Implementation of Entrepreneurship MBKM: Application of Automatic Embroidery Machine Technology as a Competitiveness of Embroidery Convection Business at Indah Collection Embroidery Convection

Handika Bayu Alfarris[1*], Koerniawan Hidayat[2]

[1,2] Prodi Ilmu Administrasi Bisnis, Fakultas Ekonomi Bisnis dan Ilmu Sosial,
Universitas 17 Agustus 1945 Jakarta, Indonesia
*Corresponding Author:
Email:handika.alfarris@Gmail.com

Abstract.

The implementation of automatic embroidery machines is an alternative that can increase the effectiveness and efficiency of the production process carried out by the Indah Collection Embroidery Convection. In practice, it discusses the application of automatic embroidery machine technology and the competitiveness of the Indah Collection Embroidery Convection business. This implementation method is video-based and discusses the application of machine embroidery technology. The application of an automatic embroidery machine is divided into several stages: the initial stage, the production stage, and the finishing stage. The results of the discussion found that the application of automatic embroidery machine technology is more widely used than manual embroidery machines and raises the competitiveness of embroidery convection businesses using both automatic and manual embroidery machines.

Keywords: *Application of Technology, Competitiveness, and Automatic Embroidery Machines.*

I. INTRODUCTION

Fashion has become a major need for humans, its development is supported by technological advances in the embroidery industry in producing quality clothing. The combination of ready-made clothes with added other elements such as motifs, logos and writing aims to beautify clothes that are still plain. In order to realize the sustainability of the strategic embroidery business sector, both in terms of quantity, quality, and ability to fulfill customer orders in accordance with a predetermined time.Technology is a form of a process that increases added value. This process will then produce certain products, where the resulting product is no different from existing products. That technology is a part of a component contained in a particular system (Rahmalia Syifa Miasari, 2022). The emergence of automatic embroidery machine technology as a form of technological development in the computer-controlled embroidery industry sector greatly influences business development. The use of automatic embroidery machines plays a role in replacing the manual embroidery machines used by business actors to run their businesses.MSMEs are part of the national economic sector which has great independence and potential to improve people's welfare.

The role of MSMEs is very significant for the country's economic growth, the contribution of MSMEs to the economy includes the ability to absorb 97% of the total workforce and own 60.4% of total investment (Sasongko, 2020). Production that is very fast is the advantage of automatic embroidery machine technology that uses computers, according to manual embroidery businesses in Jakarta. This computer embroidery machine simplifies the production process and produces large quantities of production, even though the price of this embroidery machine is relatively more expensive. Meanwhile, manual embroidery machines, which are cheaper than automatic embroidery machines, cannot produce production in large quantities and quickly, because their use still uses bodily assistance, for example, manual embroidery machines are stepped on in operation. So that embroidery business actors prefer to spend more money to buy automatic embroidery machines than manual embroidery machines.Competition in the world of the embroidery industry often occurs. According to Kadek Novayanti Kusuma Dewi (2022), the ability of businesses in the industrial sector to deal with various problems they face requires a solution to deal with existing problems. Competitiveness is determined by competitive advantage against other businesses and is very dependent on the ability of its human resources which is called competitive advantage. To see the competitiveness of the embroidery sector business seen from the number of orders, the accuracy of the completion of production.

Table 1. Comparison of the Competitiveness of Automatic and Manual Embroidery Machine Technologies

Automatic Embroidery			Manual Embroidery		
No	Information	Result	No	Information	Result
1	Order Amount	40 pcs	1	Order Amount	30 pcs
2	Production Completion Accuracy	6 hours	2	Production Completion Accuracy	2 day

The results of the table above explain that the number of orders from the use of automatic embroidery machine technology is 40 pcs and the accuracy of completing production ends in 1 day. While the number of orders using manual embroidery machine technology is 30 pcs and the accuracy of completing production ends in 2 days.So from the two comparisons, the number of orders for automatic embroidery machine technology produces more than manual embroidery machines, and the accuracy of completing production is faster than automatic embroidery machines than manual embroidery machines. According to the information obtained by the researchers, the reason that automatic embroidery machines are superior to manual embroidery machines is because they are more effective and efficient in their use.

