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VIRTUAL-MELAKA INTERNATIONAL INTELLECTUAL EXPOSITION

ROAD TO COMMERCIALISATION

V-MIEX BOOK



V - MIIEX BOOK

'ROAD TO COMMERCIALISATION'

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FOREWORD

ASSOC. PROF TS. DR MOHD RASDI ZAINI
Rector
Universiti Teknologi MARA (UiTM) Cawangan Melaka



Welcome to Virtual-Melaka International Intellectual Exposition 2022 (V-MIIEEX 2022). It is an honour for me on behalf of UiTM Melaka Branch to thank all of you for joining the programme and we are proud to inform you that this is the 12th year consecutively, UiTM Melaka Branch is organizing this exposition.

V-MIIEEX 2022 is a platform to improve the commercialization collaboration among industries and communities and at the same time, we also give the opportunity to academicians and students to share ideas and increase their potential innovation products with the industries and communities through their projects. This exposition also serves as a platform to cultivate and upload the nation's innovation culture by presenting new ideas and research by young people, especially from academia, universities, college, high schools, and primary school students.

The economy and development of the country faced a challenging phase in 2021 due to the Covid-19 pandemic. We faced changes in business, education, society, and lifestyle. However, the pandemic proved to be a blessing in disguise as it somehow gave people ideas which would be beneficial to improve their lifestyle and solve problems that might occur in the future. Besides, the new digital landscape also inspires more innovation and new ideas that contribute to various activities such as business and industries. As a university that encourages the "Research, Innovation and Commercialization", this exhibition is organized to encourage more commercialization of products that are beneficial to scholars, industries, and communities to tackle such issues to improve our present and future life.

Since 2009, UiTM Melaka Branch has successfully become the organizer for this innovation exposition. We are not only successful in organizing the exposition, but I would proudly say that we have also successfully embarked on commercialized products. With the number of participants for this year's exhibition, we believe that more commercialized products will be produced in line with the theme for this year, "Road to Commercialisation".

This exposition would never happen without dedication, teamwork, and commitment. A round of applause should be given to the committee teams as the backbone of this exposition. Their hard work, effort, and time made this exposition possible.

Finally, I would like to conclude this brief remark by thanking all the participants and stakeholders for joining the exposition, we hope that this collaboration never ends here.

Thank you.



DR. NUR HAYATI BINTI ABD RAHMAN
Deputy Rector Research & Industrial Linkages
Universiti Teknologi MARA (UiTM) Cawangan Melaka

It is a great pleasure to welcome all the participants and presenters to the Virtual Melaka International Intellectual Exposition (VMIIEX 22). I am delighted that through this periodic event, we managed to bring together scholars and professionals from various fields to engage through this virtual platform where ideas and breakthrough are discovered and leveraged for commercialization potential.

Since 2009 UiTM Cawangan Melaka has held twelve Invention and Innovation Design competitions and this year we are very honoured to have the second year of VMIIEX organized in digital platform. This has proven that despite the global challenges due to the recent pandemic, it is never an issue for UiTM Melaka to continuously organize this yearly prestigious event and to support the ministry's aspiration in leveraging creativity and innovation in the new norm.

VMIIEX 22 is organized with no sole objectives of accomplishing the University's KPI but instead we are determined to make this programme as the place to help heighten commercialization collaboration in research and innovation with the industry and community through joint exhibitions from various external organizations.

Our aspiration is to also provide exposure and opportunities to academic staff as well as students from public and private universities to engage in direct excellent scholarly activities with the industry and community through activities that can be measured and assessed. As for the Research and Industrial Linkages Office of UiTM Melaka, this exhibition is seen as the platform that can encourage active collaboration and knowledge transfer with industries; objectively to support various activities that will benefit all stakeholders from the various government agencies, local and international universities, industries and communities.

Through the theme of "Road to Commercialization" this year, V-MIIEX 22 is committed to have this event as a boulevard to inspire and cultivate creativity and innovation to the numerous levels of inventors through exposure on latest technologies, astonishing ideas and creative designs with great potential to be commercialized. For this year, we proudly introduce a special category which is the "Endemic Challenge" as the provision to the government of Malaysia's goal of moving towards the endemic.

To ensure that the competing products in this exhibition is not exclusively for the purpose of competition, V-MIIEX 22 is dedicated for the commercialization of highly potential innovation products, which is attained through its active collaboration with tailored needs industries. The commercialization effort was not for income generation purpose only but it aimed to spearhead the development of quality products in line with industrial needs and community benefit.

Therefore, it is a great honour for me on behalf of the Research and Industrial Linkages Office as well as the organizing committee to have all participants in this competition and I would like to express my highest gratitude especially to the Rector of UiTM Melaka and all strategic partners and sponsors for supporting the event.

