

■ PROGRAM ON ESCAPING
THE MIDDLE-INCOME TRAP:
CHAINS FOR CHANGE

The Jobs Challenge for the BARMM

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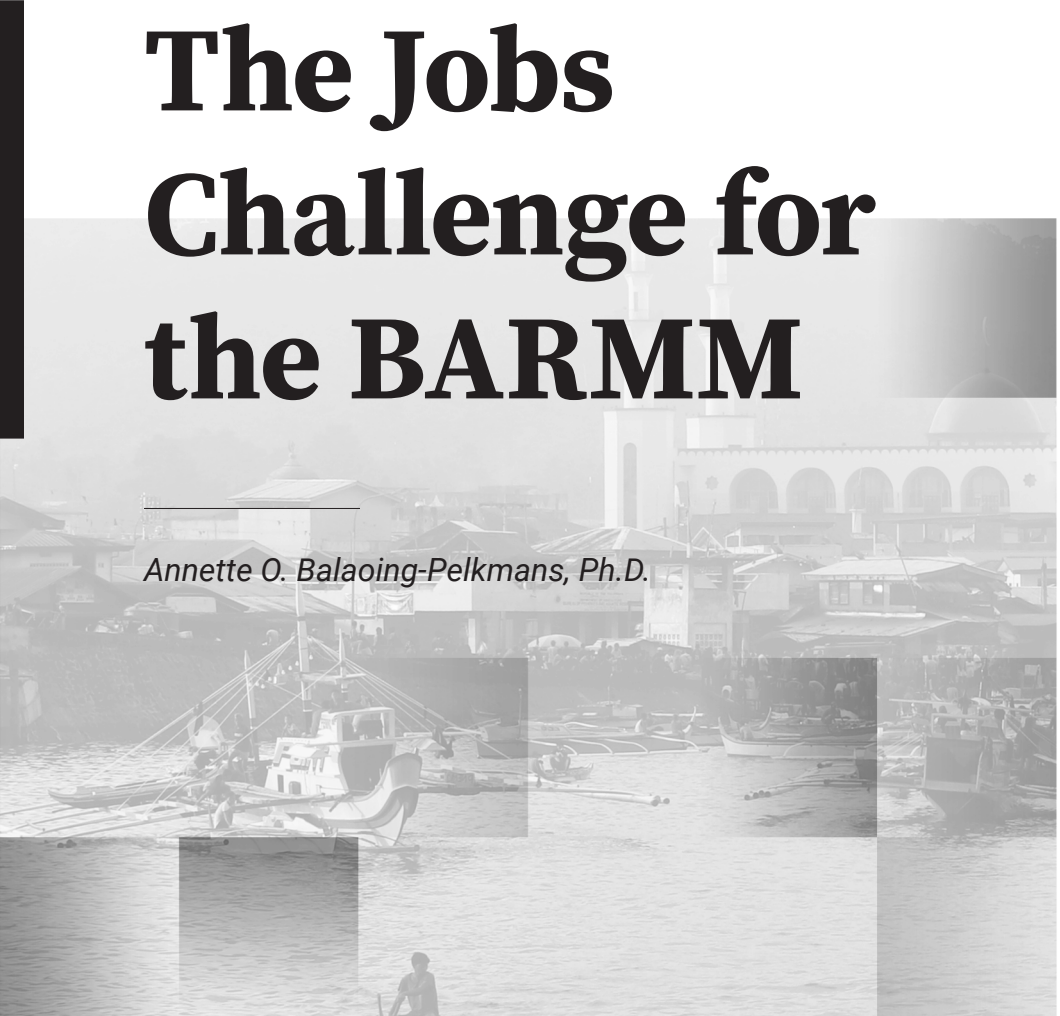
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The Jobs Challenge for the BARMM¹

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Introduction

Nearly 50 years of conflict has significantly impeded the progress of development in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM). Consequently, even with the advent of peace, the region finds itself in the early phases of agricultural transformation, in which the labor market remains closely tied to the overall performance of its agricultural and fisheries sectors. The binding constraint for employment growth in this phase is not so much the lack of skills, but rather the lack of investor interest in the region, stemming from the persistent perception of the region as being unsafe and high-risk.

