

Program Evaluation on Urban Agriculture Malaysia: A Review of Evaluation Studies Using Cipp Evaluation Model Approach

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Abstract

Background: Urban agriculture is described as all types of agricultural production (food and non-food products) that occur within or around cities. Currently, the lockdown and threat of a global pandemic has turned a lot of people especially urban dwellers who previously may have depended solely on supermarkets for their food into gardeners and would-be farmers overnight. This happened to prevent shortage of food and to ensure food supplies closer to home with nutritious food. Ministry of Agriculture and Food Industry Malaysia (MAFI) government has introduced the urban agriculture program to address the issue of land shortage for agriculture, besides enabling the people to venture into the agricultural sector by using the existing space for food production as well as generating additional income.

Methods: A review has been conducted on urban agriculture studies globally and evaluation studies. The researcher examined few evaluation approaches in evaluation studies that suit to be conducted for urban agriculture program evaluation.

Results: The reviewed demonstrated that on the majority outcomes measures on urban agriculture is not focusing on evaluation studies. The most frequent methodological conducted were lack of evaluation study design. There was also an absence of globally reviewed and method approach to evaluate has been done.

Conclusions: Further, due to a lack of program evaluation in urban agriculture program, little is also known about the CIPP Evaluation model to be used in the urban agriculture research area. Therefore, this article aims to bridge a gap in knowledge, methodological and understanding of evaluation study and approaches in urban agriculture research area.

Keywords: urban agriculture, program evaluation, evaluation model, CIPP Model

Introduction

As the world's population grows, more and more people are expected to live in cities. 60 to 85 percent of the world's population is expected to live in urban areas by 2025. Urbanization is expected to reach 75% in Malaysia by 2030. Most urban dwellers who previously relied solely on supermarkets for their food have been transformed overnight into gardeners and

would-be farmers as a result of the lockdown and threat of a global pandemic. As a result of the global pandemic, lockdown, and resulting food shortages, gardens became not only a place to escape for space and exercise, but also a vital source of food for the future.

At some point, food security issues arise. Food insecurity has a direct impact on health. Apart from that, poverty and food insecurity are a result of rapid urbanization because the majority of food is purchased by urban dwellers, who rely on cash income to buy food. As a result, the urban poor are particularly vulnerable to the shock of food price increases, which can lead to food insecurity as food accounts for the majority of urban household expenditures. Furthermore, according to Frankenberger (1992), assets, community inequalities, risk-minimizing strategies, and coping strategies are also important drivers. Negatu (2006) mentions that the ability to produce one's own food and the increase in purchasing power are the two major drivers.

Farming has always been associated with the rural environment in popular culture. Indeed, it is expected that crop output alone would suffice to feed the metropolitan population (Orsini et al., 2013). Though, this has proven to be an incorrect assumption, as UA is capable of meeting the food needs of the urban population if properly implemented (Specht et al., 2013). In order to assist urban dwellers capable in achieving food needs this would be more than just technical advancement and organizational improvement. Diversification of crops and species, farming and trading networks, and consumption behaviours and habits are all promoted when horticulture is given a role in food city supply. In this way, rural and urban communities may work together to achieve sustainable production and responsible commerce and consumption (FAO-FCIT, 2011).

Background of Study

An urban agriculture program has the potential to improve food security and health, as well as local economic viability as well as social inclusion and environmental sustainability (Orsini et al., 2013). Urban agriculture is defined as production in the home or plots in urban or peri-urban areas. As such, it is in most of the cases an informal activity quite difficult to characterize with accurate data and trends (Ruel et al. 1998; FAO 2003). Zezza & Tasciotti, (2010) defined urban agriculture (UA) as the production of crop and livestock goods within cities and towns, this definition was similar with Man and Tiraieyari (2018) who have defined urban agriculture as agriculture (crop and livestock) production that ventures within cities and towns surrounding areas. However, all types of agricultural production (food and non-food products) that occur within or around cities, as defined by Wagstaff and Wortman (2015), are considered urban agriculture. Agriculture near cities is referred to as "peri-urban agriculture" as well (Diekmann et al., 2016; Hendrickson & Porth, 2012; Oberholtzer et al., 2014).

Individuals and organizations engage in urban agriculture to achieve a variety of lofty private and public goals, including improving their own health and economic situation, improving access to food in their communities, creating income and jobs, beautifying their communities, educating about gardening and farming, creating a sense of community, and providing

ecosystem serenity (Santo, Palmer & Kim, 2016). Cities in the global south and those in the global north have different goals for urban agriculture. People in the latter typically farm for recreational or aesthetic reasons, though farming for household food supply becomes prevalent during economic downturns (McClintock, 2010).

Households in the global south's cities typically farm on undeveloped grounds, marginal lands, and community plots primarily for food for their own consumption, while empty areas in post-industrial landscapes are utilised for agricultural reasons. Cities in the global north use rooftops, balconies, and more recently vacant lots, road medians, and parks for agricultural uses (McClintock, 2010). In this context, the term "urban agriculture" is used to describe crop growing that takes place in community gardens, allotments, backyard gardens, and rooftop gardens.

