

Reshaping Business Strategy Through Technological Innovation for Post Covid-19 Recovery: A Review

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Abstract. Post Covid-19 recovery era has not been determined yet. However, it can be predicted by taking a look at the longest time of the neighborhood countries achieved that the pandemic has been already overdue. The purpose of this paper is to provide a comprehensive review of Post Covid-19 recovery. This review covers the economics' phenomena in purchasing power, business location, unemployment, competing risks in business development, challenges, and possible solutions on using system of dynamics. A significant number of literatures from index journals were cited accordingly. Previous studies had shown that the use of financial assistant, change offline business to online business, lower in renting price, and availability of the materials were important. Then, the reshaping business in accordance with the situation may be conducted as soon as possible provided that financial assistant available, offline business cum-online, renting-price tends to zero, and the material available on time.

Keywords: Reshaping, business, post Covid-19, recovery, comprehensive.

1 Introduction

Covid-19 pandemic is on a trajectory to cause catastrophic global upheaval with the potential to alter geopolitical and socio-economic norms [1],[19]. One of the greatest challenges of the coming decades is to make sure the sustainability of urban development [2]. The pandemic of Covid-19 has not been finished yet, but the planning to anticipate is required to be available. The pandemic was giving difficulties to many people especially in the healthy matters whether physically or mentally as the first problem. The second one is regarding the livelihood of the majority people. The purpose of this paper is to provide a comprehensive review of Post Covid-19 recovery. The good mental health of somebody was the one in the top level of his or her own capabilities, and be able to overcome the hectic life, but still producing some benefits to the society [3].

2 Literature Review

The reshaping business strategy in the vicinity of Post Covid-19 is a learning in the temporal changes in the association between two variables, without choosing a reference period [4]. As emphasized by [5], it was difficult to determine a relevant and robust baseline that would

simultaneously take account of the range of natural variation and reveal impacts related to disturbances. The growth of economic activities can be counted accordingly due to might be different in the pre-Covid-19 and in the post-Covid-19 era. This percentage of growth can be calculated by the formula [6] as follows:

$$\text{Relative growth (\%)} = \left(\frac{\text{Business at given time}}{\text{Business at initial time}} \right) 100 \quad (1)$$

Reshaping business with artificial intelligent is one of the most popular nowadays, because it can close the gap between ambition and action [7]. The online businesses today are running by artificial intelligent, such as Alibaba, Tokopedia, Shopee, Lazada etc. They are successful. The all of sudden of the decreasing economy and massive closures to stem the COVID-19 outbreak will have long-lasting consequences for the economy of any country. After businesses and households try to adapt to working style during the outbreak, then those consequences will finally reshape the future of business and work styles. Unfortunately, the outbreak also leads some complex policies challenges, in extent the news of business failures, which will leave some sectors with greater concentration and some firms with greater market power. It will also create persistent changes in the labor force, due to stark reductions in employment and labor force participation among already underrepresented demographics [8]. Companies are feeling the market and financial shock of the Covid-19 outbreak by factories' shutdown, labor shortages to cash flow stress, and disruptions in the supply chain [9]. The agri-food sector comprises a dynamic societal-technical innovative ecosystem and is one of the largest manufacturing industries [10; 11]. The Covid-19 outbreak has created pressure in people's daily lives, further threatening public health [12]. Many people may be feeling stressed due to the high stressed as reported by Chinese in the context of the current COVID-19 crisis [13]. System Dynamics Model (SDM) enabled to understand of the complexity and the impact of different interventions of Covid-19 in Kenya [14]. More than 5800 of the 4.6 million small businesses in the USA were surveyed between March, 28 and April, 4, 2020 by [15] during the Covid-19 pandemic, see **Figure 1**; It showed the results that the pandemic had already caused massived dislocation among small businesses just a few weeks after it onset and prior to the availability of government aid in which 43% of businesses had temporary closed, where nearly all of those closures were due to Covid-19.

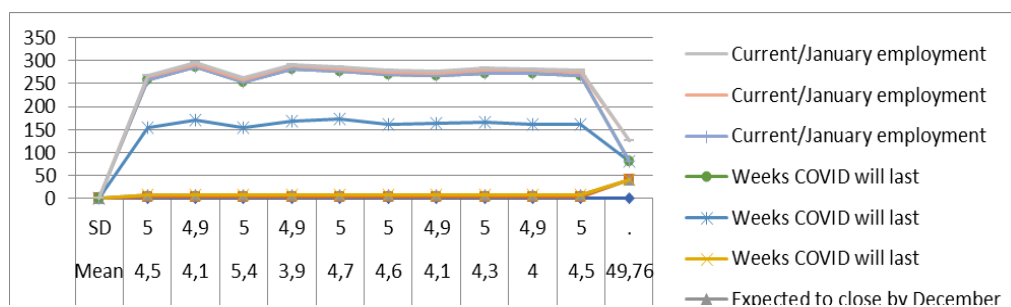


Fig. 1. Summary of closure measures across regions [15]