Undoubtedly, the most urgent concern for today's national and regional policymakers is ensuring that millions of BARMM workers have meaningful jobs. Yet with the gargantuan challenges faced by the BARMM government today, the specter of policy overload or policy proliferation hampers the

1 This paper draws insights from the research and findings of the project titled "Promoting Productive Employment and Skills Development in BARMM," commissioned by the Department of Foreign Affairs and Trade (DFAT) Australia and the International Labor Organization (ILO).

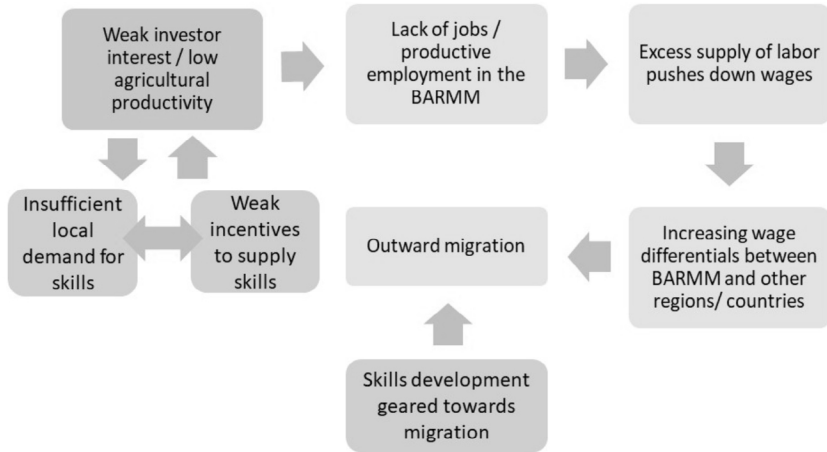
2 Annette O. Balaoing-Pelkmans, Ph.D. (eobalaoingpelkmans@up.edu.ph) is the Convenor of the UP Center for Integrative and Development Studies (UP CIDS) Program on Escaping the Middle-Income Trap: Chains for Change (EMIT C4C). She is also a Professorial Fellow at the UP School of Economics.

process of prioritization and implementation. This paper highlights specific policy areas where immediate action could be taken and where low-hanging fruits could be reaped.

The paper is structured into five key sections, each addressing a specific aspect of the challenges associated with skills development and employment generation in the BARMM. To provide a context for the skills development challenge, the subsequent section examines the influential factors that shape the BARMM labor market. The third section investigates alternative approaches, primarily focusing on diverse value chain agricultural models. Section four consolidates insights gleaned from some illustrative case studies, culminating with a discussion on strategic frameworks for skills and enterprise development. The final section delineates specific policy actions, emphasizing targeted interventions for immediate impact.

Driving Forces of the BARMM Labor Market

In the BARMM, a shortage of employment opportunities has led to labor surpluses, driving down wages and exacerbating wage gaps between the region and other areas. The demand and availability of skills training are thus strongly linked to the aspiration of workers to emigrate from the region. The so-called skills trap is typical in areas of low economic growth: there are insufficient incentives to supply (or invest in the development of) skills that are not demanded due to the weak stream of new enterprises (Figure 1). In theory, one could expect the supply of skills to create its own demand. However, when the problem of weak job generation is the result of many factors—such as infrastructure, peace and security, and the quality of governance—rather than just the lack of skills, a vicious cycle of “no-jobs-no-skills” ensues.



■ Figure 1. The low-skill trap

There are at least two pressing issues in the field of skills development in the BARMM. First issue is the insufficient adaptation of national skills policies to the unique circumstance and culture of the region. The second issue pertains to the lack of inclusiveness in these policies, since only a small portion of the population effectively benefits from them. These are, therefore, problems of contextualization (content) and inclusion (process).

During the early stages of institution-building within the BARMM government, the challenge revolves around balancing external demands from the local constituency with the internal complexities inherent in establishing a new government bureaucracy. In such circumstance, policymakers often resort to standardized templates and replicate national programs, even though they may not align with local needs and the local culture. Specifically, the existing skills development approaches in the BARMM are predominantly tailored to address the broader national context, catering to the demand for skills required for both overseas employment and the local labor market. This approach is more suitable for regions with a substantial number of local enterprises, ensuring a consistent flow of local job opportunities for workers lacking the necessary skills and resources for overseas employment.

In areas lacking substantial local job opportunities, there is often a trend of increased migration to major urban centers, where expansive informal sectors can accommodate low-skilled workers. In such situations, a dilemma arises since skills development programs are typically designed to meet the requirements of enterprises beyond the regions of origin.

