening the possibility to produce goods and services that meet the requirements of the world market. Increasing labour productivity at the macro level is extremely important for the

dynamics of gross domestic product and ensuring the purchasing power of the majority of the country's population. Increasing labour productivity is an important component not only for each individual enterprise, but also for society as a whole. After all, in the system of social and labour relations, the search for factors and reserves of social prosperity is one of the most important tasks of the labour economy (Akulov et al., 2012).

Each enterprise can be presented as a living organism, the functioning of which depends on many external and internal factors, which in turn affect the increase or decrease in productivity. A vital condition for economic development and strengthening the competitive position of the enterprise of any industry is the growth of labour productivity, which is an expression of economic law and the economic necessity of society.

In the practice of labour productivity management is called the indicator of labour activity of employees, which is expressed as the volume of output per unit of time, or the cost of time to produce a unit of output. In other words, labour productivity – is the productivity of production activities of the employee, the number of products produced by him per unit time.

Depending on the direct or inverse relationship, there are two indicators of productivity: output and labour intensity.

Productivity is an indicator that characterizes the number of products produced per unit time or the amount of products produced by one average employee. Productivity represents the volume of output to the amount of working time spent on its production. Labour intensity is the value of the reverse output; it is the cost of time per unit of output. There are hourly, daily and annual production indicators depending on the units of working time (Table 1).

Table 1

Types of production indicators

Indicator	Characteristic
Hourly	Production per person-hour, which characterizes labour productivity for the actual time worked.
Daily	Production per person-day, which also depends on the length of the working day and the use of working time during the shift. The level of daily production is influenced by such indicators as time losses and intra-shift downtime.
Annual	Production per average employee. Takes into account not only intra-shift, but also round-the-clock downtime.

Source: Own compilation.

The method of measuring labour productivity depends on the method of determining the volume of output. Thus, in the practice of management there are natural, labour and cost or monetary methods (Table 2).

Table 2

Methods of measuring labor productivity

Method	Content	Application	Disadvantages of the method
Natural	The natural method is to calculate the volume of output and labour productivity in physical units (pieces, tons, meters)	The natural method is actively used in the workplace, in brigades, in some areas of those industries of homogeneous products (mining, electricity)	Limited use, due to the fact that homogeneous products are almost not produced by enterprises and industries
Conditionally natural (conventional)	If the company produces products that have the same purpose, but different in a certain characteristic, the output can be calculated using conventional units	It is used in brigades, sections, shops that produce products with one purpose, but have some different characteristics	This method is not able to eliminate changes in the volume of work in progress, which in some industries has a large share in total output
Labour	The labour method is used in enterprises, when the volume of output or work performed is determined in standard hours	At workplaces, production sites, in brigades and shops	Limited application, due to the use of fixed standards, which contradicts the need to revise the rules as the implementation of organizational and technical measures
Cost (monetary)	It is based on the use of cost indicators of production volume (gross, marketable products, gross turnover, regulatory cost of processing, gross income)	The cost method is used to calculate productivity at most modern enterprises	The level of production is determined by the cost of the past rather than the cost of living labour. The value of production is affected by changes in product range, the volume of cooperative deliveries, the volume of work in progress, the dynamics of product prices.

Source: Own compilation.

A necessary prerequisite for determining labour productivity is the correct calculation of the level and dynamics of labour productivity in all areas of the economy. Accounting for labour productivity should be based on understanding its economic content, determining the main indicators that should characterize the level of labour productivity in time and space. There are the following requirements for measuring productivity:

1. Units of measurement must fully take into account the actual volume of work and time, to ensure the unity of methods of measuring productivity.
2. Productivity indicators should be consolidated, cross-cutting, comparative, universal in application, as well as have a high degree of generalization.

There are no universal indicators for calculating labour productivity, because they are directly dependent on the industry. Thus, when analysing the activities of agricultural enterprises the following groups of indicators must be used:

1. Production of gross output at comparable prices per average annual worker or person-hour.
2. Direct labour costs (in person-hours) for the production of a unit of agricultural product.

The first group of indicators is used to characterize labour productivity in agriculture as a whole, or its main industries – crop production and animal husbandry. It should be borne in mind that comparing the levels of labour productivity in different sectors of agriculture, it is impossible to compare its value levels in different industries or enterprises with different specialization or form of ownership (Vitvitsky et al., 2006).

The second group of indicators is used to calculate labour productivity in the production of certain products (grain, milk, sugar beet).

Figure 2 shows the dynamics of labour productivity in all sectors of the economy in Ukraine over the past decade.



Figure 2. Labour productivity in Ukraine

Source: Ministry for Development of Economy, Trade and Agriculture of Ukraine, 2019.

According to the dynamics of labour productivity in all sectors of the economy of Ukraine over the past decade, it is clear that last year the positive dynamics of labour productivity showed the vast majority of economic activities. Negative dynamics of labour productivity is observed only in forestry and fisheries, where the indicator decreased by 2.3%, in public administration and defence (by 4.9%). Figure 3 shows the dynamics of the level of labour productivity in the national agro-industrial complex.

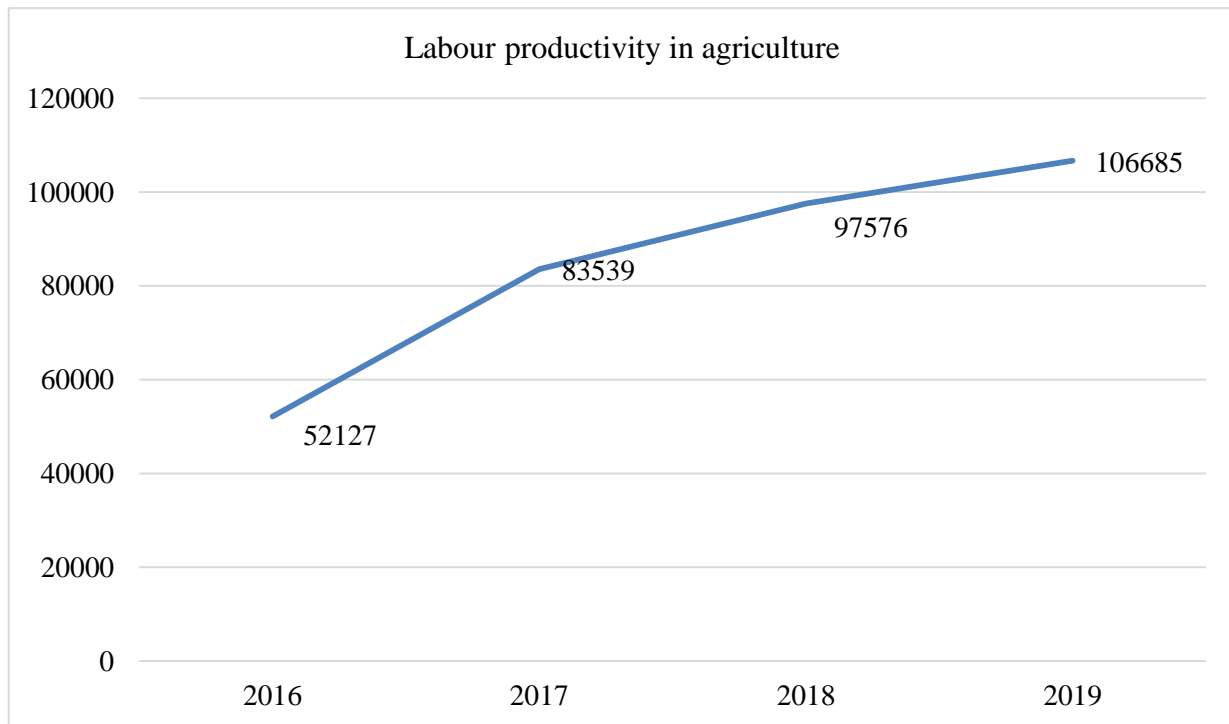


Figure 3. Labour productivity in agriculture

Source: Ministry for Development of Economy, Trade and Agriculture of Ukraine, 2019.

Thus, we can conclude that productivity is constantly changing under the influence of external and internal factors that contribute to its increase or, conversely, decline. That is why the main task of the organization's management is to ensure a constant increase in productivity, given their impact. Factors of labour productivity are the driving forces, objective and subjective reasons that affect labour productivity and determine its dynamics (Prokopivny, 2002). The action of factors, their implementation and identification is closely dependent on natural and socio-economic conditions. Factors that increase labour productivity include factors that improve the organization of labour and production, as well as the social conditions of workers. Factors reducing labour productivity are the adverse effects of natural conditions, imperfect organization of production and labour, the impact of negative elements of the social environment.

Depending on the direction of action, two groups of factors can be distinguished:

1. Factors to increase productivity (corporate culture, employee motivation system, saving time, organization of work space and work in general).
2. Factors reducing labour productivity (imperfect system of labour organization, low level of labour discipline, disruptions in logistics, natural and climatic conditions).

Factors influencing productivity can be also conventionally divided according to the level of influence into two groups:

- 1) external, which are beyond the control of an individual enterprise (change in the range due to variability in demand, socio-economic conditions, etc.);
- 2) internal, which are under the control of the enterprise (technical equipment of personnel, efficiency of labour incentive systems, etc.).

Table 3 presents the main groups of factors influencing productivity in accordance with their content.

Table 3

Groups of factors influencing productivity

Influencing factors	Characteristics
Material and technical	Automation and mechanization of production, reduction of living labour costs, development and application of innovative technologies, minimization of the use of all types of resources; deepening specialization of equipment and others
Organizational	Organization of material and technical supply, rational distribution and cooperation of labour, organizational and technical preparation of production, improvement of working conditions, efficient use of enterprise personnel, rational arrangement and others
Socio-economic	The level of qualification of employees, the level of labour discipline, change of ownership of the means of production, the level of staff motivation, the development of industrial democracy in the enterprise
Economic, legal and regulatory	The system of regulation of social and labour relations, the methodological basis for increasing productivity

Source: Own compilation.

Internal factors influencing productivity are conventionally divided into “soft” and “solid” ones. “Solid” factors include the quality of products, its compliance with consumer needs and market requirements, as well as production technology, equipment, improving the efficiency of materials and the development of efficient sources of supply. “Soft” factors include level of staff skills, improving the level of work motivation, organizational structure and management style (Zhukov and Poghosyan, 1991).

Given recent developments in the world, including the quarantine regime caused by the COVID-19 pandemic, some companies have reconsidered their attitudes to work organization and established a flexible system of work that is evolutionary. The State Employment Service of Ukraine registered 387,500 people, of whom 71,400 were registered during the all-Ukrainian quarantine period. According to experts, the unemployment rate in 2020 is 9.4% (Ukrains’ka Pravda, 2020). For most national businesses, this is a new challenge that requires strict attention in order to save business. After all, the main problem is to maintain a high level of productivity in a new distance level of cooperation and the desire to stay in touch.

One of the “soft” internal factors influencing productivity is the organization of the workplace and the format of interaction with colleagues or customers. Workspace planning and rational spatial placement of equipment in the workplace is a necessary prerequisite for effective organization of the work process that increase its productivity. According to the results of social surveys, it was determined that there is a correlation between productivity and the format of interaction of employees with colleagues or customers. For example, employees who interact with their colleagues virtually at a fixed time during the day show a 16% increase in productivity. Those who work at home in specially designated working rooms show a 5% smaller decrease in productivity compared to those respondents who work in other rooms of their house or apartment. Employees, who have a clear work schedule, i.e. start and end the working day at the same time and take breaks at a fixed time, have high productivity (Colliers Global Work-from-Home Survey, 2020).

Figure 4 shows changes in the productivity of workers after the start of the COVID-19 pandemic.