Numerous towns and metropolises in Malaysia are going in the direction of urbanized growth. Having recognized the importance of urban agriculture Ministry of Agriculture and Food Industry Malaysia (MAFI) government has introduced urban agriculture program as a way to address the issue of land shortage in agriculture, which enables individuals and families to enter agriculture by utilizing the existing space for food production and generating additional income. The Department of Agriculture Malaysia (DoA) is one of the Ministry of Agriculture and Agro-based Industry Malaysia's federal departments. The Department of Agriculture (DoA) was created in 1905, and its primary mission at the time was to carry out the government's agricultural policy. The Department of Agriculture (DoA), which provides agricultural extension and development services, is the primary agricultural department that supports and establishes the Urban Agriculture Program. Through the Urban Agriculture Program, the Department of Agriculture (DOA) has designated agricultural extension staff to assist in the transfer of technology and dissemination of appropriate knowledge to farmers.

The Urban Agriculture Program was founded by the Malaysian Department of Agriculture in 2010. It is a program that enables urban households to lower their living costs by producing some of the foods they require with the help of the Department of Agriculture. This initiative covers people from urban and suburban areas at the State and Federal levels, thanks to the coordination and participation of several departments and agencies. In the context of many life aspects and urban life needs, such as food supply, environmental greening, water and urban waste management, education, and healthy well-being, integrating agricultural into urban planning is vital for sustainable development. According to Datuk Seri Dr Ronald Kiandee, (2020) Minister of Agriculture and Agro-based Industries, this program will aid the government's efforts to ensure the country's food security and quality. People and communities can also grow and produce their own food in order to meet their daily requirements and save money.

Though the ability of urban agriculture is undeniably important in Malaysia and global, there is still little evidence of its program effectiveness. Many relevant studies have been conducted and discussed in the literature for urban agriculture practices in Malaysia despite these findings, but there is still a lack of a clear-cut study that is directly and comprehensively related to assessment system conducted, especially the implementation of Urban Agriculture

Program. A guidebook for module development of Tun Hussein Onn University (2011) suggested that, the first group of participants should be measured every four years or five years where contents evaluation can be evaluated and monitored for suitability. An in-depth evaluation of the Urban Agriculture program at the Department of Agriculture and its participants in relation to agriculture industry demands in Malaysia is therefore required. After five years of deployment, the first cohort needs to be measured to determine whether or not the continuous quality improvement set has been accomplished. All of this is in accordance with the theories of evaluation.

Therefore, the aim of this paper was to attempt to clarify the past research on urban agriculture globally and in Malaysia, to clarify the comparison of evaluations models and to clarify the significance of using CIPP Evaluation Model by considering the arguments in previous research for urban agriculture. The paper is structured into six parts. The first is the introduction, which highlights the background of study on urban agriculture. The second section covers the literature on urban agriculture and evaluation model as an evaluation approach. The third section presents the materials and methods while the fourth covers the findings between urban agriculture and evaluation models. The fifth section presents a discussion of the results of the study while the sixth presents the conclusion of the study.

Literature Review

Urban Agriculture (worldwide)

Urbanization, globalisation of food systems, and other globalisation factors are causing global social, environmental, economic, and political challenges. Urban farming is one of the methods for achieving sustainable agriculture that is frequently used by communities, particularly in rapidly urbanising areas, to address environmental and economic issues such as greenhouse gas emissions and deprivation. Numerous initiatives have been launched in recent decades to commercialise urban farming on an international, national, and municipal scale. Many studies have been conducted worldwide in the field of urban agriculture.

In a quantitative research study conducted by Suryandari & Sumrahadi, (2012) using survey approach through purposive sampling technique on 171 farmers were chosen as respondents at Jakarta Barat dan Tangerang, Indonesia to assess the perceptions of Indonesian farmers relate to farming prospects and its impacts on local communities and the urban environment.. The findings from the study have shown that farming in urban settings has certain economic, social, and environmental advantages. From a financial standpoint, urban agriculture can assure local food security, while farmers can improve their savings by not spending as much money on food. In terms of social impact, urban farming has the potential to create new jobs, empower the poor, and lower the urban poverty rate. Agricultural activities in the city can improve the green area that serves as the city's lung and contribute to a healthy urban atmosphere and sustainability from an environmental standpoint. According to the conclusions of the study, agricultural activities in the city must be encouraged in order to handle population expansion and urbanization.

As well a study has been done on performance of agricultural extensions workers in implementing Urban Agriculture program in Banyumanik District, Semaarang City Indonesia. This study conducted by Prasetyo et al., (2020) used quantitative research method using survey approach. Through purposive sampling technique, 21 extension workers(instructor) and 16 farmers were chosen as respondents at BPP Kramas, Banyumanik district. The result from the study indicates that the performance level of extension workers in extension preparation, extension implementation, evaluation, and reporting are in the high category, with an average percentage achievement of 96%. It means that the Kramas Banyumanik district's urban agricultural program went off without a hitch, as planned. Farmers were highly eager about following the agricultural extension specialists' instructions.

The previous findings were supported by a research conducted by Trutko,(2014) on 5 participants of the Green Tomorrows Program in Washington, DC. This study used qualitative research method using semi-structured interview approach. The study's target demographic was participants who consistently attended the Green Tomorrow's program and CGCF staff (5). Green Tomorrow's program outcomes met or exceeded staff and participant objectives, and the community programming activities had a positive impact on participants' food security, nutrition education, food preparation, and food budgeting abilities. The findings explained how participants described the program's food distribution resulted in increased consumption of produce, which contributed to improved food security. They reported greater knowledge of agricultural methods and healthy eating, and the ability to prepare and shop for healthily food post-program completion.

