

The Effect of Industrial Revolution 4.0 Transformation on Human Resource Management at Bank Syariah Mandiri Batusangkar

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Abstract. The purpose of this study was to determine how much the transformation of the Industrial Revolution 4.0 affected SDI Management in Islamic banking in Batusangkar, as well as to determine the pattern of Human Resource Management before and during the Industrial Revolution 4.0 era. This research is a mixed-method with a sequential exploratory or combining qualitative and quantitative research methods sequentially. From the population of all Islamic banks in Batusangkar, the researchers took samples using a purposive sampling technique or selected samples based on the considerations of the Islamic bank that had been standing longer in Batusangkar, namely Bank Syariah Mandiri which has now been converted into Bank Syariah Indonesia. The results of this study indicate that there is a significant influence between the Industrial revolution 4.0 on the management of Islamic banking SDI, and the pattern of Islamic banking SDI management in Batusangkar is still carried out centrally. The difference in management before and after the industrial revolution 4.0 is that management used to be completely manual, whereas now it is more effective because it is digital-based

Keywords: Industrial Revolution 4.0; SDI Management; Islamic Banks

1 Introduction

Technological advances in recent years have developed very rapidly. Rapid technological developments have made some people left behind to update the latest technology, due to very fast changes and developments, forcing individuals to be able to adapt to changes and technological developments that occur. Failure to adapt has left him far behind in technological developments. This digitalization era has made information technology facilities a friend of Islamic Financial Institution actors. Economic assets are no longer physical, such as machines, buildings, and others, but are mental and intellectual In nature, such as market perception, brand image, credibility, and so on [1]

If it is associated with financial institutions in this case is Islamic Banking, then Human Resources (SDI) in Islamic Banks are assets for financial institutions. SDI that can survive is those who have expertise not only in hard skills but also in soft skills. The importance of banks to have skilled human resources is a challenge that banks must face both from within and from outside to seek to produce quality human resources so that Islamic banking can compete in the international arena, especially in the current era of the industrial revolution 4.0 [2]

The industrial revolution 4.0, is a term that was first coined in Germany, covering various types of technology, from 3D printing to robotics. For developed countries, industry 4.0 can be a way to gain infrastructure competitiveness, especially for Western European countries [3]

One form of transformation of the industrial revolution 4.0 in the financial sector is better known as Financing Technology. In the era of the industrial revolution 4.0, most of the media that were initially still manual turned to online facilities because they are easier to access anytime, anywhere, and by anyone who needs it. Almost all banks in Indonesia are currently using online-based financial technology services in the form of applications to facilitate customers who we know as Mobile Banking, SMS Banking, Internet Banking, PayPal, and so on, all of which are the result of adapting banking products and services to technological developments.[4] Based data from the Financial Services Authority [5] revealed that the number of banking customers as e-banking users in 2012 increased by 270% from 13.6 million to 50.4 million customers in 2016. Meanwhile, in 2012 also occurred an increase in the transaction frequency of e-banking users by 169% or 150.8 million transactions, increasing to 405 million transactions in 2016. This data means that the banking world in Indonesia is experiencing a changing trend towards the digital era.

Anticipating the 4.0 industrial revolution in Islamic banking in Batusangkar takes competent human resources in the field of Islamic banking as well as those who have the ability in the field of technology, besides that there is also an active attitude to catch up with information and technology, innovation, creativity, and Islamic personality because SDI who do not master digital literacy will sooner or later be eliminated. Starting from the background above, the researchers are interested in discussing in more depth a study entitled "Transformation of the Industrial Revolution 4.0 on Human Resource Management at Bank Syariah Mandiri Batusangkar."