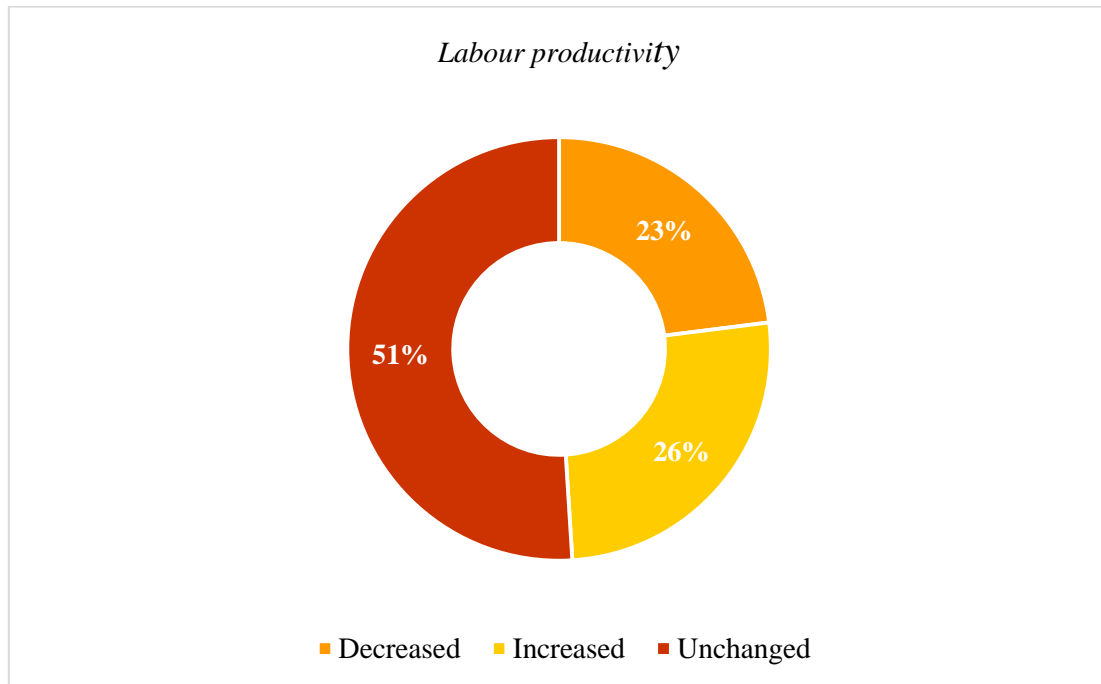


Figure 4. Labour productivity since the beginning of the COVID-19 pandemic

Source: Modified after Colliers Global Work-from-Home Survey, 2020.

Thus, according to research, sociologists found that labour productivity remained unchanged in half of respondents who work from home, 27% of respondents say that their productivity has increased, and 23% felt that their productivity has fallen. Maximizing productivity is observed only in the field of IT-technology and media. The largest decline in productivity is observed in education and research.

If we talk about the level of labour productivity in agriculture, today the national agro-industrial complex lags behind the developed countries and has a negative trend. And the main reasons for such a low level of productivity are:

- 1) deindustrialization of agricultural production;
- 2) low yields of agricultural products;
- 3) overwork;
- 4) irrational organization of production;
- 5) low level of rural infrastructure development;
- 6) worn-out production assets;
- 7) use of outdated technologies;
- 8) low wages.

Agriculture is an industry with slow capital turnover and high dependence on direct natural and weather-climatic conditions, which needs support from the state. From the special fund of the state budget the Law of Ukraine "On the State Budget of Ukraine for 2019" the Ministry of Agrarian Policy and Food provides for expenditures of the special fund in the amount of 2671.7 million UAH, of which to support the development of agricultural enterprises – only 54.3 million UAH that is 2% of the total. However, compared to the financing of the agro-industrial sector in other countries of the world, Ukrainian state support for agriculture is scarce (Figure 5).

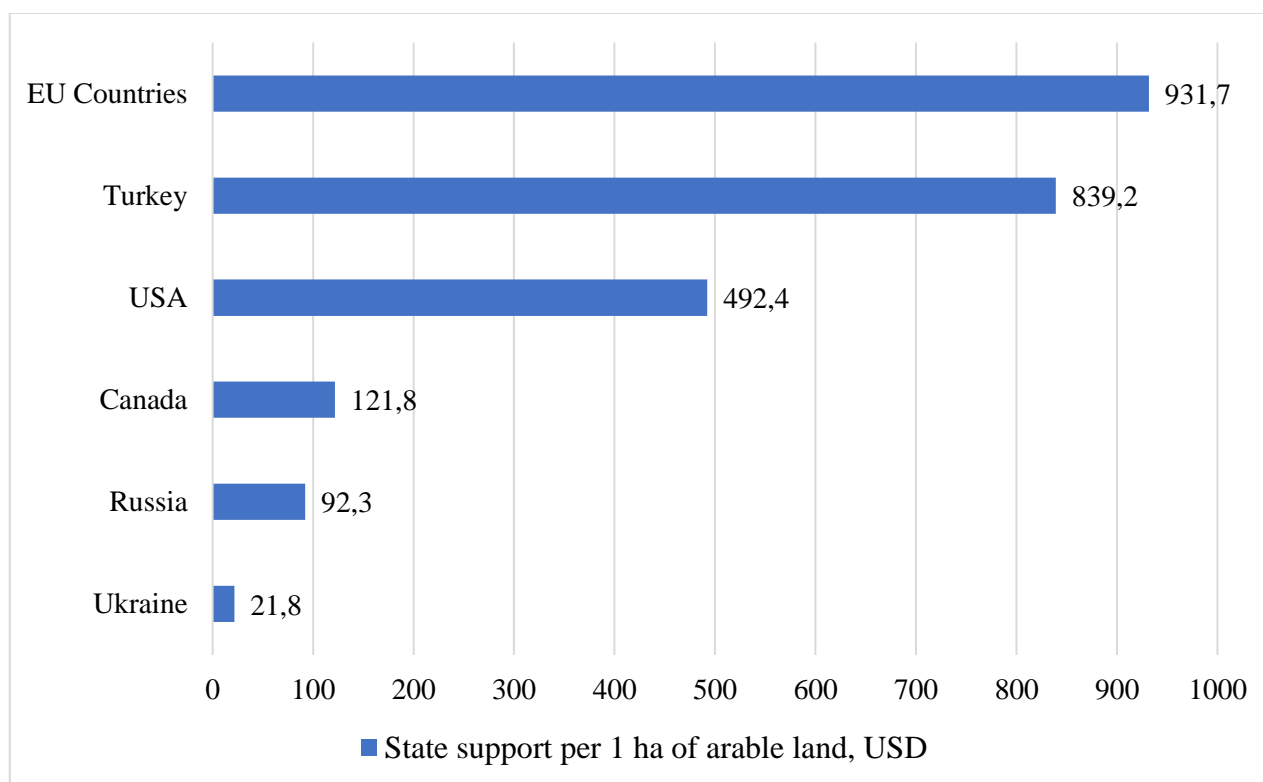


Figure 5. State support of agriculture in the world and in Ukraine

Source: Compiled according to the analysis of information from the OECD and the state budget of Ukraine (Kernasiuk, 2019).

Figure 5 shows that the highest level of state financial support per 1 ha of arable land in the EU is \$ 931.7, in Turkey – \$ 839.2. In the US it reaches about \$ 492.4, and in Canada – \$ 121.8. In general, the main trend of recent years is the reduction of direct state support for agricultural producers in Ukraine and many countries. However, even in the event of its fall, this level of support significantly exceeds that of Ukrainian farmers.

Analyzing the current state and main trends in the agro-industrial complex of Ukraine, it is impossible not to notice that the change of ownership and new formats of management, although contribute to the growth of labor productivity, but have little effect on its payment, which remains low. Thus, the financial resources of most agricultural enterprises provide only a minimum level of wages, using a direct piecework and a simple hourly wage system, in which the employee's income depends on the work performed or time worked. Such wages have a low impact on the final results of production. To increase the level of motivation and, as a result, labor productivity, it is necessary to link the earnings of workers with the final results of the agricultural enterprise (volume of output, level of income and profit).

One of the most important negative internal factors that significantly reduce the level of labor productivity for many years remains an inefficient system of employee motivation, as well as irrational organization of production. Therefore, at the state level it would be appropriate to introduce a perfect system of regulation of the motivational process, which would provide a set of economic, organizational, legal and administrative measures aimed at maximizing the efficiency of agricultural production and modifying working conditions. The motivational mechanism of work in the national agro-industrial complex has significant resources and potential for development, which can provide the vital interests and needs of the employee.

Increasing the level of labor efficiency is appropriate only when this process is based on increasing the gross output of agriculture. In the developed countries of the world (Holland, France, the USA, etc.) at the legislative level measures are introduced to limit the overproduction of certain types of agricultural products. Thus, the increase in productivity occurs under the condition of minimizing the volume of gross output (McConnell and Brue, 2004).

Another significant negative factor influencing the level of productivity in the national agro-industrial complex is the expansion of shadow economic processes, which cause disparities in socio-economic development not only in agriculture but also in the economy as a whole. In addition, the shadow economy inhibits the expansion of incentives and state-building processes in the country, does not contribute to the democratization of society (Lukashevich, 2012). The level of the shadow economy in Ukraine in 2018 was 47.2% of the country's total GDP and increased slightly compared to the previous year (46.8%). The basis for such indicators is the following types of tax evasion:

- 1) concealment of business income;
- 2) concealment of the actual number of employees;
- 3) concealment of the actual amount of salary paid or salary “in envelopes” (Ukrains’ka Pravda, 2019).

Today, the volume of GDP per hour worked is a generally accepted economic indicator that characterizes labor productivity. It is based on international comparative analysis and assessment of trends. It is more relevant for the characterization of the productivity indicator than the volume of GDP per workable person. Today the leaders in terms of GDP per hour worked among the countries of the world are Ireland, Latvia, Poland and Lithuania. In Ireland, due to the development of the IT sector, work efficiency increased by 50% between 2010 and 2020, while the national average was only 9%. Among other countries, an increase in GDP per hour worked is observed in China, due to the fact that 48% of global investment (which is attracted by startups in the field of artificial intelligence) was directed to the country, and 38% of it – to the United States (Shvabiy, 2019).

A separate problem is the lack of proper infrastructure for rural areas and businesses in Ukrainian villages, which should be centres of economic development. Of the total population (42.1 million), the share of rural residents is 31.1%. In fact, in 10 years the rural population has decreased by 16%. The economically active rural population aged 15 to 70 is now 5.6 million people. And the employment rate of the rural population in 2019 was 62.2% (Zhurakovs’ka, 2013).

Agriculture is the most labour-intensive and unproductive sector of the national economy of Ukraine, which in turn is the main budget-generating one. The main reason for the low level of labour productivity is the lack of high-tech investment in agriculture. And any investment and attracted human resources do not increase the scale of production, which has a negative tendency to fall sharply. That is why the search for methods and ways to increase productivity should begin with a revision of state economic policy. The essence of improving productivity is expressed in the fact that any changes in the functioning of the organization should reduce working hours for the production of goods, while increasing the amount of consumer value produced. Therefore, the measures taken by the Ukrainian authorities to increase the level of labour efficiency in the agro-industrial complex should be based on a comprehensive approach to rural development. Thus, the countryside should become a centre of economic development, which is facilitated by the current situation in the world market of agriculture. Rising food prices will continue for a long time and our state must take advantage of the favourable situation. First of all, for the development of a powerful agro-industrial complex, businesses must rely on stable rules of operation and clear rules of the game for at least 5 years ahead, because systemic investments in agriculture are long-term projects from 5 to 10 years.

Ukraine must increase its export potential in the direction of trade in finished products, not raw materials. Therefore, it is necessary to direct the vector of development in the direction of deep processing, which today, unfortunately, is almost absent.