In the BARMM context, the challenge in skills development becomes more apparent because of its inherent connection with enterprise and the region's overall progress. The situation in BARMM is notably intricate because the sustainability of peace and the autonomy of the region rely on its ability to attract investments that generate employment, particularly for workers who lack the option to emigrate due to their limited skills and financial resources. If the current skills development framework is applied to BARMM without a deliberate link to enterprise development, it could lead to more workers leaving for other countries or regions, and result in tokenism—training for skills without local demand.

The issue of inclusivity pertains to the failure to address the skills and employment needs of the majority of the BARMM population, who have attained only elementary education at most. According to the 2019 World Bank study on Skills Investments in Mindanao, those who are unable to complete high school rarely benefit from skills training. Close to 90 percent of Technical Vocational Education Training (TVET) enrollees finished secondary education in the BARMM, representing a subset of the 30 percent of students who manage to proceed to high school (Acosta 2019). This is a small segment of the worker population that has a higher likelihood of finding employment outside BARMM based on their skills.

For the great majority of BARMM workers, especially those in remote areas who have attained only elementary education at most, further skills upgrading is not accessible or useful because of two main reasons. First, the regular TVET (technical and vocational education and training) courses offered by the Technical Education and Skills Development Authority (TESDA) often require at least some high school education. Second, contextualized skills training programs for BARMM-destined workers are insufficient or ill-designed.

Community-based training programs are being offered, most of which are incentivized by financial allowances through the Training for Work Scholarship Program (TWS). Because of the scarcity of employment in large-scale sectoral employment in the region, these training programs are implemented with the implicit assumption that trainees will then be able to start their own livelihood activities or take on day jobs. For dressmaking courses, for instance, this would mean having a sewing machine and some initial funding for materials. However, according to interviewed trainees, not only do they lack access to these materials, but they also found the training insufficient, especially for those with little experience, to effectively start their own small cottage businesses.

To zoom in to address specific issues that can be addressed by a short- to medium-term skills and employment development strategy, it is useful to outline the main characteristics of the overall BARMM labor market. Three key factors drive the BARMM labor market:

1. The strong incentive to migrate.

This factor influences the workers' demand for skills training and the corresponding need to increase their employability overseas or in other urban centers in the country. This is a common phenomenon in the entire country and thus not unique to the BARMM. TESDA, in fact, highlights the demand for overseas employment for some of its course offerings.³

2. The formal educational attainment of the workforce.

This factor shapes both the supply of and demand for skills. The BARMM region has long experienced constraints in improving its formal education, literacy rate, and quality of skills because of several decades of armed conflict and civil unrest.

Based on information provided by the Department of Education (DepEd), the World Bank (2019) reported that while almost Filipino children started school at the age of six, only 70 percent did so in the BARMM, and only 30

3 The US Aid and Education Research Center, in its 2021 Local Labor Market Analysis, found that around 80 percent of those surveyed have migrated at some point in their careers.

percent proceeded to junior high school. This is lower than the national average of 80 percent. Almost 45 percent of people aged 16 to 30 years old in BARMM were out-of-school youth and adults, an alarming number that is twice the national average.

3. The high demand for jobs in the public sector.

This factor was particularly felt after 2019 when around six thousand positions in the defunct Autonomous Region for Muslim Mindanao (ARMM) were vacated to make way for the new BARMM administration. Due to scarce employment in the private sector, especially in industry and high-value services, most skilled job vacancies were largely found in the public sector.

These driving forces have resulted in three major classes of skill types in BARMM:

1. Those designed to fit the needs of the non-BARMM labor market;
2. Those focused on the BARMM agricultural and fisheries sector; and
3. Those required for the regional public sector.

The informal labor market within the region also absorbs a wide range of skills for the manufacturing (especially, in construction), and other service sectors.

Alternative Approaches to Skills Development and Job Generation for the BARMM

Effective strategies require sharp priorities and imply trade-offs due to the very narrow fiscal space. Thus, the target of the proposed set of strategies presented here is on the *stayers*, which are mostly based in the region's vast agricultural and fisheries sectors. Instead of the usual roadmaps, the approaches suggested here aim to stimulate the process of take-offs, following a circular or iterative process of problem identification, ideation, gaps-identification, and then re-statement of a plan of action. The premise, in fact, is the absence of a smooth and linear roadmap, which result in ready-to-implement templates. The approaches presented are instead based on actual models of cross-sectoral collaboration in agricultural value chains, with the aim of making them inclusive (hence, generating productive employment), and at the same time, efficient and competitive. These examples were chosen not only because they largely apply to the agri-fisheries

sectors, but because they demonstrate the step-by-step process that eventually builds up skills and capacities within the context of stakeholder collaboration in a value chain. They also show approaches on how to address some of the most common problems in the country's agricultural and fisheries sector, which, due to the BARMM's unique circumstances, are even more pronounced in the region.