However, the previous studies are contradict a bit with a study conducted by Crole-Rees et al., (2015) on urban agriculture an opportunity for farmers in Swiss? This research is investigated the potential of urban farming for professional farmers. This study used quantitative and qualitative research method using survey and interviews approach. Through purposive sampling technique, 360 households and 16 farmers were chosen as respondents at Lausanne, Swiss. The results explained that there are major economic and agronomic limits for traditional professional farming in cities, leaving agricultural production in cities to be handled by urban "gardeners" or quasi-professionals. Both the legal and ethical boundaries for professional farmers are major concerns. The main difficulties are the legal limits to professional farming as well as constraints. The main difficulties include regulatory restrictions on professional farming as well as limitations on the size of a profitable agricultural operation. Farmers in cities and peri-urban areas may have more opportunities for commercialization and collaboration with the urban population. As a result, the Food Urbanism Initiative (FUI) task is to identify the most appropriate set of realistic UA project typologies while keeping an open mind about the future role of professional, semi-professional, and "hobby" farmers.

Tiraieyari et al., (2019) conducted a study on the implementation of Community Urban Agriculture insights from agricultural professionals. This study is a quantitative study on 200 agricultural professionals in the Zanjan province in northwest Iran. The study tested the direct effect of several predictors on implementation of community-based urban agriculture (ICUA)

using structural equational modelling. From the study, they found that “personal characteristics”, “UA positive and negative consequences”, “sociocultural”, and “economic” factors affect ICUA. Besides, “personal characteristics” has shown that the strongest direct effect on ICUA among all the factors. Meanwhile, the mediation model was supported by an indirect model that included "attitude." “Personal characteristics,” “UA positive and negative consequences,” and “sociocultural” factors all influenced ICUA indirectly through “attitude,” according to research findings. The indirect effect of "sociocultural" on ICUA was the strongest of all the components. Through the study by Tiraieyari et al., (2019), policy makers and program planners can utilize the information to establish policy intervention sites and procedures for promoting urban agriculture.

A quantitative study conducted by Sanyé-Mengual et al., (2020) on 406 individuals to evaluate environmental and socio-cultural ecosystem services (ESs) via a standardized Likert-scale survey. The study aims to 1) assess the perceived ESs of urban agriculture by comparing the perspectives of various societal groups in Bologna, Italy (namely, UA project leaders, stakeholders, and the general public) and (2) to identify differences in the evaluation of specific UA types (indoor farming, high-tech greenhouses, peri-urban farms, community-supported agriculture, community rooftop garden, and urban collaboration). The research revealed both parallels and differences in attitudes among various socioeconomic groupings. According to the statistical research, the general public and UA stakeholders believe that socio-cultural ESs are extremely important, but providing ESs are considered less important. Peri-urban activities were more closely associated to habitat ESs, whereas UA kinds focusing on social innovation were projected to generate higher socio-cultural ESs. The researchers believe that participation in and understanding of UA are decisive variables for valuing the provision of ESs through UA, which should be taken into account when evaluating ESs, especially in a policymaking setting.

Few studies on urban agriculture were reviewed in this paper to give an overview of diversify research perspectives. Thus, this paper reviews existing literature on urban agriculture globally and national to highlight the methodology and need for inter-disciplinary research that combines urban agriculture and methodology approaches to ensure the future of urban agriculture program in guaranteeing future food security and wellbeing of urban dwellers.

Urban Agriculture in Malaysia

Malaysia has recently promoted urban agriculture as a means of ensuring food security and nutrition by 2030, as urban Malaysia's population grows as a result of urbanisation and globalisation. Several studies have done in Malaysia to address the importance of urban agriculture, the intention and factors influencing the urban inhabitants to involve and more accept the recognition and contribution, as well as the ability to expand their usage of urban agriculture.

A study by Tiraieyari et al., (2019) has tested on the relationship between various predictors from the theory of planned behaviour (TPB) and volunteering in urban agriculture. The study was conducted with a sample of 890 undergraduate students from across a university in

Malaysia. The potential moderators between the predictors and volunteering intention. The results from the study showed that predictors affect students' intention to volunteer in the program. Furthermore, the effect of moral obligation on volunteering intention was influenced by age, gender, engagement in campus-based activities, and academic achievement. The study discovered that social norms had a greater impact on female students' willingness to volunteer. For students engaging in campus-based activities, the effect of perceived behavioural control on volunteering intention was greater. From the findings it can be concluded that volunteer recruitment and development for urban agriculture should be promoted and techniques such as segmenting student target audiences to reach individuals who are a suitable fit for the program should be improved. Besides, the paper has suggested that interventions should focus on moderators while also enhancing the strength of TPB constructs with a willingness to volunteer.

Hussain et al., (2019) conducted a quantitative study on 200 respondents from residential areas of Kuala Lumpur, Putrajaya and Shah Alam, Malaysia. The study is about to investigate the community perception and participation of urban farming activities in urban areas. The results from the study indicate that the urban population has a positive perception with respect to the approach to urban farming. Additionally, the result also suggests that agricultural operations minimize their costs and expenditure on the procurement of vegetables, fruits and flowers, where 61% accepted that agriculture saved costs. Community engagement has a major effect on the valuable and productive urban farming practices linked to the sustainable urban climate.

In a quantitative study conducted by Ibrahim (2018) on 1365 city dwellers as respondents in Klang Valley, Malaysia, which the study focused on to identify factors that influence city dwellers' intention towards implementing urban agriculture. The result from factor analysis showed that perceived interest, perceptible behaviour regulation, facilitating condition, subjective norm, attitude and perceived risk were the factors influencing a city dwellers' intention towards urban agriculture. This also showed that people are dependent on the knowledge they obtain on urban agriculture from friends, family, colleagues or social media. Those who are important for them will, in other words, influence their intention to take urban farming.