Thus, among the priority areas of development of the national agro-industrial complex are the following:

- 1) high-tech investments in the agro-industrial complex;
- 2) deepening of processing;
- 3) development of infrastructure and entrepreneurship in rural areas;
- 4) technological re-equipment of the industry;
- 5) ensuring the predictability of the regulatory policy of the state;
- 6) improving the efficiency of public administration of the industry.

Modification of the tools of public administration of the agro-industrial complex and increasing the role of local executive bodies should take place by redistributing finances in favor of local authorities which are necessary for the implementation of measures for integrated rural development. Increasing the level of labour productivity in the field of agriculture, firstly, should minimize the level of production costs, and secondly – to increase the average wage. Absolute and relative wage increases are a powerful tool for motivating employees, as well as for solving staffing problems, which in turn will help solve the problem of low level of labour productivity.

Increasing labour productivity in agriculture is an important step in unlocking the export potential of the national agro-industrial complex, and the problem of finding effective tools to increase labour productivity requires a more detailed analysis of socio-economic processes such as investment processes, socio-labour relations and wage reform.

CONCLUSION

Today, the national agro-industrial complex is a labour-intensive and unproductive sector of Ukraine's economy, which in turn is the main budget-generating one. However, Ukrainian agribusiness lags behind the developed countries of the world and has a negative tendency to decline in labour productivity.

Based on the fact that agriculture is an industry with slow capital turnover and high dependence on direct natural and weather-climatic conditions, it needs support from the state. However, compared to the financing of the agro-industrial sector in other countries, Ukrainian state support for agriculture is extremely low. That is why the main reason for the low level of labour productivity is the low effect and deficit of high-tech investments in agriculture, as well as the insufficient level of state support for the industry, compared to the same indicator in other countries.

Therefore, the Ukrainian government, using foreign experience, should develop effective mechanisms to equalize the support of the national agricultural producer in order to increase productivity and ensure competitive advantages with foreign farmers who have a much higher level.

Thus, the measures taken by the Ukrainian authorities to increase the level of labour productivity in agriculture and the modification of management methods in agribusiness enterprises are an important step towards revealing the export potential of the agro-industrial complex of Ukraine.

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УПРАВЛІННЯ ПРОДУКТИВНІСТЮ ПРАЦІ НА ПІДПРИЄМСТВАХ СІЛЬСЬКОГОСПОДАРСЬКОЇ ГАЛУЗІ УКРАЇНИ

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Агропромисловий комплекс є одним з основних бюджетоформуєчих секторів національної економіки України, агробізнес відкриває перспективи лідерства для нашої держави на світовому ринку. Тому, важливим кроком для розкриття експортного потенціалу української продукції АПК є аналіз актуальних проблем та пошук шляхів посилення конкурентних позицій України на світовому ринку, зокрема за рахунок підвищення продуктивності праці, яка є одним із найважливіших критеріїв оцінки діяльності будь-якої економічної системи. Метою статті є дослідження актуального рівня продуктивності праці в національному агропромисловому секторі, порівняльний аналіз методів управління результативністю праці в Україні та розвинених країнах світу, а також пошук шляхів підвищення продуктивності праці в галузі сільського господарства, за рахунок ліквідації основних бар'єрів розвитку АПК України. Результати дослідження висвітлюють причини низького рівня продуктивності праці та пропонують пріоритетні напрями політики держави із розвитку національного АПК.

Ключові слова: агропромисловий комплекс, експортний потенціал, продуктивність праці, сільське господарство, державне регулювання.

**УПРАВЛЕНИЕ ПРОИЗВОДИТЕЛЬНОСТЬЮ ТРУДА
НА ПРЕДПРИЯТИЯХ СЕЛЬСКОХОЗЯЙСТВЕННОЙ ОТРАСЛИ УКРАИНЫ**

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Агропромышленный комплекс является одним из основных бюджетобразующих секторов национальной экономики Украины, агробизнес открывает перспективы лидерства для нашего государства на мировом рынке. Поэтому, важным шагом для раскрытия экспортного потенциала украинской продукции АПК является анализ актуальных проблем и поиск путей усиления конкурентных позиций Украины на мировом рынке, в том числе, за счет повышения производительности труда, которая является одним из важнейших критериев оценки деятельности любой экономической системы. Целью статьи является исследование актуального уровня производительности труда в национальном агропромышленном секторе, сравнительный анализ методов управления результативностью труда в Украине и развитых странах мира, а также поиск путей повышения производительности труда в отрасли сельского хозяйства, за счет ликвидации основных барьеров развития АПК Украины. Результаты исследования освещают причины низкого уровня производительности труда и предлагают приоритетные направления политики государства по развитию национального АПК.

Ключевые слова: агропромышленный комплекс, экспортный потенциал, производительность труда, сельское хозяйство, государственное регулирование.

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OPTIMIZATION OF DESTANA POLICIES (RESILIENCE DISASTER VILLAGE) TO IMPROVE COMMUNITY PREPAREDNESS FOR FLOOD DISASTER IN BOJONEGORO DISTRICT, INDONESIA

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Abstract. Natural disasters are one of the impacts on environmental dynamics, both natural and as a result of human behavior. The Destana (Disaster Resilient Village) policy is one of the programs created by BNPB (National Disaster Management Agency) and implemented by BPBD (Regional Disaster Management Agency) as one of the government's efforts in dealing with disaster problems. The purpose of the study is to describe how Destana plays an optimal role in increasing community preparedness in dealing with floods. Using a qualitative approach, this study conducted observations on 11 Destana in Bojonegoro, conducted interviews with BPBD and each Destana coordinator and documented the activities Destana had carried out to improve community preparedness. The first finding in the implementation of Destana is a medium for the community together with stakeholders in disaster management to carry out activities related to increasing community knowledge about flood preparedness. The second result is that through Destana the community becomes more aware of its environment and has a responsibility to protect itself. Finally, there is a pattern of optimizing the use of rural resources to be used in every Destana activity. The three results indicate that Destana has been used and is running optimally in an effort to increase community preparedness in facing flood disasters. Optimizing the use of Destana in this study shows that the community plays an active role by utilizing their local knowledge and resources. In addition, the government remains the main actor in implementing disaster preparedness policies.

Keywords: policy implementation, Destana, flood disaster, preparedness.

JEL Classification: D78, J24, R58.

INTRODUCTION

Disaster is a phenomenon that we cannot avoid in environmental development. Disasters themselves have become an important part of scientific development today. This proves that disasters are indeed an important part and should not be ignored so that humans can continue their lives properly. It is a shared responsibility to create a sustainable system regarding the environment and its use. Sustainable efforts are a challenge for both the community, government and all existing stakeholders, especially in disaster. The government is indeed an important part of disaster management efforts in a country. The government has an obligation to protect its territory and the people who live in the areas they lead, of course by optimizing all their capabilities (Bramley and Kirk, 2005; Patel, 2014; Parthasarathy, 2015).

Indonesia is a country with quite specific geographical, climatic and hydrological conditions that trigger many natural disasters (BNPB, 2017). The disaster, which was dominated by flooding for the last 5 years or so, has made the government and society more concerned about this flood disaster. The trends of disaster events in Indonesia during 2014 to 2019 can be seen in Table 1 below.

Table 1

Trends of disaster events in Indonesia in 2014 – 2019

<i>No</i>	<i>Disaster</i>	<i>Total</i>
1	Flood	7.768
2	Landslide	4.748
3	Abrasion	281
4	Tornado	6.047
5	Drought	1.204
6	Forest and Land Fires	929
7	Earthquake	145
8	Tsunami	5
9	Earthquake and Tsunami	1
10	Volcanic Eruption	111

Source: Calculated by authors based on BNPB statistical data, 2014-2019.

The data in table 1 illustrates that flood disasters have been the most frequent disasters for 5 consecutive years, starting from 2014 to 2019. A total of 7,768 flood events have occurred in 5 years, of course, making each region continue to be aware of the disasters that occur. The number of flood disasters each year is not the same and shows fluctuating developments with various causes of flooding as part of natural disasters. Table 2 states that the development of the number of flood events in each year is a separate form of alertness for each region.

Table 2

Number of floods in Indonesia in 2014 – 2019

<i>Year</i>	<i>National Flood</i>	<i>East Java Flood</i>
2019	790	99
2018	679	84
2017	979	130
2016	824	148
2015	525	87
2014	596	76

Source: Calculated by author based on BNPB statistical data, 2014-2019.

The development of the number of flood events on a national and local scale, namely in East Java, which has been listed in table 2 illustrates a complicated problem that flooding as the most frequent disaster can occur at any time and the community must continue to be vigilant. There is an increasing trend every year, namely 2014 to 2016 and 2018 to 2019, which is a separate warning to the regions to continue to increase their awareness of flood disasters. Efforts to deal with disasters and also to increase awareness of the region and also the community are a challenge in facing floods. Regions have their own way of resolving disasters in their respective territories, this is a part of institutional decentralization in disaster management. (Korthal, 2002; Patel, 2014) The research on disaster management speaks a lot about institutions or government (Kusumasari, et al, 2010; Mashi et al, 2019; Sant'anna, 2018), about community involvement in the implementation of disaster policy (Ireni-Saban, 2013; Habibullah, 2013; Siriporananon et al, 2018; Otani et al, 2018), while disaster preparedness and mitigation (Rusli, et al, 2018; Tiwow, et al, 2019) are also an important concern in the studies.

The government, both at the central and regional levels, has issued various policies related to disaster management starting from the mitigation process, emergency response to recovery. This policy was initiated from the existence of Law (UU) No. 24 of 2007 concerning disaster management, followed by the existence of Government Regulation (PP) No. 21 of 2007, and at the local level in Bojonegoro District, a policy of Bojonegoro District Regulation No. 7 of 2012 on the prevention of disasters was made. In addition to these disaster management policies that are used as a reference, there are policies from the government regarding disaster management systems that involve the community as a form of community preparedness. The government must take part in efforts to improve community preparedness in dealing with disasters by facilitating the entire process (Helsloot and Ruitenbergh, 2004).

The Disaster Resilient Village Program (Destana) is a program to improve community preparedness in the face of disasters. The implementation of the Destana program is regulated in Regulation of the Head of the National Disaster Management Agency Number 1 of 2012 concerning General Guidelines for Disaster Resilient Villages / Villages (Perka BNPB No. 1/2012). The implementation of this Destana policy is an important part to pay attention to in an effort to improve community preparedness in facing disasters. This program suggests that people are being educated to be more independent and adaptive in dealing with disasters. The implementation of the Destana program and the success of this program are very closely dependent on the community in

its efforts to overcome it. This article describes how the community implements the Destana program so that their preparedness in facing disasters can be well and strong.

LITERATURE REVIEW

The literature review in this article is divided into two groups, the first is policy implementation and the second is disaster management. In principle, policy implementation is about how a policy is implemented by the organization properly. (Munawaroh, 2019). In policy implementation theory, it is stated that policies are implemented by an organization. Observations in policy implementation are carried out starting from the time the policy is ordered to an organization so as to create its dynamic implementation within the organization. (Montjoy and O'Toole, 1979). The policy implementation process model presents a relationship between each sub-system to form a process in policy implementation within an organization. Van Meter and Van Horn (1975) describe the cycle of the policy delivery process model as in Figure 1 below:

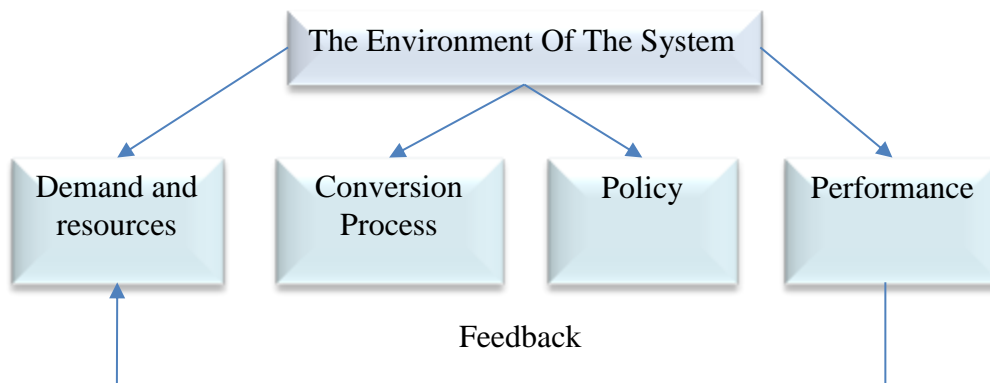


Figure 1. Policy Delivery Process

Source: Adapted from Van Meter, D. S., and Van Horn, C. E. (1975).