The following are among the most-cited problems faced by the BARMM agri-fisheries sector:

- The “chicken-or-egg” dilemma of insufficient infrastructure, inadequate financing, and lack of market access;
- Insufficient private-sector collaboration with Local Government Units (LGUs) and training agencies, especially in skills-building and employment generation;
- Inadequate smallholder organizing;
- Underdevelopment of cooperatives as the main vehicle for organizing;
- An inadequate pool of agri-fisheries technical trainers provided by LGUs and the regional government; and
- Inadequate modification of national policies to fit the local circumstances and culture of the BARMM.

Box 1. What is a Value-Chain Approach?

The value-chain approach to analyzing and then addressing the skills gap is meant to address the problem of training-vacancy mismatch in a more direct (or even policy-interventionist fashion), as well as prevent the situation wherein training is provided for the mere sake of training. However, since value chains are, by definition, engineered or organized relationships governed by lead firms, or lead consolidators (as opposed to market-driven supply chains wherein relationships are governed by price signals alone), such an approach is mostly effective in thick markets, or in cases wherein there are value chain lead actors who are willing to collaborate with policymakers and researchers. This is not often the case hence so-called value chain approaches, often turn into mere supply chain studies that map the gaps (largely in terms of infrastructure), and eventually propose solutions wherein the government plays a big role as a public goods provider (e.g., infrastructure, information, machineries and equipment, training). The methods generated by a value chain approach, nonetheless, provide a good benchmark, especially on how collaborative action is fostered instead, with clear lead players in the chain (e.g., firms, local government units, NGOs, and financing providers) at the forefront. While a supply chain approach often maintains the status quo as far as relationships of actors are concerned, a value chain approach, by introducing new institutions (i.e., rules of the game) and by developing a longer-run vision that is explicit and shared among all stakeholders, eventually transforms relationships, which then leads to value chains being more inclusive and sustainable.

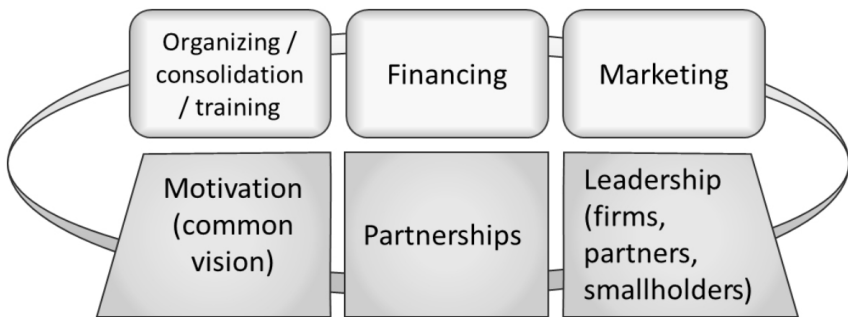
There are deep underlying causes of these cited problems, certainly in the context of the BARMM, which is undergoing a critical process of reform and transformation across a multitude aspects. Since this strategy paper aims to avoid paralysis with too much analysis, two practical value chain examples and approaches are presented here. These were chosen to help benchmark whatever strategies would eventually be deemed appropriate and implementable by key stakeholders.

Jollibee Group Foundation's Farmers Entrepreneurship Program (FEP) Model

The low incomes of farmers are often blamed on the presence of middlemen, who control both the capacity of farmers to produce and the farm-gate price of their goods. Hence, many initiatives by the government, firms, and civic groups aim to link smallholders to markets in order to remove their dependence on

middlemen. The practice often turns out to be more complex since the existence of middlemen and their impact on the system are caused by broader fundamental problems, which in turn, continuously increase the risks faced by smallholders (e.g., climate change, lack of insurance systems, insufficient infrastructure). Eliminating middlemen, therefore, entails the provision of alternative means of reducing or managing these risks. Even the lack of farmers' sufficient technical know-how, the aging population of smallholders, and the lack of financing access are the result of the high-risk nature of the agri-fisheries sector. The coping mechanisms (or risk-averse behavior), in turn, further amplifies the risks in a vicious cycle that is typical of many systemic problems.