Nevertheless, a study from Ramaloo et al., (2018) which the findings shows that Community agriculture has become critical in achieving and addressing the full potential of the residential population. The qualitative study conducted based on in-depth interviews and observations on 15 community residents from Taman Desa Damai, Bukit Mertajam City, Penang, Malaysia has recommended stakeholders to give financial help to the community. This is because to allow the community farming has greater access to technological facilities and ensures household food security, quality of food and food health, variety of diets and makes an enormous contribution to urban household's livelihoods. According to the study, this can be one of the best ways to tackle the food shortage in the future by supplying support. If urban agriculture is properly developed and practiced by government and agencies, it will give the local residents many benefits to change their ideas, and support in realizing the green community vision.

Survey study consistently showed that the area of research study on urban agriculture keep on going under diversify of methodologies. This can be proved by a study from Ngahdiman et al., (2017) which the study is about to investigate the intention of urban dwellers towards practicing urban agriculture particularly among stratum households since the related campaign and concept of urban agriculture are relatively new in Malaysia at that time. The study used a multistage sampling technique involving stratified sampling to select the 305 respondents around Putrajaya, Kuala Lumpur, and the periphery of Putrajaya. The survey was conducted among strata housing dwellers such as apartment and condominiums. The data from this study was analysed using descriptive analysis, factor analysis, and binary logistic analysis. The study's findings demonstrate that respondents have good attitudes toward urban agriculture, with the majority intending to implement it in the future. Four latent components emerged through factor analysis, indicating respondents' intentions to engage in urban agriculture. Positive attitudes about urban agriculture, confidence in implementing urban agriculture, societal environmental, and role model effects were among these aspects. The socio demographic features were determined using a binary logistic analysis model, and the derived elements from factor analysis affected urban people to pursue urban agriculture. Age, gender, educational level, and household size, along with the four latent components described previously, were found to be the most likely factors influencing urban people' intentions to pursue urban agriculture.

Regardless of how, a quantitative study by Rezai et al., (2016) on 360 households in Putrajaya, Malaysia has shown a positive statistical relation between achieving adequate food and adequate diet through dedication to urban farming. The results of the study indicate that there are sufficient quantities of food, proper nutrition, cost-effective food supplies and a reduction in food bills which could contribute to food safety from urban farming. This highlights the need for local authorities in Malaysia to give local residents better recognition and support, and enable them to expand urban farming practice. In addition, from the 360 households face-to-face interviews the findings revealed that higher-income households are more likely to see urban agriculture is correlated with food security. The results from this study suggest that younger urban residents with a higher education degree are more likely to link the Urban agriculture to food security as well.

Many researches have been conducted to give an overview about urban agriculture as a great potential among city dwellers in Malaysia. However, there is still lack of study in improving and evaluating urban agriculture program held by Department of Agriculture in Malaysia.

Theory of Evaluation

The higher the assessment level, the greater will be the evaluation process and the more time it will take. Evaluation theory is a concept that is hard to clearly define. Sarkowi (2012) formulates the theory of practice, theory-based evaluation, theory-driven evaluation, system theory, evaluation theory, shift theory and logic models among the words frequently used to refer to evaluation theory. There are various ideas about the needs and significance of the evaluation process. The evaluation theory is important to the evaluator himself, the stakeholders in relation to what is evaluated, and to the evaluated program itself (Sarkowi,

2012). There is lack of clear and concrete ways or measures in program evaluation happen. Therefore, A more systematic and organized approach will help in some way to solve this problem.

There are numerous models for assessing the program, such as; Provus models (Discrepancy Model), a model Stake (Countenance Model), Formative-Summative Evaluation Model, a CSE-UCLA Model, Tree Evaluation Model, Logic Model and the CIPP Model. Essentially, no evaluation model is correct, and every form has strengths and weaknesses. Through this multitude it is clear that no one solution can match every situation (McCoy & Hargie, 2001). In reality, Chelimsky, (1995) described a trend in evaluation, whereby the focus is increasingly not so much on the attributes of a specific method as to use complementary methods to support one another.

From some consideration of the use of the above-mentioned evaluation program methods, this study used CIPP model evaluation due to the four components of context (goals), input (plans), process (actions), and product (outcomes) being a single whole reflecting the strengths of the CIPP models (Zhang, et.al, 2011).

In particular, the context evaluation aspect of the Context, Input, Process and Product evaluation model can help to define learning needs of service providers and the needs of the community. The component of the input evaluation can then help recommend an approachable project that can best address the needs identified. Following the process evaluation component tracks the project process and possible operational obstacles, and determines project adaptation needs. Lastly, the product evaluation components portion interpret and determine the outcomes of the program and evaluate its quality, importance, relevance and probity.

CIPP Evaluation Model in Agriculture Program

In all cases, a straightforward approach to evaluating expansion projects is insufficient (DeHegedus, 1994). The Stufflebeam model provides frameworks for extension program assessment planning. Stufflebeam (1983) developed an evaluation approach, known as the CIPP model, that is concerned with providing meaningful knowledge to persons in decision-making positions. Context, input, process, and product (CIPP) is the initial letter of such evaluations. These four forms of evaluations are interconnected; while it is possible to focus solely on one component, a complete evaluation of extension programs should encompass all four categories. The major goal of the evaluation is to improve rather than to prove, according to the CIPP Model (Stufflebeam, 1983, p. 118). There were several studies in agriculture sector that has been used CIPP model as a based to evaluate agriculture program.