Figure 1 shows that there are six components in the policy implementation process. The first component is the environment, namely the environment that can make government officials provide a policy and receive products from their policies. The second component is the demands and resources from the environment on policy makers. The third component is the conversion process in which there is a formal structure and government procedures. This conversion process includes a process that converts requests and resources into a policy. The fourth component is policy, where this policy describes the formal goals, intentions, or statements of government officials. Next is the fifth component, namely policy performance, where the policy performance will be closely related to policy users. The final component is the policy feedback, the results of which will be the demands and resources going forward.

This component is an important part of implementing policies in an organization, that a policy and its implementation are strongly influenced by the environment of the existing system. In developing countries policy implementation is strongly influenced by the existing system environment. This is illustrated by the output of existing policies and tends to be ambitious towards expanding development and social reform. Many factors can weaken government policies, namely lack of human resources, weak control from the leadership, policy opposition, and corrupt behavior. (Smith, 1973). The problems resulted from public policy both to the government and society make

the policy implementation process room to develop. Figure 2 shows that there are important components in the policy implementation process. (Smith, 1973).

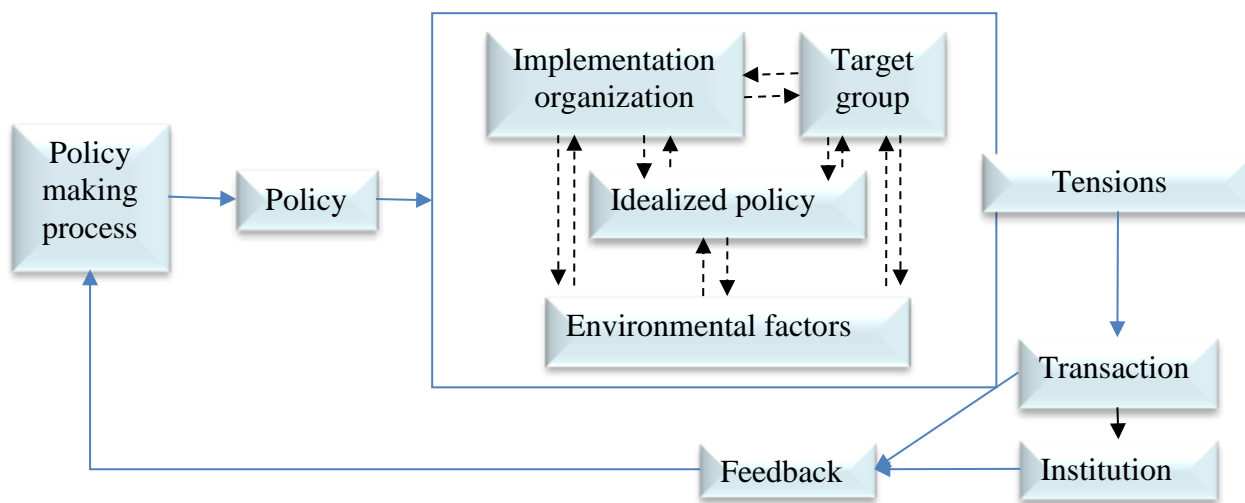


Figure 2 Policy Implementation Process

Source: Adapted from Smith (1973).

According to Figure 2 there are four important components in the policy implementation process. The first component is the ideal policy, the second component is the implementing organization, the third component is the target group, and the fourth component is environmental factors. When policies are implemented, interactions within and among the components of the policy implementation system generate discrepancies and tensions. Tensions produce transaction patterns that have the purpose of the policy and it is possible that transaction patterns can result in institutionalization. Feedback in the form of easing or increasing tensions turns into the tension generating matrix of transaction patterns and institutions.

The second. The literature on disaster management in the previous research on disaster policy implementation also received serious attention in policy developments on the topic of disaster. Disaster preparedness is measured through 5 elements, namely: disaster knowledge, disaster policies, disaster preparedness plans, early warning systems and the ability to mobilize resources (Deny Hidayati et al, 2006). In the disaster preparedness process a linkage between each of the existing elements is needed for the community to understand the subject and create a disaster-prepared community. Therefore, it is very important to emphasize disaster preparedness, especially at the community level to minimize losses from future disasters. (Ainuddin and Routray, 2012)

The Disaster Resilient Village Program (Destana) itself was created to prepare communities and regions so that they are better prepared in the event of a disaster at any time in the area. This readiness can be seen through indicators of risk reduction and disaster impact. Destana aims at community-based disaster management in the area with organizational components that include not only volunteer teams but from the Disaster Risk Reduction Forum (FPRB), facilitators and other stakeholders. (Habibullah, 2013). The community and other stakeholders are very important to be involved in the disaster management process because in disaster prevention the government and intervention from institutions will not be sufficient to overcome the dynamics developing in the community. (Yodmani, 2001).

When local people are given the freedom to care more about their environment, they are often not aware of the importance of disaster management as the information on disaster vulnerability in

the area is weak and the community's ability to handle it is insufficient as well due to the lack of local resources and facilities for disaster management. (Yodmani, 2001). The pattern of community development in an effort to build disaster preparedness is characterized by high social capital and careful decision making. (Buckland and Rahman, 1999). In addition, there are NGOs that position themselves as advocacy teams and legal support for local communities in the face of increased risk of disasters due to nature, development or human-caused environmental damage (Luna, 2001).

There are efforts to develop local capacity so that they are able to build a disaster preparedness system. It consists of four actions, namely a) dissemination of technical information and provision of training; b) increase awareness of disaster risk and vulnerability; c) exploring local knowledge and resources; d) mobilizing local communities. (Allen, 2006). Raising public awareness on point b is very important and is achieved by carrying out an education process about disasters. It can increase the response of citizens about their readiness to face disasters in the future. (Hafida, 2019). Figure 3 below shows how the Destana policy implementation process can improve community preparedness.

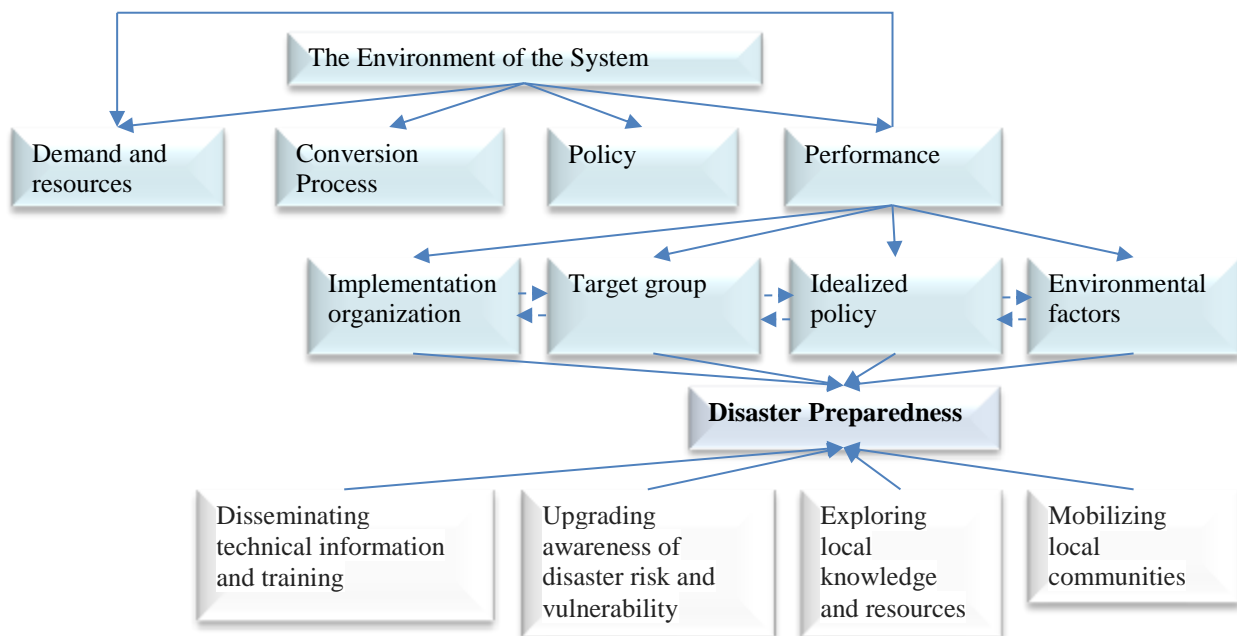


Figure 3 The Destana Policy Implementation Process in an effort to improve community preparedness

Source: Adapted from Smith (1973), Van Meter and Van Horn (1975) and Allen (2006).

Figure 3 can explain how a policy can work well and achieve the desired goals. So the chain of command and objectives in implementing a policy must be considered. The number of commands in a policy makes the implementation of the policy unable to be carried out by one party but requires the participation of more than one party. This makes the implementation of the policy difficult to control by just one actor, but each party concerned must coordinate with each other (Montjoy and O'Toole, 1979). It was also stated that the effectiveness of policy implementation requires bottom-up coordination so that it can provide legitimacy and lead to effective collaboration. (O'Toole Jr, 2004). The collaboration is needed to provide social, economic and environmental developments and overcome a tendency to develop vulnerability risks in society in the future. (Kapucu et al, 2013).

PAPER OBJECTIVE

This study aims to describe how to optimize Destana's role in increasing community preparedness in floods. This optimization will be illustrated using a policy performance process model adapted from Smith (1973), Van Meter and Van Horn (1975) and Allen (2006). This model will be used by the authors to describe, identify, map and analyze policy performance indicators so that the implementation of the Destana policy can work optimally in improving disaster preparedness in Bojonegoro Regency.

METHODOLOGY

There is used a qualitative approach with descriptive analysis in this article. The data were collected through observation, interviews and documentation. Observations were made by observing the development and implementation of activities in the Resilient Disaster Village (Destana), Bojonegoro District. Interviews were conducted with informants, namely the Head of the Mitigation Section at the Regional Disaster Management Agency (BPBD) Bojonegoro District as well as the Village and Community Heads from 11 Resilient Disaster Villages. The 11 villages are Piyak Village, Kabalan Village, Cangakan Village, Sarangan Village, Kedungprimpen Village, Gedongarum Village, Kalisari Village, Tulungagung Village, Bogo Village, Mojo Village and Pilangsari Village.

Furthermore, documentation is also carried out in the data collection process by collecting information from secondary data in the form of policies, written reports and visual reports. The data collected was validated using the triangulation technique of data sources, namely conducting cross-checks of information from informants as well as from observation data and documentation that had been collected. The analysis technique was performed using an Interactive Model by Miles and Huberman (1992). After the data is collected, data reduction is carried out where the information that has been collected is identified in order to produce the data needed to answer the research questions. The last is reporting, which is compiling a systematic report from the data that has been identified so that a conclusion and solution to the problems in the research can be obtained.