Even though an automatic embroidery machine is more complicated to use at first if the business actor does not have an understanding of the application of an automatic embroidery machine, business actors prefer to use an automatic embroidery machine instead of a manual embroidery machine which requires more energy to operate it.Business Actors as the most important component in operating embroidery machines both automatically and manually, where business actors must have the ability to operate both machines to produce quality products and obtain consumer satisfaction for the goods ordered according to their wishes, so that it will generate consumer confidence in the business which is conducted. So the question formulated by the author is how to apply automatic embroidery machine technology to the "Indah Collection" embroidery convection.

II. METHODS

The method for carrying out this activity takes place on September 12–December 17 2022. The implementation method used is application and media in the form of video. Video is a tool used to convey information processes, concepts, skills, slow down or shorten time and influence attitudes (Kustandi and Bambang, 2013). Media in the form of video makes it easier for writers to convey information about the application of automatic embroidery machine technology. The benefits of using video are considered appropriate for applying practical material that explains steps or procedures so that it has an effect on the affective, cognitive and psychomotor domains (Warsita, 2011). In this application method, the author explains and conveys information about the use of automatic embroidery machine technology. Of course, this application is supported by taking a video that contains information on how to use embroidery machine technology. The author hopes that the video about the application of an automatic embroidery machine that has been made and prepared will be useful for increasing knowledge.

III. RESULT AND DISCUSSION

Competition in the world of industrial technology is very tight, along with very fast technological advances. The competitiveness of automatic embroidery machine technology is superior to manual embroidery machines. The factors that are the advantages of using an automatic embroidery machine over a manual embroidery machine are:

1. Production in fast time

Using an automatic embroidery machine will make the production process much faster, because the work is not done individually and does not require focus and accuracy in the production process.

2. Cheaper production costs

The production process that is carried out by an automatic embroidery machine will make production costs in large quantities using a computer embroidery much cheaper than manual embroidery. If there are orders in large quantities with the same motive, it makes production costs much cheaper

3. Accurate results

The results of embroidery using an automatic embroidery machine will be far more accurate than manual embroidery machines, and also according to the designs previously made. Because the production process is made using a computer program, such as the Wilcom Tajima application program.

4. More color combinations

For customers who order logos with more colors on the logo design, automatic embroidery is a good choice, because the thread color combinations used by automatic embroidery are far more than manual embroidery.

5. Far from human error

The use of a computer embroidery machine is much different than a manual embroidery machine, using an automatic embroidery machine can minimize human error due to lack of focus and inaccuracy. This happens because automatic embroidery machines use computers in the production process.

In operating an automatic embroidery machine, there are steps that must be taken by business actors in the field of embroidery. The operational steps are divided into 3 stages:

A. Stages of Accepting Orders

1. Purchase of Raw Materials

Purchase of raw materials from suppliers, raw materials purchased in the form of thread, embroidery paper, embroidery needles, duct tape, double tape. We choose raw materials that are still in good condition and of high quality.

Fig 1. Purchase of Raw Materials

2. Payment of Down Payment (DP)

Payment dp is a payment activity at the beginning of the order with the condition that 50% of the total payment.

Fig 2. Payment of Down Payment (DP)

B. Production Stages

The stages of the production process consist of 3 processes, namely transferring order data to a computer, using a computer embroidery machine, and the production process.In transferring order data to a computer, there are several steps taken. First, the customer sends order data in the form of a logo/video to the seller's email/whatsapp. Second, save customer data to storage on the computer. Third, open the file via the willcom Tajima application (application for embroidery designs). And finally, save the embroidery design via USB.After the process of transferring order data to the computer, the next step is to use a computer embroidery machine. The following are the steps taken in using a computer embroidery machine, namely: First, enter the embroidery design that has been stored on the USB into the computer embroidery machine. Second, thread installation. Third, setting the thread color order on the computer embroidery machine layer.

And lastly, fabric installation.Next is the production process, for the production process there are 2 steps that will be carried out. First, install the material to be embroidered according to the position. Second, start processing the production of customer orders.