To finish, I sincerely wish VMIIEX 22 a remarkable success. I believe that this will not be the only collaboration between UiTM Melaka and the respective partners and linkages, but a beginning of a long and fruitful cooperation in future.

Thank you very much.

road to commercialisation...

WAN HASMAT WAN HASAN
Project Director V-MIIEEX 2022
Universiti Teknologi MARA (UiTM) Cawangan Melaka



Assalamualaikum and Warmest Greetings.

It gives me an enormous pleasure, on behalf of the organizing committee to welcome all participants and presenters to the Virtual -Melaka International Intellectual Exposition 2022 (VMIIEX '22) with the theme "Road to Commercialisation". We are honoured and glad to welcome all participants to this biennial event.

This is the second time that we have organized this biennial event virtually. V-MIIEEX 22 is an innovation competition, in which, innovation products, ideas and systems related to various science and technological fields are exhibited as a solution for the presented problems.

V-MIIEEX22 expectantly will be a platform that gathers experts from academies, scientists, and researchers, locally and internationally, to contribute towards the growth of scientific and technological knowledge in each participant's specialisation and expertise.

The competition also serves as a platform to give fresh exposure to the various level of inventors, as well as to encourage the culture of innovation design focused on latest technologies and related to new norms technologies and inventions due to COVID-19.

V-MIIEEX 22 is also hoped to be an avenue for gathering and disseminating the latest knowledge on ideas and acquisition of innovation among the participants. It is hoped that the competition will be able to open the mind of the participants towards latest technologies and design. It is also in line with the government's aspiration to encourage innovation activities in Malaysia.

As a final note, I would like to congratulate my fellow committee members for their tremendous effort, which have been critical to the event's success. In addition, I would like to thank our co-organizer, event sponsors and supporters. Optimistically, we wish that all new knowledge that is discovered, invented, or innovated will drive towards our future sustainability.

Thank you.

ABOUT V-MIIEEX

The world after COVID-19 is unlikely to return to the world that was. Despite the challenging pace during the pandemic, the strong rebound is expecting in this exciting year 2022. Malaysia is welcoming the great prospects ahead with positive impact on the country's economy and development. Hence, the hope for greater opportunities motivates for more creative thinkers to come up with innovative ideas that can be put forward to be harnessed to overcome similar problems in the future. V-MIIEEx 2022 is one of these platforms which contribute relevant ideas that could help communities of all walks of life cope with this pandemic.

UiTM has identified research, innovation, and commercialization to be among the core components and strategic effort towards becoming a well-known and prominent university. Aside from realizing this goal, with these components and efforts, fostering the development of knowledge, generating financial stability of the university, and producing knowledgeable academicians are also potentially achievable.

By having invention and innovation competition yearly, UiTM Cawangan Melaka is confident that it could further enhance creative and innovative abilities among staff and students. In support of the government notion which upholds the importance of innovation, UiTM Cawangan Melaka has taken the initiative of organising the Virtual Melaka International Intellectual Exposition (V-MIIEEx).

In instigating and nurturing the continuous culture of inventing and innovating, this event is an ideal platform for lecturers, administrative staff, students, and the public to showcase and commercialize their products or prototypes as well as novel ideas. The first IID which was held nationally in UiTM Cawangan Melaka in 2009, has successfully gathered and displayed more than 37 inventions and innovations. Accordingly, to continue this strong passion towards inventing and innovating, the IID competition should be continued and celebrated.

With that, the Division of Research and Industrial Linkages will be organising its 12th IID competition, the Virtual - Melaka International Intellectual Exposition (V-MIIEEx 2022) with the theme, 'Road To Commercialisation'. V-MIIEEx 2022 hopes to welcome 200 competing products to be showcased and commercialized, at the same time, attract attention of related and matching industry.

Objectives

1. Encourage and instill passion towards inventing and innovating among UiTM Cawangan Melaka staff, students and academicians of local and international higher education institutions;
2. Highlight distinguished talents of skillful inventors and exhibit intellectual products, inventions and innovations among local and private tertiary institutions, government and private agencies, including international participants;
3. Become an effective Business Matching platform for participating research products, matching industries and partnering government agencies;
4. Recognise, inspire and promote invention and innovation products to be patented and commercialized;
5. Increase passion towards inventing and innovating through research and boost interests of government and non-government agencies to obtain consultancy services from a line up experts of higher education institutions and UiTM Cawangan Melaka.