RESULT AND DISCUSSION

1. The Destana Policy Implementation Process

The process of implementing the Destana policy is carried out by a village-level organization where the community also takes part in its implementation. There are four elements in the implementation of the Destana policy. First is the implementing organization, second is the target group, third is the ideal policy, fourth is the environmental factor.

a. In the first element, namely the implementing organization, the Destana program is carried out by the Village with all its instruments which are directly monitored by the Regional Disaster Management Agency (BPBD). At 11 Destana in Bojonegoro District, the Village Head was asked to appoint a volunteer coordinator, where the coordinator would later lead the volunteer team and forward disaster information from BPBD. The volunteer formed the name Working Group (Pokja) in which there were activities about the Destana program.

b. The second element is the target group, in Destana the target group here is the people in the Disaster Resilient Village. The entire community must participate in mitigation efforts and improve disaster preparedness. Therefore, Destana's volunteer coordinator formed a team to later guide residents in the form of socialization and training on disasters. The team in each Destana in Bojonegoro District consists of approximately 30 people who have different competency

backgrounds, ranging from village officials, community leaders, village midwives, security, youth leaders and so on.

c. The third element is the ideal policy in the Destana program. The Destana Program is a program created by the National Disaster Management Agency with the main objective of reducing disaster risk in disaster-prone areas. The government strives to reduce disaster risk by increasing the capacity of village institutions by involving the community so that they can be adaptive and ready to face disasters that have already occurred or those that will occur. Destana in Bojonegoro District has shown a pattern for institutions to be more active in efforts to reduce disaster risk and prepare people for disasters. This is evidenced by the reduced impact caused by the flood disaster in Bojonegoro District. In addition, the public knows more about disaster information and the level of compliance with disaster information has also increased.

d. The fourth element is environmental factors, in the implementation of the Destana Program in Bojonegoro District this environmental factor consists of the external and internal environment. External factors are the environmental conditions of the area and the institution itself, Bojonegoro District is a disaster-prone area, especially floods and droughts. The high fluctuation of water discharge makes it prone to natural disasters in every season. During the rainy season the water flow is large, the river basin will be flooded, on the contrary, when the dry season the water discharge is small, the water will not come out of the source, causing drought. Facilities and infrastructure are needed to anticipate this disaster. Destana in Bojonegoro District has also various activities which are budgeted by BPBD Bojonegoro District. The construction of embankments, tree planting, and other structural mitigation are also carried out to increase the capacity of villages in disaster preparedness. Internal factors, namely motivation and public awareness of the importance of prevention and preparation for disasters, are also carried out by conducting activities on disaster education in the form of socialization and training on disaster mitigation to all elements of society.

2. Optimization Destana to Improve Community Preparedness

The Destana policy implementation process is divided into four important elements in its implementation. Destana, which has the goal of reducing disaster risk in communities in disaster-prone areas, is manifested in community preparedness in facing disasters. Of course, the implementation process for each element of the Destana policy must be synchronized with its objective, namely disaster preparedness. Disaster preparedness is measured through the four actions described below.

a. Disseminating technical information and providing training

The Destana program that has existed in Bojonegoro District since 2017 has grown rapidly, each year adding 5 villages that are trained and formalized as Disaster Resilient Villages. The information was given to both the residents and the Destana coordinators in each village to urge them to care about environmental developments as well as information about disaster risks in their area. The village head was appointed a Destana coordinator who then formed a Destana volunteer team. This team of volunteers is given training by BPBD in collaboration with related agencies in disaster management efforts. The volunteer team is given training for approximately 7 days in accordance with their respective fields. The health team consists of village midwives, an education and counselling team consisting of the village teachers, a security team consisting of the village security officers, and village youth and volunteers who will be given ongoing training by those who have received training from the BPBD. The implementation of the Destana Program is a medium for the community and stakeholders in disaster management to carry out activities related to increasing community knowledge about flood preparedness. Besides the apparatus and the community, the stakeholders here are also NGOs that provide disaster information and disaster mitigation training through their cadres and later this will be socialized to the general public in the village.

b. Increasing awareness of disaster risks and vulnerabilities

Public awareness is also an important part of disaster management. People who are aware of disaster risks are considered to be more concerned about the environment so that they can minimize the risk and impact of disasters. The existence of a disaster curriculum that has been created by the Bojonegoro District government has made the Destana team take part in the process of socialization and disaster education in educational institutions both formally and informally. The curriculum in education is made on the basis of the needs of the object by taking into account the availability of resources, and other supporting factors. (Zamili, 2020). Thus the disaster curriculum in Bojonegoro District was created because people really need it. The Coordinator and the Destana team participated in several events on disaster mitigation training for children and adolescents in the village environment. This collaborative pattern makes community awareness efforts in the village about disaster risk and vulnerability more effective. The results range from children to the elderly, the community knows how they act when a disaster occurs, about their efforts to minimize the impact of disasters and how to recover from existing disasters, both from material and psychological aspects. Through Destana the community becomes more aware of their environment and has a responsibility to protect it.

c. Exploring local knowledge and resources

The potential of local resources in each region is not the same, so how to use them does not have to be the same. In Bojonegoro District each village has not the same resource potential, both human and natural. In one of Destana, starfruit agro-tourism also offers flood tourism, where tourists can still enter tourist sites in a flooded state by taking a boat and picking starfruit on the boat when it is flooded. In addition, utilizing tourism potential also exists in the Destana area where there are dams and reservoirs as part of the government's efforts to overcome large water flow fluctuations. The development of the tourism sector can encourage the realization of cleanliness, health, environmental conservation programs as well as great benefits for the sustainability of people's lives. (Lestari, 2020). In implementing the Destana activities the community also uses existing resources in the area to improve community competence regarding disasters. One of the local resources is the knowledge of the village community to detect disasters by looking at natural responses, be it plants or their surroundings. This has greatly helped the successful implementation of the Destana activities to reduce the disaster risk. In conclusion, the pattern of optimizing the use of rural resources is used in every Destana activity.

d. Mobilizing local communities

The movement of rural communities is indeed a separate concern of conventional village communities vulnerable to the impact of cultural developments. The new information makes all sectors cooperate with one another in implementing disaster policies. Fostering public awareness so that they move in a sustainable manner to remain concerned about the environment and disasters is the main task of the Destana volunteer team. At Destana in Bojonegoro District the local community is quite active in playing a role in the implementation of the Destana program. This is evidenced by the enthusiasm of the community when conducting periodic disaster mitigation trainings. In addition, the local community has qualified local knowledge related to disasters, so it only needs to be synchronized with government programs in disaster management. This synchronization will later create an adaptive and collaborative policy in disaster management.

At these four stages, efforts have been made to maximize the implementation of Destana. So that it can be judged that the optimization of the implementation of Destana has been carried out by all components that play a role in the implementation of the Disaster Resilient Village policy in Bojonegoro District. Figure 4 below describes the work pattern of the Destana policy implementation in an effort to increase community preparedness in facing flood disasters in Bojonegoro District.

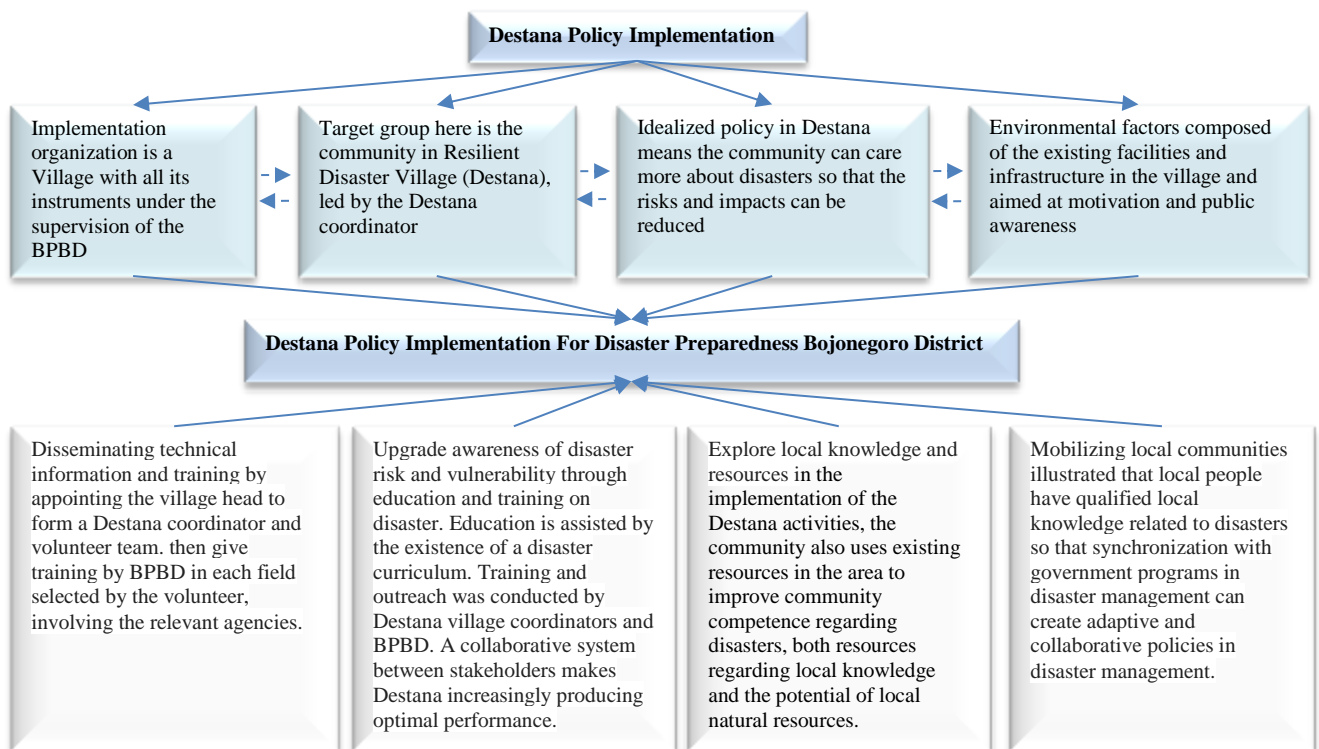


Figure 4 Implementation of the Destana policies for community preparedness in Bojonegoro District

Source: Own compilation.

In Figure 4 it is described that the Destana policy implementation is measured through four elements, namely the implementation organization, target group, idealized policy and environmental factors. Meanwhile, to realize community preparedness through Destana it is seen by four indicators, namely disseminating technical information and training, upgrading awareness of disaster risk and vulnerability, exploring local knowledge and resources, mobilizing local communities.

CONCLUSSION

In the implementation of disaster resilient village policies the first four important elements are obtained, namely Implementation organization is a Village with all its instruments under the supervision of the BPBD. The second element is the Target group, here is the community in Disaster Resilient Village (Destana) led by the Destana coordinator. Third is the idealized policy in Destana which means that the community can care more about disasters so that the risks and impacts can be reduced. The last element is environmental factors composed of the existing facilities and infrastructure in the village as well as motivation and public awareness.

In optimizing the Destana policy to improve community preparedness in facing disasters, four indicators of preparedness were found. The first is disseminating technical information and training by appointing the village head to form a Destana coordinator and volunteer team through training by BPBD in each field that has been selected by the volunteer, involving the relevant agencies. Second is upgrading awareness of disaster risk and vulnerability through education and training on disasters. Education is assisted by the existence of a disaster curriculum. Training and outreach was

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conducted by the Destana village coordinators and BPBD. A collaborative system between stakeholders makes Destana increasingly producing optimal performance. The third is to explore local knowledge and resources in the implementation of the Destana activities. The community also uses existing resources in the area to improve community competence regarding disasters, both resources regarding local knowledge and the potential of local natural resources. Finally, mobilizing local communities proves that local people have qualified local knowledge related to disasters so that the synchronization with government programs in disaster management can create adaptive and collaborative policies in disaster management.