2 Research Method

This research is a combination research or mixed-method approach. This method model combines qualitative and quantitative research methods sequentially. This research design intends to find out the data based on quantitative results and to explore more deeply using qualitative data [6]. Primary data sources, researchers obtained from the first source, namely the leadership of Islamic banks, the head of HRD, and employees. from the results of interviews and the results of filling out the questionnaire. The primary data that has been collected is then statistically processed using the SPSS 22 tool

. The population of this research is all 18 employees at Bank Syariah Mandiri Batusangkar. The sample in this study is divided into 2, namely the first sample for quantitative research which is a survey, considering the population is small, and second, the sample for qualitative research which is selected purposively for the determination of the sample in the sense that the researcher determines sampling by setting special characteristics. Which is by the research objectives so that it is expected to be able to answer research problems, for that the sample for qualitative research is 2 bank employees/practitioners who are involved in bank management/management consisting of General Support Staff and HRD. Descriptive statistical test in this study using a simple linear regression test, which aims to determine the magnitude of the influence of the independent variable (industrial revolution 4.0), on the dependent variable (Human Resource Management)

3 Research Results and Discussion

Human Resource Management (MSDI) Bank Syariah Mandiri KC Batusangkar Before (pre) and The Industrial Revolution Era 4.0

Based on the results of interviews that researchers conducted with Mr. Jefri Ikhwan as General Support Staff /bank operations and Mr. Adi, one of the Islamic bank employees, regarding SDI Management in terms of job analysis, the answer was that: "For job analysis in BSM, still carried out by the center (BSM in Jakarta), and still with coordination between the region and the area. Meanwhile, branch offices only receive job analysis results from the center and the region. Meanwhile, the difference in job analysis before using technology/manual compared to when using technology was that in the past the data was still stored or sent manually, files could be sent to the address, or later with a little more advanced technology, the data was sent via email, not to the central address. again. And now, technology is more advanced, we have an *intranet*, so *intranet* has employee data provided in a digital portal, employees only need to input, for example, they want to take leave, etc. If an employee wants to upgrade his position to another level, the bank can first see the history of the intranet, what is the employee's track record, although there will be other considerations later. Meanwhile, in HR Management in terms of manpower planning, the answer was obtained that: "Management of SDI in terms of manpower planning is still centralized. Regions and areas also receive the results of decisions from the center (human capital group), while in the past we sent the documents to the office address or email, while now it is by the system." (Jefri Ikhwan, Interview, July 29, 2020)

SDI management in terms of training and development, the interview results obtained that: "For training and development, there is another division called a *learning center* which is also managed centrally. The difference between 10 years ago and when technology had developed, is now there is such a thing as a refreshment via the intranet. Refreshment is like a final exam evaluation if you are a student. I used to have to be at the computer at work to do a refreshment. Only now employees can refreshment through their cellphones and don't have to be in the office. (Jefri Ikhwan, Interview, 29 July 2020)

Management of SDI management in terms of performance appraisal, the interview results obtained as follows: regions and areas. But now the performance appraisal can be inputted through the system on the computer, which can then be forwarded from the staff to the middle manager, then to the direct supervisor manager (BM). Meanwhile, the work performance assessment of the Middle Manager-BM section is directly forwarded to the Area which is also assessed directly by the region and is carried out through the respective employee portals. In the past, the assessment sheet was still manual, sent to email"(Anwar, interview, August 2, 2021)

As for additional information related to job performance appraisal, "it was used to be measured by the barometer of performance achievement. Now, every work unit has different applications. For example, the *funding* has its application, the collection also has its application. Where the report is directly across the region or throughout Indonesia, for example at 5 pm it is reported by the system of the data is pulled by the system, and it can be seen who did not report their performance and how they performed that day, so that the report is factual, updated and reported and related to the assessment. performance becomes easier and faster than before without using technology" (Adi, interview, August 2, 2021)

Management of Human Resources Management in terms of maintaining or retaining employees, the results of the interview are as follows: "we are the bank in maintaining or retaining employees by doing flashman earlier to all employees. For example, if the passing

grade is not achieved, the assessment must be repeated. As for termination of employment, it remains directly from the center” (Jefri Ikhwan, Interview, 29 July 2020)