Hence, the key challenge is not so much how to remove and replace middlemen, but rather how to solve the chicken-and-egg problem. The Farmer Entrepreneurship Program (FEP) of Jollibee Group Foundation is a useful benchmark because ideally, a bad status quo in a value chain is best broken by the most powerful player in the chain, which is the buyer-firm. Although the FEP might be difficult to fully replicate outside the value chains of Jollibee Foods Corporation, it nevertheless demonstrates the minimum but key interventions needed to increase farmer incomes through increased technical, marketing, and organizing capacities of smallholders. It also shows the process from incubation to replication and scaling-up, which can help BARMM stakeholders to imagine the potential path towards take-off.⁴



■ Figure 2. Jollibee Group Foundation's Farmer Entrepreneurship Program Model

4 For a full discussion of the Jollibee FEP case, see Capacio (2021).

Figure 2 presents a highly stylized model of the FEP, which captures both the tangible and intangible dimensions of the Jollibee approach. Value chains are usually analyzed based on observed activities (i.e., organization, production, financing marketing). However, since inclusive value chain models are underpinned by sustained or resilient relationships across the chain, it is important to likewise underline the fundamental building blocks of the said relationships as they are the basis of the success of the model.

To jump-start the model, a trigger is needed to motivate the lead firm in the value chain to become inclusive. This can spring from the need to comply with regulations, react to government incentives, empathy, values transformation, or the felt need to realign the company's vision to meet societal goals.⁵ Depending on the initial motives, the level of ambition for objectives will be set, ranging from providing basic assistance for farmers to access markets, to the more challenging goal of capacitating farmers to the point where their share in the value chain can meaningfully increase. The set of interventions required at various points in the value chain is such that no one actor can deem itself capable of providing these interventions on its own. Brokering critical partnerships is, therefore, the next important step. This allows a division of labor, which enable partners to specialize on key tasks such as *organizing*, *training*, and *financing* smallholders, and *marketing* their produce.

In the FEP model, agricultural and cooperative development workers from LGUs assist in organizing and training. Microfinance institutions provide production and bridge financing, while the lead firm assists in access to markets. Partners enhance each other's contribution through information-sharing, and collaboration in one of the most important aspects of the model, which is the leadership training of farmer leaders. This is critical not only for ensuring the sustainability and viability of the farmers' organization but also as a means for increasing the bargaining power of smallholders in the value chain. In a broader sense, inclusive value chains are driven not only by the leadership of one actor,

5 In the case of Jollibee Group Corporation, the top leadership reached the decision to design their corporate social responsibility in ways that can best leverage their core competencies. They aimed to link farmers to their value chains, starting from the supply of onions to the Jollibee commissary.

but the collective leadership of firms, farmers, and other societal partners such as LGUs, financing institutions, and Non-Government Organizations (NGOs).

Skills development embedded in value chain partnerships is clearly superior to a generic approach for two main reasons. Firstly, partnerships between institutional buyers and technical extension workers enhance the quality and extent of information that is crucial in making farmers meet the required set of market standards. Second, the concrete investments committed by business and societal partners in the chain lower the risks perceived by farmers when adopting new production techniques. What may seem to many as stubbornness or unwillingness of smallholders to embrace new technologies and practices, is, in essence, a form of farmers' coping mechanism to minimize costs and risks. Farmers are no different from other entrepreneurs who will not invest their time and resources when the prospects are uncertain. The FEP case strongly demonstrates the entrepreneurial spirit of farmers once critical public investments (i.e., public good) and assurance of market access are provided.

Unifrutti Model

Intermediaries or traders can also act as lead actors in the initiation of inclusive business models in the value chain. The Unifrutti case is particularly apt because it is the first banana company in the country that invested in the conflict-ridden ARMM in 1997.⁶ The Transformational Business Partnership (TBP) model of Unifrutti highlights the importance of building social capital in situations where conflict, due to lack of trust, renders any economic activity fragile and unstable. There are three areas where lessons can be drawn from the Unifrutti model. One is in their relationships with partner Muslim communities; second, in their relationships with Agrarian Reform Beneficiaries (ARBs) cooperatives as well as their management approach; and lastly, in how they trigger inclusion as consolidators in the value chain.⁷

6 Unifrutti Tropical Philippines Incorporated, established in 1992, exports cavendish bananas in East Asia and the Middle East.