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ОПТИМІЗАЦІЯ ПОЛІТИКИ ДЕСТАНА (СЕЛО СТІЙКОСТІ) ДЛЯ ПІДВИЩЕННЯ ГОТОВНОСТІ СПІЛЬНОТИ ДО ПОВЕНІ В РАЙОНІ БОДЖОНЕГОРО, ІНДОНЕЗІЯ

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Стихійні лиха – це один із впливів на динаміку навколишнього середовища, як природний, так і результат людської поведінки. Політика Destana (село, стійке до стихійних лих) – одна з програм, створених ВНРВ (Національне агентство з питань ліквідації наслідків стихійних лих) та реалізовуваних ВРВД (Регіональне агентство з управління стихійними лихами) як одна із зусиль уряду щодо вирішення проблем стихійних лих. Мета дослідження полягає в тому, щоб описати, як Дестана відіграє оптимальну роль у підвищенні готовності громади до боротьби з повенями. Використовуючи якісний підхід, це дослідження проводило спостереження за 11 Дестанами у Божонегоро, проводило інтерв'ю з ВРВД та кожним координатором Дестани та документувало діяльність, яку Дестана проводила для покращення готовності громади. Перший висновок у впровадженні Дестани – це засіб для спільноти спільно із зацікавленими сторонами в галузі управління катастрофами для здійснення заходів, пов'язаних із підвищенням знань громади про готовність до повені. Другий результат полягає в тому, що завдяки Дестані громада стає більш обізнаною про своє оточення і несе відповідальність за захист себе. Нарешті, існує схема оптимізації використання сільських ресурсів, яка використовуватиметься в кожній діяльності Дестани.

Ці три результати вказують на те, що Дестана використовується і працює оптимально, намагаючись підвищити готовність громади до боротьби з повеннями. Оптимізація використання Дестани у цьому дослідженні показує, що громада відіграє активну роль, використовуючи свої місцеві знання та ресурси. Крім того, уряд залишається головною дійовою особою у реалізації політики готовності до стихійних лих.

Ключові слова: реалізація політики, Дестана, катастрофа, повені, готовність.

ОПТИМИЗАЦИЯ ПОЛИТИКИ ДЕСТАНА (ДЕРЕВНЯ УСТОЙЧИВОСТИ) ДЛЯ ПОВЫШЕНИЯ ГОТОВНОСТИ СООБЩЕСТВА К НАВОДНЕНИЮ В РАЙОНЕ БОДЖОНЕГОРО, ИНДОНЕЗИЯ

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Стихийные бедствия – одно из воздействий на динамику окружающей среды, как природных, так и в результате человеческого поведения. Политика «Дестана» («Деревня, устойчивая к стихийным бедствиям») – одна из программ, созданных BNPB (Национальное агентство по управлению стихийными бедствиями) и реализуемых BPBD (Региональное агентство по управлению стихийными бедствиями) в качестве одной из мер правительства по решению проблем стихийных бедствий. Цель исследования – описать, как Дестана играет оптимальную роль в повышении готовности населения к борьбе с наводнениями. Используя качественный подход, в этом исследовании были проведены наблюдения за 11 Дестанами в Боджонегоро, проведены интервью с BPBD и каждым координатором Дестаны и задокументированы действия, которые Дестана осуществила для повышения готовности сообщества. Первый результат внедрения Destana – это средство для сообщества вместе с заинтересованными сторонами в управлении стихийными бедствиями для выполнения действий, связанных с повышением осведомленности сообщества о готовности к наводнениям. Второй результат заключается в том, что благодаря Дестане сообщество становится более осведомленным об окружающей среде и обязано защищать себя. Наконец, существует модель оптимизации использования сельских ресурсов, которые будут использоваться во всех сферах деятельности Дестаны. Три результата показывают, что Дестана работает оптимально, чтобы повысить готовность населения к стихийным бедствиям, связанным с наводнениями. Оптимизация использования Дестаны в этом исследовании показывает, что сообщество играет активную роль, используя свои местные знания и ресурсы. Кроме того, правительство остается главным действующим лицом в реализации политики готовности к стихийным бедствиям.

Ключевые слова: реализация политики, Дестана, наводнение, готовность.

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THE EDUCATION PROCESS VIEWED FROM THE STANDARD-BASED EDUCATION PARADIGM IN PUBLIC SCHOOLS: A CASE FROM CENTRAL JAVA, INDONESIA

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Abstract. This study aims to analyse Indonesia's education process using a standard-based education paradigm in the process aspect. The study focused on public high school students on four educational standards released by the Central Java Provincial Education Quality Assurance Agency. Methodology: Case studies were selected based on data from national education standards. Data analysis processed using ATLAS.ti version 8. The research findings: the results showed the absence of regulations regarding improving teacher qualifications had worsened the standard achievement. Excessive implementation of educational concepts and ignorance of collaborative assessment of spiritual aspects obscures religious tolerance as a hallmark of Indonesian education.

Keywords: education process, standard-based education paradigm, central java province.

JEL Classification: I2, I21, I28.

INTRODUCTION

Today, Indonesia's education process emphasises the transformation of experience into knowledge rather than the transfer of knowledge. This can be seen from the practice of the 2013 revised 2019 curriculum, which emphasises a scientific approach; real-life learning, democratic procedures, and scientific processes, which are Dewey's concepts (Dewey, 2004). Discovery learning and collaborative learning strategies are offered to produce satisfying results to replace a school-based curriculum that was implemented from 2006 to 2012 (Suprpto, 2016). The education paradigm has also been shifted from teacher-centered learning to student-centered learning (Chang et al., 2013). Changes in curriculum and education paradigm did not show significant results in PISA, both in 2012 (64 out of 65 countries), 2015 (fourth from bottom), until the latest report 2018 ranked 72 out of 77 countries (PISA, 2015, 2018, 2012).

The standardised education expectations began since the issuance of Government Regulation of the Republic of Indonesia Number 19 of 2005 concerning National Education Standards which contained the quality of inputs, processes, and outputs. Then in 2013 it was revised on aspects of the content standards (process) and graduate competency standards (output). Drastic changes in content standards and assessment standards by including 21st-century skills formulations, authentic

assessments, and higher-order thinking skills assessments that occurred between 2017 and 2019. The education process is examined in terms of content, process, teacher, and assessment standards. The teacher's role is an input and a comparison factor to the standard process in the paradigm of standards-based education. As definitively standard-based education paradigm is a minimum criterion of the education system in the entire jurisdiction of the Unitary Republic of Indonesia. This is interesting because from the results of a comparative analysis between East Java, Central Java, and West Java, the element of asymmetric teachers with educational process achievements. The most obvious contradiction is seen in the province of Central Java as a locus of research because this province is the first pilot of 34 provinces in Indonesia regarding anti-corruption education and is the first province to stipulate Governor Regulation No. 10 of 2019 concerning the Implementation of Anti-Corruption Education. Not only that, but Central Java also achieved a portrait of the SDGs in mid-2018 (Agency, 2018).

The results of several studies indicate that the qualifications and competence of teachers largely determine the quality of learning (Black and Wiliam, 2006), the quality of assessment management to the quality of education (Hill et al., 2012). This phenomenon is contrary to the reality that occurred in Central Java. Apart from the above problems, the facts show that the implementation of the scientific approach to the 2013 curriculum in Indonesia is in the medium category or not at the analysis stage (Suyanto, 2018). The lack of use of the latest learning models is not appropriate between the stages of the scientific approach and pedagogical competence (Zaim, 2017). Besides, teachers are still confused about applying the scientific approach and linking it with the assessment of attitude, spiritual, and skill aspects.

LITERATURE REVIEW

The standards-based education paradigm established by the National Education Standards Agency is used as a theoretical basis for studying the educational process. This paradigm has a philosophical foundation on the values of the Pancasila, which accommodates the diversity of tribes, religions, races, and between groups (Kemendikbud, 2012). The theoretical foundation of the Indonesian education process is based on the UNESCO concept of learning to be, learning to do, learning to live together (Faure et al., 1972) and the Bruner theoretical framework (Bruner, 1977; Fusarelli and Johnson, 2004) which was translated in Minister of Education and Culture Regulation of the Republic of Indonesia Number 22 of 2016 concerning Basic and Secondary Education Process Standards, 2016. For content standards, it is based on Anderson and Krathwohl's revision of cognitive processes (Anderson et al., 2001; Krathwohl, 2002). The cognitive process of Anderson and Krathwohl above is translated into two regulations: (a) Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 21 of 2016 concerning Standard Content of Elementary and Secondary Education, (b) Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 103 of 2014 concerning Learning on Basic Education and Secondary Education. Through these regulations, the learning process is named a scientific approach.

Organising learning experiences summarised in a scientific approach consists of five steps: observing, questioning, experimenting, associating, and communicating. The process is embedded with authentic assessments (Gulikers et al., 2004; Kemendikbud, 2013) and applying higher-order thinking skills to measure aspects of knowledge, attitudes, and skills (Brookhart, 2010; Kemendikbud, 2013). Thus, the learning process through assessment, since 2013, followed the 2013 curriculum format (Pratiwi, 2019). From a school-based curriculum to the 2013 curriculum, national education standards are adjusted between the eight standards on behalf of curriculum development. Eight national education standards are the minimum criteria for the education system in the entire jurisdiction of the Unitary Republic of Indonesia is shown in the following Figure 1.

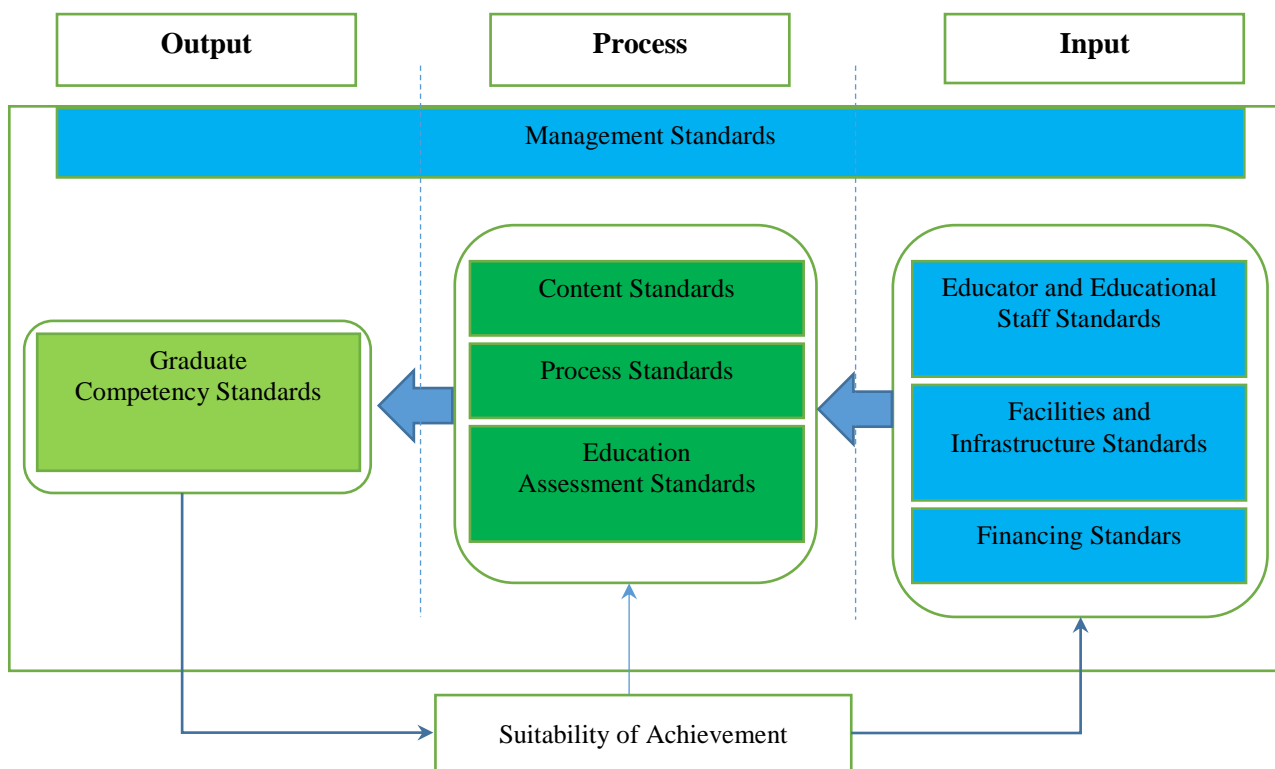


Figure 1. Standard Based Education Paradigm

Source: National Education Standards Agency, 2019.