Model Aplikasi Qard al-Hasan dalam Inisiatif i- CSR (MAQiC)

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Abstract

CSR dan pembangunan mapan merupakan sebahagian daripada matlamat ekonomi yang terhasil dari ajaran Islam. Setiap bank Islam secara umumnya sangat aktif dalam aktiviti kemasyarakatan dan CSR namun pelaksanaannya tidak seimbang dan hanya tertumpu kepada satu dimensi. Selain itu, tahap amalan CSR di bank Islam masih belum mencukupi dan berbeza dengan objektif yang digariskan oleh ekonomi Islam di samping ketiadaan rangka kerja CSR yang komprehensif menyebabkan pelaksanaan CSR di bank-bank Islam di Malaysia tidak seimbang dan progresif. Justeru, Model Aplikasi Qard al-Hasan dalam Inisiatif i-CSR (MAQiC) dibentuk bagi menyediakan rangka kerja CSR yang lebih mapan dan lestari kepada institusi perbankan Islam agar pelaksanaannya lebih meluas dan holistik. Model MAQiC boleh digunapakai oleh Institusi Perbankan Islam di Malaysia dalam menyediakan produk-produk dan inisiatif CSR kepada para pemegang taruh mereka terutamanya golongan rentan (*unbankable customer*) mendapat pembiayaan kewangan bagi meningkatkan kualiti dan taraf hidup mereka.

Keywords: CSR, i-CSR, Perbankan Islam, Qard al-Hasan,

1. INTRODUCTION

Perbankan Islam di Malaysia khususnya dan dunia amnya masih tidak mempunyai satu rangka kerja khusus untuk CSR sebagai garis panduan kepada bank-bank Islam melaksanakan aktiviti CSR mereka. Ketiadaan rangka kerja CSR yang standard dan komprehensif akan mempengaruhi keberkesanan pelaksanaan CSR, interpretasi CSR yang tidak tepat dan ketidakseimbangan dalam pelaksanaan aktiviti CSR oleh bank-bank Islam (Wan Noor Hazlina & Uzaimah, 2020). Penggunaan rangka kerja CSR sedia ada yang berlandaskan budaya, nilai, kepercayaan dan perspektif Barat dalam pelaksanaan CSR di Malaysia adalah tidak bersesuaian dengan budaya masyarakat Timur dan agama Islam.

Pembentukan rangka kerja CSR yang serasi antara amalan Barat dan Islam perlu diwujudkan supaya pelaksanaannya di bank-bank Islam akan lebih mapan dan berdaya tahan. CSR sahaja tidak mencukupi dalam mencapai kebajikan sosial dan kesejahteraan ekonomi. Ulama arus perdana dan ahli ekonomi Islam di seluruh dunia telah berhujah bahawa keadilan sosial, ekuiti dan pengagihan semula pendapatan boleh dicapai dalam masyarakat Islam kontemporari melalui zakat, waqaf dan pinjaman tanpa faedah. Oleh itu, bagi mencapai matlamat yang kebajikan sosial dan kesejahteraan ekonomi lebih holistik, konsep CSR perlu diintegrasikan dengan prinsip Qard al-Hasan.

Qard al-Hasan merupakan akad kebajikan yang sangat digalakkan oleh Islam. Malah, para sarjana ekonomi Islam meletakkan Qard al-Hasan sebagai salah satu inisiatif CSR yang boleh dilaksanakan oleh bank-bank Islam. Bank Islam seluruh dunia seperti Bank Islam Palestin, Islami Bank Bangladesh Limited, Al Arafah Islami Bank, EXIM Bank Bangladesh, Social Islami Bank, First Security Islami Bank, Shahjalal Islami Bank (Quazi, 2012), Bank Rakyat Indonesia Syariah, Bank Islam Bahrain dan Bank Muamalat Indonesia telah menggunakan Qard al-Hasan sama ada untuk membiayai inisiatif CSR atau Qard al-Hasan itu sendiri merupakan inisiatif CSR di bank-bank tersebut. Ertinya, bank tidak hanya menjadi penyumbang (*donator*) malah bank bertindak sebagai penghubung (*mediator*) antara unit defisit dan unit lebihan dalam masyarakat untuk menyalurkan dana yang bersifat tabarru'.

Sehubungan dengan itu, penyediaan inisiatif CSR berasaskan Qard al-Hasan dapat membantu memenuhi keperluan kewangan masyarakat dan mencapai objektif yang telah digariskan dalam *maqasid Syariah* sekali gus menjadi salah satu cara perbankan Islam melaksanakan tanggungjawab sosial mereka. Melalui pelaksanaan Qard al-Hasan sebagai inisiatif CSR, perbankan Islam dijangka akan berjaya mencapai matlamat yang digariskan oleh Bank Negara Malaysia iaitu mewujudkan pengantara yang memberi impak secara beretika dan memenuhi keperluan masyarakat dalam menghadapi situasi kemelut ekonomi yang melanda dunia.