According to a study on performance of Agribusiness Microfinance Institution (MFIA) conducted by Gurning et al., (2019) used Context, Input, Process and Product (CIPP) as an approach to evaluate the performance. The study was conducted on 65 of MFIA in District of Gunungkidul based on MFIA that had been conducted the Annual Members Meetings (AMM) on January-March 2018. Direct interviews with the MFIA manager using questionnaires were used to acquire primary data. Secondary data was collected from the

AMM 2017 report. The CIPP model was employed in this investigation (Context, Input, Process, Product). The purpose of the study was to assess the performance of the MFIA Rural Agribusiness Development Program in the Gunungkidul District. Agribusiness Rural Enterprise Development Program was created as a stimulus, with the goal of developing into an MFIA to provide farmers with long-term finance as MFIA is the only financial institution dedicated to providing agricultural capital to farmers in rural areas. As the result, the performance of MFIA in the District of Gunungkidul in 2017 was included in the good criterion, according to metrics in CIPP models.

Similar study has been conducted by Man (2010) using CIPP Model on evaluation of the Women Economic Development (WEDA) programme in developing women entrepreneurship in Sarikei, Sarawak, Malaysia. The quantitative research method employed in this study was a survey methodology. 30 female respondents from the Department of Agriculture's Women Economic Development (WEDA) program in Sarikei, Sarawak, were chosen as respondents using a purposive sampling technique. The CIPP (Context, Input, Process, and Product) Model Evaluation was used to evaluate the program's efficacy for women entrepreneurs, particularly those engaged in agriculture-related activities. The findings showed that Only 35% of the target component one (Women Entrepreneurs Development) was met, as assessed by changes in total sales and net profit after participating in the WEDA program, while 15% of the target component two (Family Income Diversification) was met. This happened because of participants' drive for success is not raised since the lack of effort due to the high cost of operation, weather conditions and marketing problems. Nevertheless, positive changes were felt by the participants, particularly in terms of business knowledge, skill growth, and entrepreneurial operations.

Previous study can be supported by Ishak et al.,(2017), Rus et al.,(2018), and Ishak et al., (2019). They study on the evaluation of My Kampung My Future (MKMF) Program Effectiveness based on CIPP Model in Malaysia. This MKMF program is organized by Ministry of Agriculture Malaysia to promote involvement of youths in agriculture, fisheries and food sectors as well small medium industries. The selection of CIPP Model has been used in the study was to focus more on the improvement process. The quantitative study employs survey approach where the questionnaire was distributed to 212 MKMF participants for data collection and has been analysed using SPSS software. As the results from Input dimension, showed that the mean and standard deviation values were moderate, the understanding of the MKMF role, explanation from MOA officers and the latest facilities elements were at high level. Meanwhile, the finding to maintain the program's long-term viability, it was evident that the assessment process was essentials from process dimension showed that the total mean value was at high level and there were two moderate constructs in terms of problem solving and loss liability. As conclusion from the results, to maintain the program's long-term viability, these are evident that the assessment and improvement process were essential in input and process dimension. Besides, CIPP evaluation model (Context, Input, Process and Product) performed as an effort to ensure its effectiveness and smoothness of the program in the future.

These studies have found the similar evaluation approach where to identify the programme's achievement is through context, input, process and product (CIPP) analysis as articulately quoted by Muhamad & Man (2014). The goal of the study is to look into and assess the performance of the Department of Veterinary Services' (DVS) Target Area Concentration (TAC) program, which focuses on the integrated farming system of cattle and oil palm plantations. This study used quantitative research method using survey approach. Through cluster sampling techniques, 350 farmers in the TAC programme were selected as respondents in several states in Peninsular Malaysia. Though, only 187 of the planned 350 farmers responded and were interviewed. From the study, the analysis revealed that TAC meets the real needs of the program context; the provision meets input needs, still there are some constraints; the TAC program is running well and receiving good cooperation from farmers, but there are some limitations; and the program has a positive impact on production, income, employment, and knowledge changes. To date, the TAC program has met its goals, but it still needs additional work to improve.

Furthermore, in a mix-method study by Khanson et al., (2015) the findings have shown that An average score of 73.40 on a 1 – 100 rating scale was given to the weavers' community enterprises in Udon Thani Province. Evaluations of context and input earned ratings of 79.75, 68.04, 70.01, and 76.0, respectively. This study by Khanson et al., (2015) is about guideline for capacity buildings in Weavers's Community Enterprise in Udon Thani Province, Thailand. The aimed of study are to access the operational performance of weavers' community enterprises in Udon Thani Province, and to determine the guidelines for their capacity building. The information was collected from interview with chairpersons of 136 enterprises based on application of context, input, process, and product (CIPP) evaluation model. This study employed a mixed method combining both quantitative and qualitative research approaches. The quantitative information was collected from totally 136 chairpersons of weavers' community enterprises operating in Udon Thani Province through CIPP evaluation format addressing the context, input, process, and product aspects. While, focus group discussion was arranged with 30 individuals representing members of such community enterprises and representatives of pertinent government agencies for additional qualitative information and determination of guidelines for enterprise capacity building.