Standards-based education aims to manage students' knowledge, attitudes, and skills competencies. In this study, the three competencies are processed based on four main categories, namely: (a) content standards, (b) process standards, (c) education assessment standards, (d) educator and education staff standards. The content standard contains the formulation of graduate competencies, curriculum development procedures, and curriculum implementation. Implementing the scientific approach to the 2013 curriculum in Indonesia is in the medium category or not at the analysis stage (Suyanto, 2018). The lack of use of the latest learning models (Gunawan, 2017), is not appropriate between the steps of the scientific approach and pedagogical competence (Zaim, 2017). Besides, teachers are still confused about applying the scientific approach and linking it with assessing attitude, spiritual, and skill aspects. Some of the studies above contradict the high teacher qualifications in five districts/cities, which were 96.55% in Pekalongan, Surakarta 98.32%, Tegal 97.78%, Semarang 98.44%, Salatiga 98.19% with an average: 97.9 in 2019 (Disdikbud-Jateng, 2019).

Process standards contain planning, process, and assessment of learning. Educational assessment standards include (a) aspects of assessment and competence, (c) objectivity and accountability of assessment techniques, (d) follow-up assessment, (e) appropriateness of instruments and competency aspects, (f) assessment procedures. The above elements are managed by teachers, education units, and the government. Recent developments in the national mass media show that learning plans' preparation is simplified into one sheet. This saves on administrative procedures efficiently and effectively is done so that the teacher has plenty of time to prepare and evaluate the learning process. Thus, what is written in the learning implementation plan will be acted out in the learning process. Meanwhile, there are not many changes regarding the standards of educators and education personnel in Indonesia, especially regarding the qualification criteria. Since

law number 20 of 2003 regarding the national education system was translated into Republic of Indonesia Government Regulation Number 32 of 2013 concerning Amendment to Government Regulation Number 19 of 2005 concerning National Education Standards, qualifications have never been touched.

PAPER OBJECTIVE

In general, this study aims to analyse the educational process used a standards-based education paradigm following question:

- (1) how is the condition of the education process in Indonesia viewed from the achievement of the process's national standard aspects?
- (2) what are the inhibiting factors on the achievement of standard processes?

METHODOLOGY

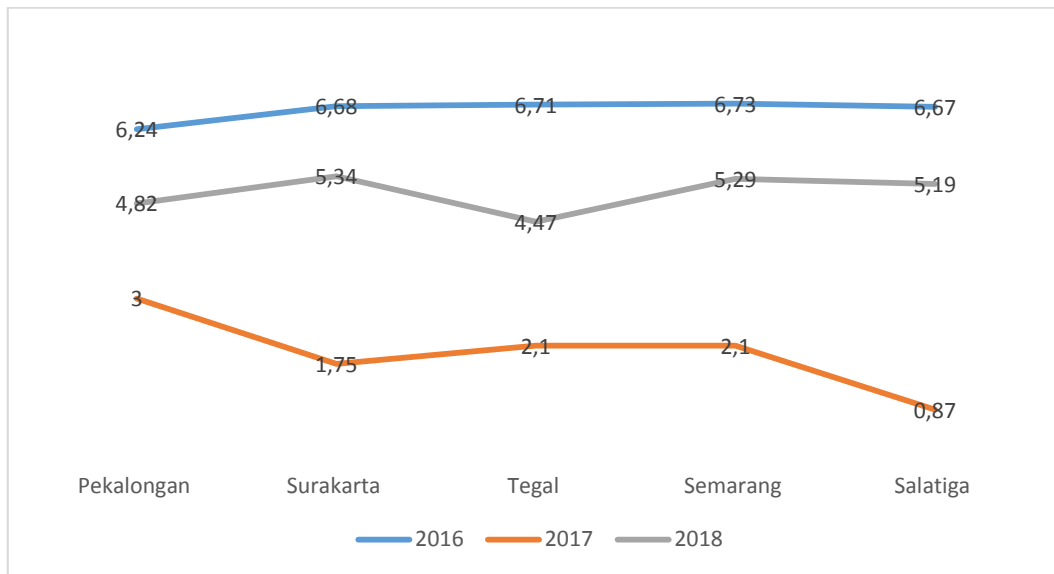
The selection of five districts/cities is due to several reasons: (1) the achievement of national education standards that almost touches the minimum standard, (2) has several suitable reference schools for the surrounding schools, (3) dynamic teacher qualifications. The selection of these sites is supported by secondary data on high school level quality report cards throughout Java released by the Educational Quality Assurance Institute. Based on the above reasons the researchers grouped by category from five districts/cities consisting of 100 schools in Pekalongan, 322 schools in Surakarta, 158 Schools in Tegal, 584 schools in Semarang, and 113 schools in Salatiga. The data is analysed thematically and carried out with focus groups that involve the Head of Primary and Secondary Schools and the Head of General Affairs (Caillaud and Flick, 2017). An examination of the Education Quality Assurance Agency data occurred between July 2019 and January 2020 was compared with data released by the planning department and statistics team at the Office of Education and Culture of Central Java Province. Selected case study strategies to track contemporary and real events (Yin, 2018). The complexity of the phenomenon is revealed through the Miles-Huberman model data analysis procedure coupled with the Creswell data validity, triangulation model, and the use of ATLAS.ti version 8 in processing data (Creswell and Creswell, 2018; Miles et al., 2014).

RESULT AND DISCUSSION

Result

Schooling, training is not enough

17 years is enough time to make a regulation that teachers must have a bachelor's degree. This phenomenon has occurred since the issuance of Law number 20 of 2003 concerning the national education system. Even the government regulations on national education standards that changed from 2005 to 2013 also did not touch the issue of increasing teacher qualification standards. Improving qualifications is not enough to be done through training which tends to be held three days to a week. Improving qualifications is not just about achieving an academic degree but is questioning a mindset, a culture set, and improving the quality of education. The question, is the government ready to face a surge in teacher qualifications that automatically increase salaries? Given the number of teachers consisting of two ministries; teachers in the ministry of education totalled 2,720,778, and the ministry of religion totalled 767,952 from primary schools, special schools to senior high schools in 2018/2019 school year. This number does not include private school/madrasah teachers and special religious schools. Noting the facts above, I do a minimum recapitulation of S1/D4 qualification as one of the standard educators as listed in the following chart:



Graph 1. Development of Teacher Qualifications

Source: Central Java Province Educational Quality Assurance Institute, 2019.

Graph 1 displays teacher qualifications development from 2016 to 2018, which never reached the minimum standard at number seven. Besides, the government has facilitated the matter of competency development in the arrow's direction with a qualification called the teacher competency test. Teacher professional development through teacher competency tests is not reciprocal because it is limited to testing pedagogical and professional aspects, as shown in Figure 2.

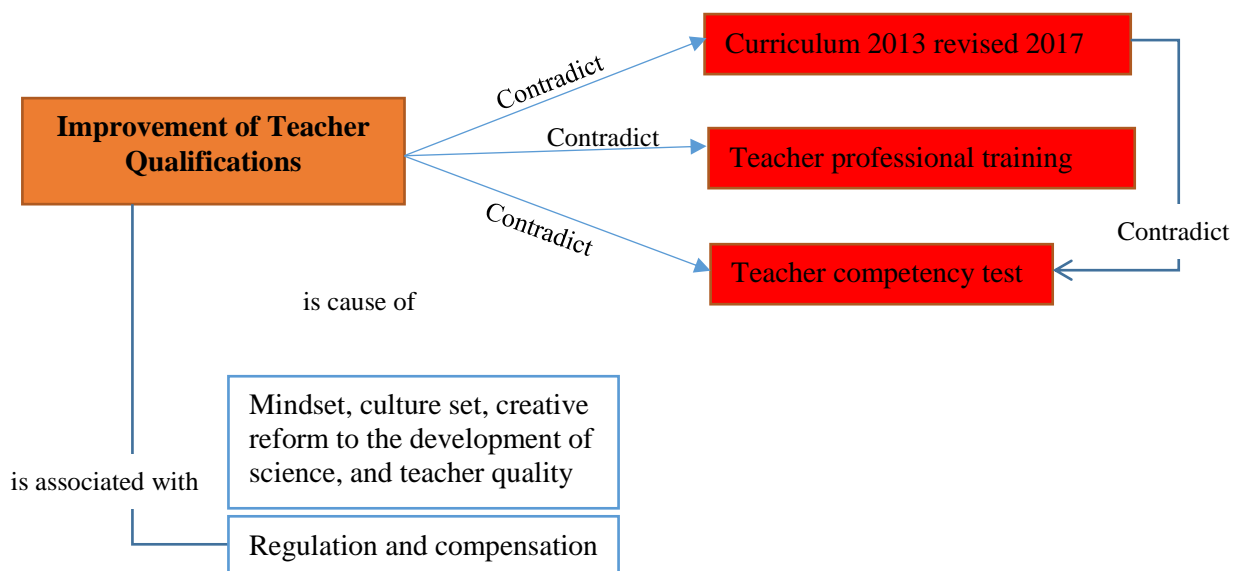


Figure 2. Teacher Competency Standard Conditions

Source: Own compilation.

Menu variants in the education process

In line with the implementation of the scientific approach, in 2017 until now the government launched a learning package in the form of strengthening character education, school literacy movement, communication-based learning, collaboration, critical thinking, creativity (called 4C), and strengthening higher-order thinking skills. The story of the presence of strengthening character education stems from the fact that in the next 25 years, Indonesia will reach a century, but beyond that, for the last ten years, the practice of corruption has spread from ministers to bureaucrats in the countryside. To face the challenges of a century while improving the nation's generation, strengthening character education is seen as urgent in the face of demographic bonus in 2045 and translating the issue in Presidential Regulation No. 87 of 2017 concerning Strengthening Character Education, 2017.

The second menu is led to school literacy movements. It is a contrasting phenomenon considering that the number of libraries in Indonesia is the second-largest globally in mid-2019. The number of libraries scattered in various regions is 164,610. The largest number of library infrastructure after India, amounting to 323,605 libraries. The world's number two library infrastructure is under India and above Russia, with 113,440 libraries. China ranks fourth with 105,831 libraries. In short, the number of libraries is inversely proportional to reading habits and interests. The last package of the learning menu is the 4C learning concept is a translation of 21st-century skills theory. The conceptual characteristics of the concept are similar to the scientific approach and in line with Krathwohl's taxonomy. In the name of renewal of the latest educational developments, the 4C concept is part of the 2019 curriculum revision, which tends to be redundant because of its similarity.

Formulation of competencies and learning strategies

The correlation between the formulation of competencies and the use of learning strategies tends to be ignored. Teachers often focus on using strategies, whereas learning is a change in mindset and behaviour derived from why and how students learn. As noted by the Educational Quality Assurance Agency, this phenomenon regarding the achievement of the indicator "adjusts the level of competence of students [competency formulation]" with an average of 3.8. While the indicator "the learning process is implemented appropriately [use of learning strategies]" is at an average of 6.7. Both achievement disparities are due to a contradiction between the competencies that students must master (spiritual aspects and spiritual attitude) and teacher competencies (social and personality competency aspects), as shown in figure 2, never tested through teacher competency test instruments.