“Implementation of human resource management in BSM before (pre) and at present (industrial revolution 4.0) is carried out by the head office, while branch offices only assist in sending and collecting data, while management is still carried out by the head office. As for the difference between management managers before using digital technology and after using digital technology, it is certainly very different, branch offices are greatly helped by the current digital system, because employees can access the staffing system online, while in the past (before the 4.0 era) employees banks cannot access the staffing system” (Jefri, Interview, October 23, 2020)

Instrument Validity, Reliability and Normality

The results of the analysis of the validity test of the industrial revolution 4.0 transformation instrument (variable x), showed that 3 question items were were invalid (because the value of r count < r table), namely the 3rd, 13th, and 28th question items because the value of r count was less than 0.423 . While the other question items have a *Corrected Item - Total Correlation* value of more than 0.423 (correlation value > r table = 0.423), it can be concluded that the average questions on the instrument used are declared valid.

From these reliability test the alpha value is 0.986 which has a greater value than the r table (0.423). Therefore, it can be concluded that all question numbers on the questionnaire are declared reliable. Based on *normal probability plot*, it can be concluded that the points spread around the diagonal line and their distribution follows the diagonal current. This shows that the regression model meets the assumption of normality or is normally distributed.

Simple Regression Analysis

Decision-making in a simple linear regression test can refer to two things, namely: comparing the probability value of 0.05 . If the significance value is less than 0.05, it means that the X variable affects the Y variable. If the significance value is more than 0.05, it means that the X variable doesn't affect on the Y variable. The following data has been successfully processed from a questionnaire that has been filled out by 8 respondents who worked as an employee at Bank Syariah Mandiri KC Batusangkar. From the output it is known that the calculated f value = 31.726 with a significance level of less than 0.05, then the regression model can be used to predict industrial revolution variable relationship, or in other words, there is an influence of industrial revolution variable (X) on human resource management variable (Y). From the output, it is obtained that the coefficient of determination (R Square) is 0.793, which implies that the independent variable (industrial revolution 4.0) has a significant effect on the dependent variable (SDI management) of 79.3%.

Hypothesis Test Results

Hypothesis testing in this study used a simple linear regression technique with the help of the SPSS 22 for the window program.

Table 1
The simple linear regression coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,473	23,535		,020	,985
	Revolusi Industri	1,770	,314	,905	5,633	,001

a. Dependent Variable: Manajemen SDI

The value of 0.473 is a constant value (a) which indicates that if there is no increase in the industrial revolution, the outstanding SDI management will reach 0.473. The value of 1.770 is a regression coefficient which indicates that every time there is an addition of 1 number for the industrial revolution variable, there will be an increase in SDI of management

1.770. =0.001. So from these data, the hypothesis is accepted. This study received an effective contribution of R square/ $R^2 = 0.819$ which shows that 81.9% of industrial revolution variables affect the management of Islamic banking SDI. Or in other words, the Industrial Revolution 4.0 has a very strong influence on the management of Islamic banking human resources. So it can be concluded that H_a . Accepted and H_o is rejected, which means that there is a significant influence between the Industrial revolution 4.0 on Islamic banking HR management.

4 Contribution and Implication

Based on the explanation of the results of interviews with several respondents, it can be concluded that the comparison of Islamic banking SDI management in Batusangkar before and pre-industrial revolution 4.0 is:

Table 2
Comparison of SDI Management before and during the Industrial Revolution 4.0 In Bank Syariah Mandiri

No	SDI Management	Before 4.0	At 4.0
1	Position Analysis	Employee data sent to the head office address, and email, job analysis is still not systemized	Employee performance history is monitored through a portal digital, job analysis is fast
2	Workforce planning	Centralized still manual, send to the address or email	Centralized, with a mechanism for sending data faster
3	Training and development	Training must be face-to-face	Training can be carried out online at any time, refreshment can be anywhere and anytime
4	Performance	appraisal Assessment is still manual, print, scan, etc.	Using an integrated system between management parties
5	Maintenance	Centralized management	Using the refreshmanz system
6	Constraints	Slow process, manual	No significant problems have been found

Source: Conclusions from interviews

Based on the simple regression test the results show that the correlation value obtained by the coefficient of determination (R Square) of 0.793, which implies that the independent variable (industrial revolution 4.0) has a significant effect on the dependent variable (SDI management) of 79.3%. This is reinforced by hypothesis testing with a simple linear regression test, the value of the regression coefficient $R = 0.905$, and the value of $F = 31.726$ with $sig = 0.001$. So from these data, the hypothesis is accepted. This study received an effective contribution of R square/ $R^2 = 0.819$ which indicates that 81.9% of the industrial revolution 4.0 variables affect the management of Islamic banking human resources. Or in other words, the Industrial Revolution 4.0 has a very strong influence on the management of Islamic banking human resources.