Lastly, there is a study conducted by Alibaygi et al., (2011) on evaluation of "facilitating transfer of research findings' project" from the viewpoint of farmers in Kermanshah province. The major goal of this descriptive survey study was to use the CIPP (Context, Input, Process, and Product) evaluation paradigm to assess the "Facilitating Transfer of Research Findings Project" (FTRFP) from the perspective of farmers. Farmers who implemented FTRFP on their farms (N=72) made up the statistical population for the study. From the evaluation, FTRFP was found to be moderately successful. he level of effectiveness in Inputs (Mean=3.85 form 5) was higher than those in the Context (Mean=3.82 form 5), Product (Mean=3.32 form 5), and Process (Mean=3.28 form 5), respectively. The most important FTRFP strengths were reported as effective social and professional linkage among farmers, extension agents, and researchers, facilitating dissemination of appropriate research findings and appropriate new technologies, increasing farmer participation and cooperation,

and improving farm performance. The most significant points of weakness identified by FTRFP were a disregard for farmers' indigenous knowledge as well as an increase in production costs.

In a nut shell, from the previous studies the CIPP model has shown that can aids in shaping progress even though the project is already underway. The CIPP job steps are more adaptable and simpler to follow, and they may be used to verify a variety of cases or scenarios throughout the project. This ability to conduct assessments differs depending on whether the program is being implemented before, during, or after it has been implemented.

MATERIALS AND METHOD

This study used Mendeley software and library searches such as Scopus, Google Scholar, CABI and etc. to find numerous references such as materials from journals, papers, theses, websites, guides, and pertinent reports from online and other sources. This study gathered around more than 40 references from 2010 to 2020 in order to provide a comprehensive literature review. However, there were 19 materials on urban agriculture and CIPP evaluation model were reviewed on this paper based on the contents needed.

Findings

Table 2: Findings of previous studies on Urban Agriculture in Developing Countries

Authors	Findings	Critics/Comment/Argument
Suryandari & Sumrahadi (2012)	Farming in urban areas provides specific economic, social, and environmental benefits. From an economic standpoint, urban agriculture can assure local food security, while farmers can save money because they do not spend a lot of money on food. In terms of social impact, urban farming has the potential to create new jobs, empower the poor, and lower the urban poverty rate. Agricultural activities in the city can improve the green area that serves as the city's lung and contribute to a healthy urban atmosphere and sustainability from an environmental standpoint. To summarize, agricultural activities in the city should be supported in order to handle population expansion and urbanization.	The abstract and the methodology of the article was not clearly stated the results and not mentioned the analysis has been used by the researcher. The number of respondents selected was quite small (171) through purposive sampling without any justification to choose the small number of respondents which not really represent the whole population in Jakarta Barat and Tangerang. The article is not complete.
Prasetyo et al. (2020)	Extension personnel have a high level of performance in extension planning, implementation, evaluation, and reporting, with an average percentage achievement of 96%.	While mentioning the number of respondents (21 people), the authors did not mention the total number of populations of the farmers. Also, the number of respondents is not ideal in such a

		quantitative study. Furthermore, ethical consideration is not described. The reliability and validity of the used Likert scale were not tested as well. Although in the abstract, the authors mentioned using the quantitative inquiry, but in the result section, they also include statements from their respondents, which are typical qualitative research. Last, the limitation of the study is not mentioned.
Trutko (2014)	Participants stated that the program's food distribution led in increased produce consumption, which enhanced food security. They claimed to have a better understanding of agricultural processes and healthy eating, as well as the ability to prepare and shop for nutritious foods after completion of the program	Although the abstract did not include recommendation for further study, the report met credibility and robustness' elements of a good qualitative study.
Crole-Rees et al. (2015)	Traditional professional farming in cities faces significant economic and agronomic constraints, leaving agricultural production in cities to be managed by urban "gardeners" or quasi-professionals. The primary challenges are legal restrictions on professional farming as well as financial restraints. Regulatory restrictions on professional farming, as well as limits on the size of a profitable agricultural operation, are the key challenges.	Since the article is not yet published in any journals, we can assume that it is not peer-reviewed.
Tiraieyari et al. (2019)	Several predictors of "personal characteristics", "UA positive and negative consequences", "sociocultural", and "economic" factors affect implementation of community-based urban agriculture (ICUA)	The article met all the elements of believability and robustness of a research.
Sanyé-Mengual et al. (2020)	The socio-cultural environmental and socio-cultural ecosystem service (ESs) are extremely important, but providing ESs are considered less important. Peri-urban activities were more closely associated to habitat ESs, whereas UA kinds focusing on social innovation were projected to generate higher socio-cultural ESs.	Apart from failing to explain the ethical considerations, the authors also failed to explain the criteria used to select their participants. Additionally, the authors did not explain how they arrived at data saturation in the section on data analysis. Finally, no recommendations were made regarding the development of the research findings.