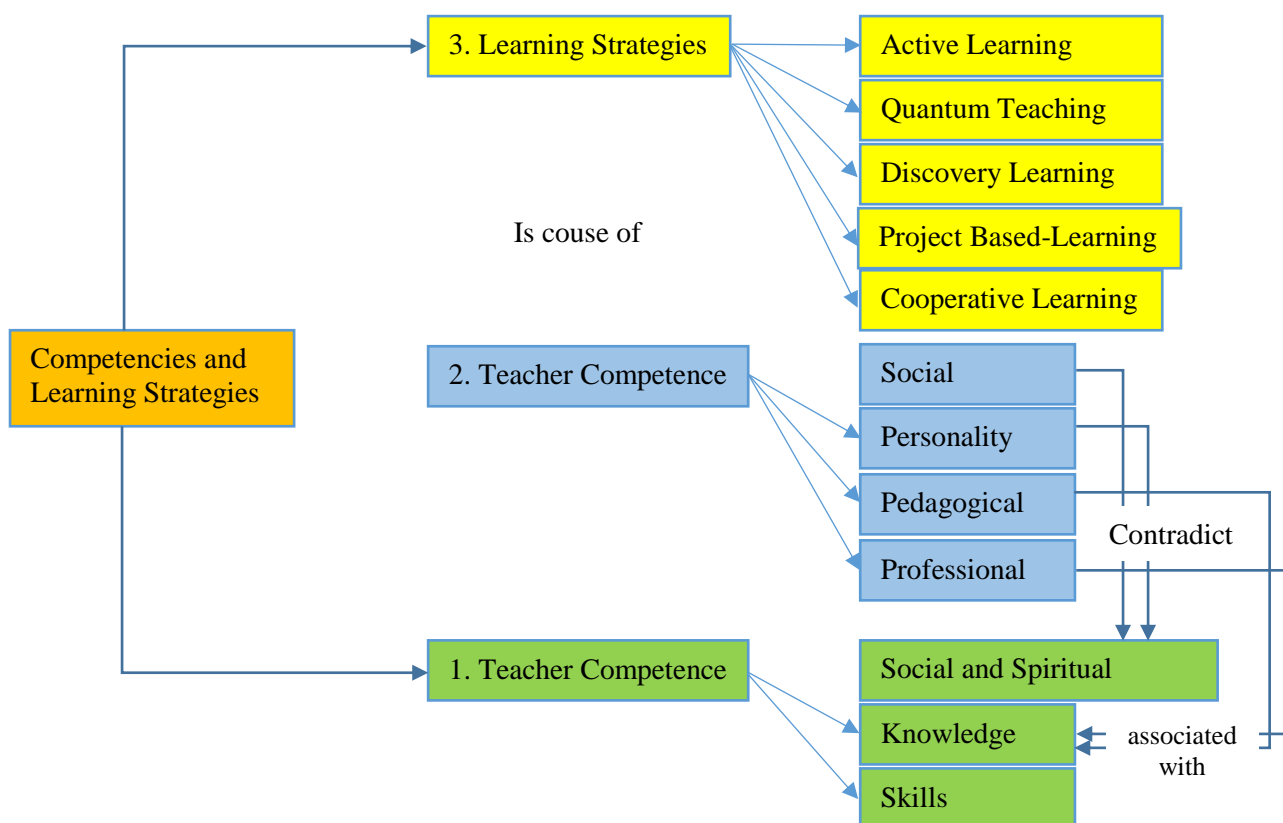


Figure 3. Competencies and Learning Strategies

Source: Own compilation.

The competency formulation above is processed using various learning strategies oriented to achieving learning effectiveness, such as implementing active learning and cooperative learning. The two strategies are said to be current because the 2013 curriculum changes emphasise the two strategy variants. In the past five years, the discovery/inquiry learning approach has been touted as an approach that fits the characteristics of 21st-century learning.

Educational Assessment Process

The fundamental difference from the latest education assessments that have been in effect since 2017/2018 until the 2018/2019 school year is about the assessment approach. The dimensions of the assessment approach are translated using higher-order thinking skills and authentic assessment designs. The complexity of assessment requires teachers to explore various approaches to learning for assessment and assessment as learning. Unfortunately, the research findings show a contrast in the aspect of evaluating spiritual attitudes.

The assessment process is submitted to the guidance counselling teacher and the homeroom teacher without involving students' parents as users of the assessment results. Even though the aspects of spirituality cannot be separated from Indonesia's characteristics, which are religious and upholds religious tolerance. Education starts with the family, especially religious education, all starting from the family, but unfortunately, spiritual assessment is still considered an academic assessment. Spirituality is not a matter of achieving numbers on report cards. But the increase in obedience, tolerance, integrity, and the like begins with the family.

Discussion

Until now, the aspect of increasing teacher competency has only been focused on training programs. There is nothing wrong with the variety of training to improve competence (Arnott, 2000; Looney, 2011; Rothstein, 2010; Vagi, Pivovarova, and Barnard, 2019), but for me, the effect is very small in the aspects of innovation and improvisation of learning. Best practice from several countries has shown that competence, teaching experience, and improved qualifications go hand in hand with improved learning processes (Mctavish, 2003; Tolofari, 2005), progress in learning outcomes, and quality of education (Croninger et al., 2007; Guo et al., 2012; Qin and Bowen, 2019). Training does not change the teacher's mindset so that teaching is like a machine with strategies obtained throughout the training course. In addition to training, the professional teacher program that has been in effect since 2012 as an effort by the government to develop teacher professionalism has not been significant in improving education quality. Several problems were encountered, such as the urge to revitalise the Educational Personnel Educational Institution's quality assurance as to the program implementer and the loosening of teacher candidate participants' selection.

In the aspect of the process, the first round of problems encountered was inequality in the management of spiritual attitudes and social attitudes curricular managed by religious teachers and civic education teachers. On the other hand, all subject teachers, homeroom teachers, and counseling guidance teachers manage these two competencies through a journal summary that contains a brief description of the progress or setbacks of student attitudes. Indeed, a collaboration of excessive, redundant, and formalistic student competency management. Considering that there are already student teachers and school committees in the school structure that are rarely involved, especially the lack of involvement of parents in competency monitoring. Even recent research shows that teachers still assume the evaluation of the spiritual aspects as the academic domain and not the appreciation and change of good behavior in daily life (Zamili, Suwitri, Dwimawanti and Kismartini, 2020). Meanwhile, social competencies and personalities that have never been tested in teacher competency test instruments are increasingly asymmetrical with the achievement of social-spiritual competencies that students must master, even though in the context of wider social relations, the links between the two cannot be separated (French et al., 2013).

The second half of the revision of the learning process began in 2017 with four learning programs, namely: (a) strengthening character education, (b) school literacy movements, (c) 4C, and (d) Strengthening higher-order thinking skills. Until now, uncertainty about the practice of strengthening character education is because there has not been a partnership between character education built by schools and foundations built by families. Collaboration between the two sides is not enough when considering Indonesia's diverse social conditions. On the other hand, good and competitive character-building needs to pay attention to planned multicultural education (Malihah, 2015) given the diversity of cultures, languages, ethnicities, religions, and between groups and the importance of comprehensive intelligence from intellectual to spiritual. Meanwhile, the school literacy movement package is oriented to uplift Indonesian students' literacy, which is hampered by access to virtual-based reading material and the accumulation of urban libraries. The results of studies published under the name "The World's Most Literate Nations" ranks Indonesia 60th, only one level above Botswana (Miller and McKenna, 2016). Some research results also explain the lack of school commitment to form a school literacy team (Pantiwati, Permana, Kusniarti and Miharja, 2020) and the literacy program's low intensity for schools that have a literacy team.

The next package that is warm in the education process is 4C learning. The 4C concept is the ministry of education's interpretation of 21st-century skills coupled with the practice of higher-order thinking skills breathing the taxonomy of Krathwohl (Krathwohl, 2002). Combining the learning process menu is a challenge and a new problem in the education system. The four menus must be available and complete in the lesson plan that began since implementing the 2013 revised 2017

curriculum. Adaptation is made again by creating a new label and the 2013 revised 2019 curriculum. It is only a matter of how to list KI 1 and KI 2 (called, first core competencies and second) in the lesson plan. The repetition terminology is changed to an assessment, and there is no need to include a column of learning methods in the lesson plan. Indeed, the revision is insignificant compared to the Republic of Indonesia's unitary unity, which amounts to thousands of islands with two ministries managing education through different paradigms. An ambitious variety of menus to raise the achievement of four standards with an average of 5.4 from the 7.0 target released by the Central Java Provincial Education Quality Assurance Institute. Central Java has the potential to develop better education processes, given the initial data pointing towards the development of standardised education quality. The pattern of collaboration between actors, namely the Office of Education and Culture of Central Java Province, the Institute for Quality Assurance of Education, and the education unit in the management of education is very urgent to face the challenges of the golden generation 2045.

CONCLUSION

The standardised education process requires an increase in teachers' qualifications who have been untouched for 17 years. As a front guard in developing students' competencies, teachers cannot be exchanged with technological developments. On the other hand, the achievement of students' social and spiritual competencies is not compatible with social and personality competencies that educational quality assurance agencies have never measured. Whereas social attitude education and spiritual attitude cannot be replaced. That is, teachers must still practice examples of good behavior in daily life because students cannot be likened to search engines like Google or YouTube. Throughout the study, the learning process of educational assessment has not yet become a unified whole. Changing regulations show weak government commitment to the advancement of education. The four years of government are marked by curriculum revisions that have implications for the learning process. Unfortunately, the revisions made were not significant with the needs of the education unit and global needs, as PISA noted. I admit that PISA does not measure the assessment of social-spiritual attitudes, but in the Indonesian context, the neglect of measuring social-spiritual attitudes has implications for the blurring of the characteristics of religious tolerance.

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НАВЧАЛЬНИЙ ПРОЦЕС У СВІТЛІ СТАНДАРТНОЇ ОСВІТНЬОЇ ПАРАДИГМИ В ДЕРЖАВНИХ ШКОЛАХ: ПРИКЛАД ЦЕНТРАЛЬНОЇ ЯВИ, ІНДОНЕЗІЯ

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Метою даного дослідження є аналіз освітнього процесу в Індонезії з використанням стандартної парадигми освіти в процесуальному аспекті. Дослідження було зосереджено на учнях державних середніх шкіл за чотирма освітніми стандартами, підготовленим Агентством з забезпечення якості освіти провінції Центральна Ява. Методологія

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дослідження: тематичні дослідження були відібрані на основі даних національних освітніх стандартів. Аналіз даних оброблений за допомогою ATLAS.ti версії 8. Результати дослідження показали, що відсутність нормативних документів щодо підвищення кваліфікації вчителів погіршило досягнення показників стандарту. Надмірне використання освітніх концепцій і ігнорування спільної оцінки духовних аспектів ускладнює розуміння релігійної терпимості як відмінної ознаки індонезійської освіти.

Ключові слова: освітній процес, стандартна парадигма освіти, Центральна провінція Ява.

УЧЕБНЫЙ ПРОЦЕСС В СВЕТЕ СТАНДАРТНОЙ ОБРАЗОВАТЕЛЬНОЙ ПАРАДИГМЫ В ГОСУДАРСТВЕННЫХ ШКОЛАХ: ПРИМЕР ЦЕНТРАЛЬНОЙ ЯВЫ, ИНДОНЕЗИЯ

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Целью данного исследования является анализ образовательного процесса в Индонезии с использованием стандартной парадигмы образования в процессуальном аспекте. Исследование было сосредоточено на учащихся государственных средних школ по четырем образовательным стандартам, подготовленным Агентством по обеспечению качества образования провинции Центральная Ява. Методология исследования: тематические исследования были отобраны на основе данных национальных образовательных стандартов. Анализ данных обработан с помощью ATLAS.ti версии 8. Результаты исследования показали, что отсутствие нормативных документов по повышению квалификации учителей ухудшило достижение показателей стандарта. Чрезмерное внедрение образовательных концепций и игнорирование совместной оценки духовных аспектов затрудняет понимание религиозной терпимости как отличительного признака индонезийского образования.

Ключевые слова: образовательный процесс, стандартная парадигма образования, Центральная провинция Ява.

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