Model Integrasi Qard al-Hasan dalam inisiatif i-CSR (MAQiC) merupakan adaptasi daripada beberapa buah model dan kerangka kerja sedia ada dalam sorotan kajian lepas. Model ini terbahagi kepada dua iaitu:

- i. Model Konseptual Integrasi i-CSR dan Qard al-Hasan
- ii. Model Aplikasi Qard al-Hasan dalam inisiatif i-CSR (MAQiC).

Model pertama merupakan asas kepada pembentukan model MAQiC. Model ini merupakan gabungan daripada tiga model dan kerangka kerja sebagaimana berikut:

- i. Kerangka kerja i-CSR menurut Syariah Islam
- ii. Teori Pemegang Taruh dan Piramid i-CSR
- iii. Kerangka Kerja Obligasi i-CSR

Berdasarkan Model Konseptual Integrasi i-CSR dan Qard al-Hasan, Qard al-Hasan boleh diaplikasikan ke dalam inisiatif CSR bank Islam bagi menyediakan produk kewangan sosial yang lebih mapan dan lestari. Model MAQiC ini boleh digunakan oleh bank Islam dalam menyediakan produk kewangan sosial kepada golongan yang memerlukan di bawah inisiatif CSR. Qard al-Hasan merupakan akad pinjaman yang bersifat kebajikan. Oleh itu, akad ini lebih sesuai digunakan dalam inisiatif CSR bank berbanding produk komersial. Bank Islam sebagai entiti perniagaan bertanggungjawab untuk memastikan operasi perniagaan yang dijalankan mendatangkan keuntungan. Oleh kerana asas pinjaman akad Qard al-Hasan ialah tiada sebarang penambahan ke atas modal yang diberikan kepada peminjam, maka penawaran produk berasaskan akad Qard al-Hasan ini tidak memberikan keuntungan yang banyak kepada bank Islam. Oleh sebab itu, akad Qard al-Hasan dicadangkan untuk diaplikasikan dalam produk pembiayaan dan kewangan sosial.

2. OBJECTIVE

Produk Qard al-Hasan secara asasnya mempunyai potensi untuk ditawarkan sebagai produk tabarru' seperti pembiayaan mikro yang bertujuan untuk membantu golongan miskin rentan (*unbankable customer*) mendapatkan perkhidmatan kewangan daripada bank. Oleh itu, model Model Aplikasi Qard al-Hasan dalam inisiatif CSR (MAQiC) dibentuk untuk membantu

perbankan Islam di Malaysia menyediakan lebih banyak produk dan program berasaskan CSR kepada para pemegang taruh masing-masing dengan lebih lestari dan holistik. Model MAQiC ini juga bertujuan untuk mengisi kelompongan kerangka kerja CSR yang lebih bersesuaian dengan masyarakat Timur umumnya dan Muslim khususnya.

3. NOVELTY & INVENTIVENESS

MAQiC dibangunkan bagi memenuhi keperluan perbankan Islam di Malaysia terhadap satu rangka kerja khusus CSR untuk memastikan kelestarian pelaksanaan CSR oleh bank Islam di Malaysia. Pelaksanaan CSR yang lestari dan holistik akan menjamin kemaslahatan dan kebajikan ekonomi masyarakat secara keseluruhan.

4. PRACTICALITY & USEFULNESS

MAQiC dihasilkan untuk diguna pakai oleh Institusi Perbankan dan Kewangan Islam di Malaysia dalam membangunkan produk-produk CSR berasaskan Qard al-Hasan. Produk CSR berasaskan Qard al-Hasan akan dapat membantu ramai golongan miskin rentan (*unbankable customer*) beroleh bantuan kewangan terutamanya bagi menjalankan perniagaan yang secara tidak langsung dapat mengubah taraf hidup keluarga mereka.

5. CONCLUSION

Bagi memastikan pelaksanaan CSR terus mapan dan lestari, bank Islam perlu proaktif dalam membangunkan produk berasaskan Qard al-Hasan. Unsur kebajikan pada kedua-dua konsep ini akan memberikan manfaat kepada pemegang taruh bank terutamanya kepada golongan miskin rentan mendapat peluang ekonomi yang sama sebagai mana segmen masyarakat yang lain. Model Aplikasi Qard al-Hasan dalam Inisiatif i-CSR (MAQiC) akan membantu bank melaksanakan tanggungjawab sosial mereka dengan lebih mapan dan berterusan untuk jangka masa yang lama. Secara tidak langsung, perbankan Islam juga akan mencapai matlamat penubuhannya iaitu kebajikan sosial dan kesejahteraan ekonomi kepada seluruh pemegang taruh amnya dan masyarakat khususnya.

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