Table 3: Findings of previous studies on Urban Agriculture in Malaysia

Authors	Findings	Criticism/Comment/Argument
Tiraieyari et al. (2019)	Social norms had a greater impact on female students' willingness to volunteer. For students engaging in campus-based activities, the effect of perceived behavioural control on volunteering intention was greater.	The article complied with all of the elements of research credibility and robustness.
Hussain et al. (2019)	Urban population has a positive perception with respect to the approach to urban farming as the agricultural operations minimize their costs and expenditure on agriculture food-based product. 61% accepted that agriculture saved costs. Besides, community engagement has a major effect on the valuable and productive urban farming practices.	There is no suggestion in the abstract. Certain sentences, such as the first paragraph of Section II (Community Perception and Participation), line 1, were not grammatically correct ("Perception is defining as..."). Because the sentence was in the passive form, it should be written as "perception is defined as..." The target population is unknown as well. Additionally, ethical considerations are not mentioned. The questionnaire's reliability and validity were not evaluated. The discussion did not appear to be connected to the literature review, the strengths and limitations of the study were not discussed, and there was no recommendation for additional research.
Ibrahim (2018)	Perceived interest, perceptible behaviour regulation, facilitating condition, subjective norm, attitude, and	The thesis addressed the elements of research credibility and robustness, including a concise summary of the study in the abstract,

	<p>perceived danger were the elements impacting a city dweller's intention towards urban agriculture, according to the findings of factor analysis.</p>	<p>logical consistency, logical organization of literature review, and balanced critical analysis. The findings were correlated with the reviewed literature. The readability, on the other hand, could be improved. For example, in line one of the abstract, it was written, “the economic transition from agricultural based to industrial based experienced by Malaysia...”. That sentence could be improved by substituting to “Malaysia's economic transition from agricultural to industrial has resulted in urbanization. Another was, “it was also revealed that senior citizens who had retired and have high income showed more interest in urban agriculture than do the youngsters and unemployed person have low intention to adopt urban agriculture. This sentence could be replaced with, “It was discovered that retirees with a high income expressed a greater interest in urban agriculture than youth and unemployed individuals.”</p>
<p>Ramaloo et al. (2018)</p>	<p>The community agriculture has become critical in achieving and addressing the full potential of the residential population and the study has recommended stakeholders to give financial help to the community.</p>	<p>The abstract made no reference to the research problem that the author wished to investigate. The total population was not stated explicitly. Additionally, the authors did not refer back to the literature review and did not discuss the results/findings in greater detail. Occasionally,</p>

		informants' responses were longer than the discussion surrounding them.
Ngahdiman et al. (2017)	Factor analysis revealed four latent components that indicated respondents' aspirations to engage in urban agriculture. These factors included positive views toward urban agriculture, confidence in implementing urban agriculture, societal environmental effects, and role model effects.	The abstract summarized the entire study except for recommendations for additional analysis. The literature review was organized logically but focused exclusively on the definition of urban agriculture (UA) and its benefits. Prior research on the intention to practice UA, which formed the basis of this study, was not critically reviewed. Finally, while the authors presented the results clearly, they did not elaborate and connect them to the literature review. The study's strengths and weaknesses were also not highlighted, as was the recommendation.
Rezai et al. (2016)	According to the study, there is enough food, correct nutrition, cost-effective food sources, and a reduction in food costs, all of which could contribute to food safety from urban farming. Higher-income households are more likely to believe that urban agriculture is linked to food security, and younger city dwellers with a higher education degree are also more likely to believe that urban agriculture is linked to food security.	The article met all of the criteria for credibility and robustness in a scientific investigation.

Table 4: Findings of previous studies on CIPP Evaluation Model in Agriculture Program

Authors	Findings	Criticism/Comment/Argument
Gurning et al. (2019)	<p>The performance of MFIA in the District of Gunungkidul in 2017 was included in the good criterion based on metrics in CIPP models. However, MFIA's performance would be poor regardless of how strong its management was if it wasn't backed up by a shared sense of the need to improve and develop from the customer's side.</p>	<p>While the abstract discussed the study's objective, methodology, and findings, it omitted to mention the research problem or recommendations for further action. Although the authors specified the sample's selection criteria and the number of final samples, they did not state the population's total size. Additionally, while the authors' literature review was well-organized, they included only two sources on CIPP and none on Agribusiness and Microfinance Institutions. In other words, this section lacked a critical analysis of the literature that was balanced. There was no information about ethical considerations relating to, for example, consent and confidentiality of respondents. The authors appropriately explained the findings. However, the findings were not connected to the literature review; in other words, the authors ignored findings from other studies, regardless of whether they supported, mentioned, or contradicted the findings from this study. Finally, the article makes no recommendation for additional research.</p>
Man (2010)	<p>Context evaluation showed that there was generally an increase of income among women entrepreneurs in rural area after participating in the programme. Input evaluation, it is indicated that the source of information was obtained from WEDA Section officer, and the allocation was not in the money form as DOA allocated it in the form of inputs. Process evaluation showed that the implementation was well done by the DAO officers. Product evaluations showed 35% of the respondents were able to</p>	<p>The abstract lacked a clear research problem, methodology, and recommendations. The ethical considerations involved in sample selection were not adequately described. The findings were not discussed in relation to the literature review. Additionally, the study's strengths and weaknesses were not discussed. Finally, the article's layout was peculiar, as the Malay abstract was placed after the reference section.</p>