The results of this study are also in line with several previous studies [7], that the human resources [8] needed by industry today are who have competence in the use of digital technology. This competency is to realize smart factories, such as the Internet of Things (IoT).[8] The era of the industrial revolution 4.0 opens opportunities for human resources (HR) to have skills that are by the latest technological developments. Where the results of his research explain that the industrial revolution affects the competence of human resources.[9] The efforts in preparing and mapping human resource competencies in the era of the industrial revolution 4.0. In creating competent human resources, there are 5 ways, namely: recognition, understanding, an assessment in the form of feedback to participants about how many competencies the participants, through a job application, to use competence in real life.

5 Conclusion

There is a differences between HR management managers, both regarding job analysis, manpower planning, training and development, compensation, HR maintenance before the 4.0 era, which did not use digital technology, the process was not as fast as now, which used to be a lot of manuals and standards, while with the revolution industry 4.0 which is marked by technological advances, the series of SDI management processes become easier, faster, updated, factual, effective and efficient. The influence of the 4.0 Industrial Revolution transformation on Islamic banking SDI Management in Batusangkar, it can be concluded that the 4.0 Industrial Revolution has a very strong influence to the management of Islamic banking human resources.

References

- [1]Harto, K. (2018). Tantangan Dosen PTKI di Era Industri 4.0. *Jurnal Tatsqif*, 16(1), 1–15. <https://doi.org/10.20414/jtq.v16i1.159>
- [2]Latifah, F. N. (2021). Sumber Daya Insani yang Diperlukan Lembaga Keuangan Syariah. *Izdihar: Jurnal Ekonomi Syariah*, 1(1), 1–18.
- [3]Prasetyo, H., & Sutopo, W. (2018). Industri 4.0: Telaah Klasifikasi Aspek dan Arah Perkembangan Riset. *J@ti Undip: Jurnal Teknik Industri*, 13(1), 17. <https://doi.org/10.14710/jati.13.1.17-26>
- [4]Subagiyo, R. (2019). Era Fintech: Peluang Dan Tantangan Bagi Ekonomi Syariah. *El-Jizya: Jurnal Ekonomi Islam*, 7(2), 316–336.
- [5]Dz., A. S. (2018). Inklusi Keuangan Perbankan Syariah Berbasis Digital-Banking: Optimalisasi dan Tantangan. *Al-Amwal: Jurnal Ekonomi dan Perbankan Syari'ah*, 10(1), 63. <https://doi.org/10.24235/amwal.v10i1.2813>
- [6]Sugiyono. (2018). *Metode Penelitian Kombinasi (Mixed Methods)*. Alfabeta.
- [7]Rohida, L. (2018). Pengaruh era revolusi industri 4.0 terhadap kompetensi sumber daya manusia. *Jurnal Manajemen Dan Bisnis Indonesia*, 6(1), 114–136.
- [8]Adirinekso, G. P. (2021). Minat dan Penggunaan Fintech PayLater Pekerja Urban Pelanggan Traveloka dan GoJek Sebelum dan Selama Pandemi Covid 19 di DKI Jakarta. *Journal of Management and Business Review*, 18(2), 327–342. <https://doi.org/10.34149/jmbr.v18i2.283>
- [9]Wahyuni-S, E., Candra, R., & Asmawanti-s, D. (2020). Dimensions and Orientation of Sharia Banking Corporate Social Responsibility In the Society 5.0. *AL-FALAH: Journal of Islamic Economics*, 5(2), 177–190.