This table reports from [15] breakdowns by regions. Totals include 12 observations with unknown region. Note that the Closed at time column includes both temporary

and permanent closures. The measure Expected to close by December comes from a question asking about the likelihood of being open in December, where answers were given on a five-point scale. Closure is coded as a binary indicator for those marking “Extremely Unlikely,” “Somewhat Unlikely,” or “Somewhat Likely” to be open in December. The ratios of current employment versus January employment are weighted by January employment.

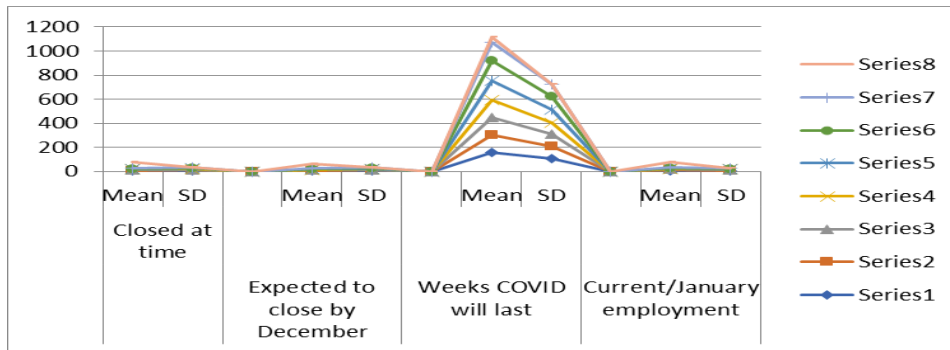


Fig. 2. The Closure Summary measures by firm size [5]

This **Figure 2** reports breakdowns by firm size [15]. Totally, There are 103 firms in this sample with unknown employment as of January. Social isolation caused by the Covid-19 pandemic has drastically affected lifestyles, from sedentary behaviors to reduced physical activity, from disrupted sleep patterns to altered dietary habits[16].

3 Methodology and Data Analysis

We collected around 20 papers from index journal as our material to review the economic and social feedback before and at the Covid-19 outbreak. Afterwards, we took the point of views that seem to be the same intention. Later on, we propose to reshaping the business by the systems of dynamics. In this paper the purpose of our survey, we used the definition of artificial intelligence from the Oxford Dictionary: “AI is the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.” However, AI is evolving rapidly, as is the understanding and definition of the term. In this paper we propose to model the business such as follows:

Steps to model and its implementation

A. Model Design

By applying simulation method of the Systems of Dynamics as follows:

- a. Creating Causal Loop Diagram (CLD)
- b. Creating Stock Flow Diagram (STD)
- c. Verification and model validation
- d. Creating Scenario

Modeling and simulation should be applied to model the reshaping strategy business in the

post-covid-19 era. This can be a model for poor citizen and unemployment caused by the pandemic. The poor citizen and unemployment caused by pandemic as the indicators for reshaping the business, and might be taking some another supporting-variable, hence, the simulation results can assist in the development to the expectation.

B. Causal Loop Diagram

The initial step in creating simulation of the systems of dynamics was to formulate the model in accordance with the condition of the business of the beforehand and afterwards the pandemic era. The main part in the concept creating of *Causal Loop Diagram* (CLD) was administering the identification followed by connecting among each variable which can affect the reshaping the business based on economic system that is running in the current situation and the term and condition of the smart economy. See **Figure 3** as a Causal Loop Diagram.

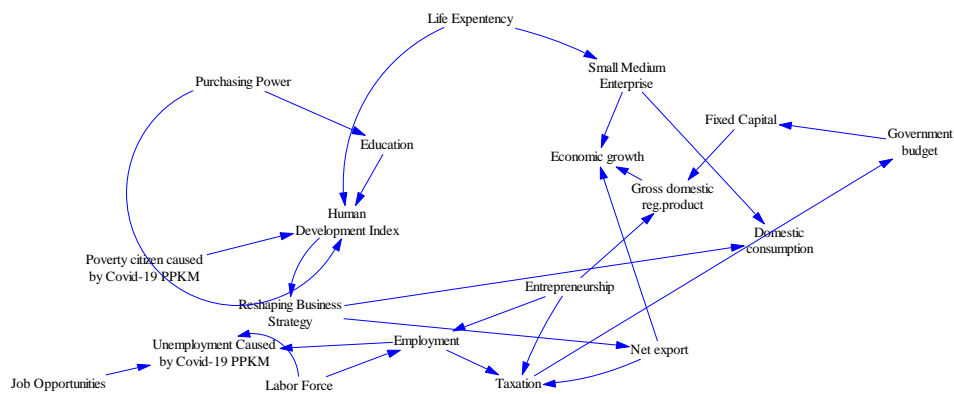


Fig. 3. Causal Loop Diagram for Reshaping Business in the Post Covid-19. Modified from [18]