Fig 3. Stages of the Production Process

C. Finishing Stages

For the finishing stage, the steps taken are tidying up the yarn after the production results

Fig 4. Finishing Stages

IV. CONCLUSION

Based on the implementation of the activities described above, it can be concluded that the implementation of automatic embroidery machines is more widely used in the embroidery industry technology sector, especially Indah Collection which receives large quantities of orders every day, thus facilitating the implementation of the production process with satisfactory results. The competitiveness created by the presence of automatic embroidery machines has increased the number of orders for Indah Collection embroidery convection compared to the embroidery industry which uses manual embroidery machines. The presence of automatic embroidery machines not only increases the number of orders, but also creates competition in the embroidery industry that uses automatic embroidery machines. Factors supporting the success of using an automatic embroidery machine are effective in the production process time and efficient in saving energy. Suggestions that can be given are adding a problem formulation to assess the implementation of the application of automatic embroidery machine technology as a competitive advantage for the embroidery convection business and proving the use of automatic embroidery machine technology is more effective and efficient than using manual embroidery machines.

REFERENCES

[1] Daudpoto, J. *et al.* (2023) 'Design of Loading and Unloading Mechanism of Spring Steel Cloth Fixture for Computer Embroidery Machine Design of Loading and Unloading Mechanism of Spring Steel Cloth Fixture for Computer Embroidery Machine'. doi: https://iopscience.iop.org/article/10.1088/1742-6596/2459/1/012051

[2] Dewi, Kadek Novayanti Kusuma, and Luh Putu Mahyuni. "Pelatihan Digital Marketing Kepada UMKM di Banjar Pitik untuk Daya Saing Usaha." Dinamisia: ***Jurnal Pengabdian Kepada Masyarakat*** 6.3 (2022): 716-724. (artikel digital marketing pada UMKM)

[3] Herydiansyah, G., Candera, M., & Pahlevi, R. (2019). Penyuluhan Pentingnya Label Pada Kemasan Produk Dan Pajak Pada Usaha Kecil Menengah (UKM) Desa Tebedak II Kecamatan Payaraman Ogan Ilir. Suluh Abdi : ***Jurnal Ilmiah Pengabdian Kepada Masyarakat***, 1(2), 84–89.

[4] Kadek Novayanti Kusuma Dewi and Luh Putu Mahyuni (2022) 'Pelatihan Digital Marketing Kepada UMKM di Banjar Pitik untuk Daya Saing Usaha', *Dinamisia :* ***Jurnal Pengabdian Kepada Masyarakat***, 6(3), pp. 716–724. doi: https://doi.org/10.31849/dinamisia.v6i3.6302

[5] Marniati, Marniati. "Penerapan Media Video Tutorial Pembuatan Pola Busana Anak Untuk Meningkatkan Hasil Belajar Siswa Kelas XI Tata Busana Smk Dharma Wanita Gresik." ***Jurnal Online Tata Busana*** 12.01 (2023): 38-42. (artikel video)

[6] Mansur, M. and Djaelani, A. K. (2022) 'Business Strategy Approach to Informal Small Businesses in Increasing Productivity and Competitiveness', *Golden Ratio of Marketing and Applied Psychology of Business*, 3(1), pp. 01–19. doi: https://doi.org/10.52970/grmapb.v3i1.206

[7] Miasari, R. S. *et al.* (2022) 'Teknologi Pendidikan Sebagai Jembatan Reformasi Pembelajaran Di Indonesia Lebih Maju', ***Jurnal Manajemen Pendidikan Al Hadi***, 2(1), p. 53. doi: 10.31602/jmpd.v2i1.6390.

[8] Putri, A. D., Permatasari, B. and Suwarni, E. (2023) 'Strategi Desain Kemasan Sebagai Upaya Peningkatan Daya Jual Produk Umkm Kelurahan Labuhan Dalam Bandarlampung', 4(1), pp. 119–123.

[9] Sasongko, D. (2020). UMKM Bangkit, Ekonomi Indonesia Terungkit. 2, 8–11.

[10] Warsita, Bambang. 2011. Pendidikan Jarak Jauh. Bandung. PT Remaja. Hal 118.

[11] Yin, H., & Long, D. (2023, March). Design of Loading and Unloading Mechanism of Spring Steel Cloth Fixture for Computer Embroidery Machine. ***In Journal of Physics: Conference Series*** (Vol. 2459, No. 1, p. 012051). IOP Publishing.