	achieve the target set by the WEDA programme requirement.	
Ishak et al. (2017)	Discussion on the evaluation of My Kampung My Future (MKMF) program based on CIPP evaluation model performed as an effort to ensure the effectiveness and smoothness in the future.	The abstract did not offer a clear overview of the study, including the unclear research problem and methodology. Furthermore, the authors presented some understandings about the CIPP evaluation model. Nevertheless, the literature review did not critically analyse the CIPP evaluation model under the same program in different areas. Although the study intended to discuss the evaluation of the MKMF program based on the CIPP evaluation model, it failed to show dimensions of Context, Input, Process, and Product (CIPP) within the evaluated program. Last, the article did not include any recommendation for further action, and additional references could be increased.
Rus et al. (2018)	The findings showed that the total mean value was at high level in process dimension. While, the mean and standard deviation values were moderate in input dimension.	The abstract was missing a research question and data samples. In addition, the literature review did not provide a fair, balanced assessment of input dimension assessment. The past studies concerning it haven't been thoroughly analysed. The proper citation of books and journal articles was observed, but more references could be added.
Rus and Ishak (2018)	The results revealed that the total mean value was extremely high. In terms of problem solving and loss liability, however, there were two moderate constructs. It was clearly demonstrated that the assessment process is critical in the quest of continual improvement in order to ensure the program's long-term viability.	In general, the abstract provided a clear overview of the study except for the unclear research problem. Moreover, while presenting the findings, the authors did not discuss and connect the results to the literature review. The number of references should be added to allow critical balance analysis.
Md. Said & Man (2014)	Target Area Concentration (TAC) program has met its goals based on the indicators of context, input, process and product. However, there is still few constraints from the program that need solutions and work to be improve.	There was no overview of the methodology in the abstract. The review of literature lacked a balanced critical analysis and included only a few empirical findings from previous studies. Furthermore, the study stated only

		that the data obtained was entered into a computer, making no mention of the statistical software used. Ethics were not adequately described. Additionally, the authors calculated frequency distributions and specific averages from the collected data but did not include them in the results section.
Khanson et al., (2015)	The program has been evaluated as having a good overall operational performance. Various business aspects have been recommended to be implemented on the community enterprise such as product development, marketing, accounting system, product design, networking, transfer of traditional local knowledge in weaving and members affairs.	The abstract omitted any reference to the research problem or recommendations for future studies. This article lacked any section on literature review. Although the authors presented the results and discussed them appropriately, the article's layout did not conform to the standard for good research findings publication.

The findings of this study clearly show that many research outcomes have been discovered on urban agriculture scope. The findings obtained have been summarized and reported in Table 2, 3 and 4 in an argumentative way. The collection of studies has been separated according to the study area and method approach. Based on the findings in table 2, it discusses several literatures on urban agriculture research in developing countries. According to research that has been done in developing countries, the urban agriculture activities are most likely acceptable among community and the methodology used are in various approaches such as identifying extension performance level, factors influencing to involve in urban agriculture, benefits of urban agriculture and factors affect the implementation of urban agriculture. These purpose of studies from developing countries showed many benefits and roles of urban agriculture towards better community well-being, social impact, environmental and economic.

Meanwhile, Table 3 discussed about previous studies on urban agriculture in Malaysia. Several studies have been showed that, Malaysia recognized urban agriculture as one of the tools for greater environmental, community, food security, health and economic benefits. However a reviewed from Islam & Siwar (2012) reported that urban farmers have received weak support on urban agriculture land use planning. Besides, in the study found that Malaysia urban agriculture is lack of integrated development approach. The study on analysis of urban agriculture development in Malaysia supported the findings from this study where there is no evaluation has been made on urban agriculture program in Malaysia to identify the weakness throughout the program implementation. Thus, it is recommended to provide some improvement in the program by conduction evaluation study for future urban agriculture performance.

Table 4 has showed findings of previous studies on CIPP Evaluation Model in agriculture program. A few agriculture studies have been found used CIPP evaluation model as their guideline to conduct evaluation research. From the findings CIPP has been proved as a good evaluation model in improving and helping decision making of a program been implemented. Several weaknesses have been found from the way of the articles presented. However, the evaluation of the projects has met the goals based on elements Context, Input, Process, and Product. Even though, the findings are found to be positive yet the methodologies of how CIPP model evaluation is conducted was still ambiguous. Agricultural programme evaluation studies using CIPP were found in a variety of research areas, including evaluation of extension agent performance, women entrepreneurship programmes, My Kampung My Future programmes, integrated farming of cattle and oil palm plantations, and community enterprise. However, there has been little research into the comprehensive evaluation of urban agriculture programmes.

Based on the table 3 and 4, it showed that Malaysian urban agriculture research is hampered by a lack of evaluation study methods. The major challenges identified are how urban agriculture is carried out in Malaysia, and a comprehensive evaluation of the program's overall effectiveness has never been studied. This study was limited by few studies have been reviewed through several online database platform such as Google Scholar, CABI, and Scopus. The articles were reached only on open access articles, this it becomes as limitations of this study. Besides, this result lack of rigorous meta-analysis on the methodology has been used for each of the previous studies. This requires thorough research approach in conducting evaluation study on urban agriculture.

Conclusion

As a conclusion urban agriculture is one of profound research area to be discover in many research perspectives. An evaluation study is one of the methods in another way of outcome that could be achieve from researcher instead of common outcome from research study. In addition, for program and projects initiatives, the effectiveness and efficiency of the evaluation are becoming crucial to make sure the accomplishment of the program. In this context, evaluating the urban agriculture program is a significant and critical activity, as the urban agriculture sector has emerged as a good trend in the recent Covid19 pandemic. The evaluation and selection of an urban agricultural program is critical for a variety of reasons, including project financing, evaluation of a project's efficacy, and program enhancement. Therefore, CIPP evaluation model has been recognised as one of the comprehensive evaluation models to be used in program evaluation for a program continuous improvement.

Based on the literature has been reviewed, a suitable research approach has been identified and this paper offers a comprehensive overview of the existing study on urban agriculture in Malaysia and worldwide that can support the decision-making process to conduct evaluation study using CIPP Model.

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