The **Figure 3.** shows the complex system of reshaping business strategy in the post covid-19 era. The prediction will be started on October 2021 onward following the ease of pupil and students return to their school in Indonesia. The poverty citizen caused by PPKM (Pemberlakuan Pembatasan Kegiatan Masyarakat/Ordinance of the Limited Communities Activities) will then be connected to Human Development Index, as well as Education and the purchasing power of the communities. The labor force that were losing their job during the pandemic will regain their job opportunities and remain be unemployed or start to have a new job. However, the employment will increase the taxation revenue, and leads to government budget accumulation. The reshaping business will increase the net export, and also lead to economic growth. The government budget will affect the fixed capital. If the Government budget rise then the fixed capital will also rise. The reshaping business strategy will also deal with domestic consumption. The small medium enterprise will affect the economic growth and the domestic consumption.

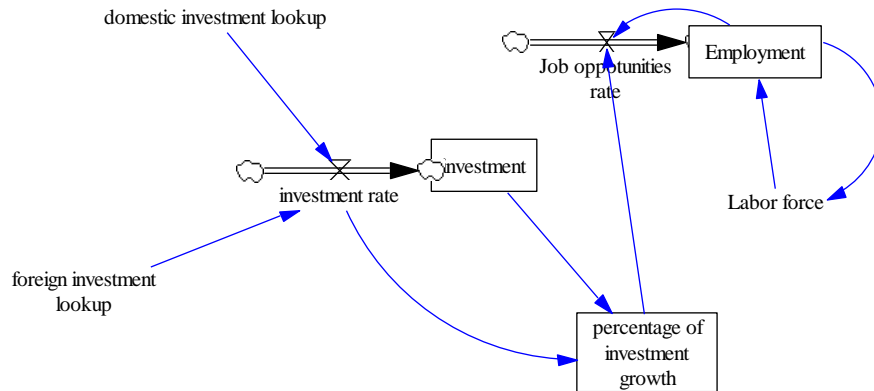


Fig. 4. Causal Loop for Reshaping the Job Opportunities, modification from [18].

As seen on **Figure 4** the domestic investment lookup and foreign investment lookup will contribute a lot to the investment. The investment rate was also contribute to the percentage of investment growth, and then created the job opprtunities. Afterwards, the employment can be fullfilled by Labor force. The reshaping business strategy in the Covid-19 aftermath is to regain job opprtunities for the workers or labor force, and also to regain the money lost during the pandemic. Who knows the opportunities to regain the economic activities return back in the near future.

4 Research Result and Discussion

The use of Artificial Intelligent may have significant effects on the workplace environment, the feeling of new value creation, and comparative advantage. Beyond the near term, how should companies prepare for these changes? In accordance with ISO 37120 as the smart city standard, the main economic indicator within smart city are the numbers of unemployment and the poverty [17]. To develop the smart economic city, it is required the smart economics simulation model. Thereby, it will be conducted to model those factors that affected the rate of unemployment and the numbers of poverty in the region which affected by pandemic. The method was applied for developing the smart economics model was system of dynamics, the system by consideration that the model was nonlinear and dynamics. The analysis was conducted by considering the macroeconomics factors. Later, that the structure and the behaviour or parameter were determined. From that scenario then conducted a comprehensive model for longer interval time. The scenario of the best structure which the most able to reduce the average percentage of the poor citizen was variable of customers. Then, the best parameter (behaviour) which the most able to reduce the average percentage of the poor citizen was optimistic.

5 Implication and Suggestion for Future Research

After we identified that the variable of customer and the optimistic behaviour were able to contribute to the reshaping the business strategy in the post Covid-19 era. The reshaping business strategy in the post-Covid-19 is an obligation for several business sectors. However, some traditionally markets no required to change their business strategy, due to some certain reasons. To regain the customers comeback to our business, like it or not the business by online and at the same time the offline business should have been administered simultaneously. But, then the new capital for preparing the online business should be available from fresh money belong to the owner, not from borrowing from any institution that can be a big burden later on.

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