7 See Baloaing-Pelkmans (2020) for the Unifrutti model.

Modernizing the agri-fisheries sector and stimulating the growth of labor-intensive manufacturing in BARMM require adaptive and culturally sensitive training approaches. There are various divides that must be bridged when Muslim communities and workers engage with Christian investors and employers. Prejudices from both sides run deep, intensifying isolation and ignorance of each other's culture. This has serious implications not only for maintaining industrial peace (e.g., in large-scale plantations) but also for transferring skills and know-how in the workplace due to the absence of effective and regular communication. The basic premise is that the large pool of unemployed workers in the region have relatively low educational formation. In an agri-enterprise, for instance, farm supervisors and technicians need to impart skills to workers during actual farming. In the case of Unifrutti, the standard practice of assigning technical supervisors is based solely on their education attainment and experience. This approach does not consider that supervision is not a matter of expertise alone but, in the hierarchical Bangsamoro culture, it should be backed by authority, which in turn emanates from the *datu* and one's social status. This is the reason why workers with royal blood resent taking direct orders from people lower than their social class.

Through close dialogue with the recognized leader/s of the community, alternative modes of supervision were developed. In the banana plantation of La Frutera in Datu Paglas, Maguindanao, the *datu* explicitly conferred his authority on a local leader. The local leader was tasked to pass on the *datu*'s orders directly to workers and implement necessary sanctions, while the company supervisors provide all the necessary technical information. In the case of MKAVI-2, a plantation in Amai Manabilang, Lanao del Sur, the farm leadership and authority was given to Sultan Manabilang himself, but relied on the technical know-how of the farm head who was previously appointed by the company. Eventually, when trust was established, the Sultan conferred his authority to the farm head. What is important is the explicit signal of the *datu* or Sultan to his community that the assigned person is acting and speaking on his behalf. These social dynamics must be taken into account, especially in agriculture, where economic activities take place on the land or ancestral domain of the community, and where corporate and traditional power relationships overlap. Failure to do so has been the cause of conflicts that have plagued many enterprises in the region.

Unifrutti's management style and its relationship with ARBs are unique due to their open-contract approach.⁸ Two primary factors often underlie the tension in the relationship between a company and its growers: the price of the product and the length of the contract, alongside the opportunities for negotiation and communication during the contract's active period. However, this practice is only possible in the presence of mutual trust and reciprocity between the company and the farmers' cooperatives.

The Transformational Business Partnership (TBP) model evolved as Unifrutti strove to address the problems encountered by their smallholder and farmer-cooperatives engaged in small-scale agriculture (Balaoing-Pelkmans 2020). Under the government's Comprehensive Agrarian Reform Program (CARP), individuals primarily engaged in executing distinct duties on banana farms have transitioned into organizing as cooperatives, thereby taking on the administration and operation of their own agricultural ventures. This shift has unveiled a significant gap in the comprehensive skill set required to successfully oversee a full-scale business, including effective procurement and utilization of resources, management and maintenance of machinery, and financial governance, management, and reporting. Additionally, the leadership abilities presented often fell short of what was necessary. The type of leadership adept at advocating for farmers' rights amid contentious interactions between cooperatives and companies may differ from that required for the proficient management of their agricultural operations.

Aside from critical technical know-how, farmer cooperatives also lack access to the appropriate technology needed for various stages of agricultural production: from planting, fruit care, pest and disease control, and irrigation, all the way to harvesting, packing, and transport (Balaoing-Pelkmans 2020, 56). Under the standard transactional (or buyer-producer) relationship, the lack of capacities of smallholders often lead to power imbalances, which then translate into unequal distribution of the value created. In the framework of Unifrutti's innovative business partnership model, there's a clear understanding that both the company and the farmers have a mutual goal of enhancing productivity and quality, thus, they must collaborate closely as partners, especially when

8 According to Atty. Apuzen of FARMCoop (interview dated 23 November 2017), "what makes Unifrutti different from other companies is that their contracts are not cast in stone" (Balaoing-Pelkmans 2020, 47, note 36).

challenging situations arise. This mutual dependence fosters a readiness to support one another, which is why Unifrutti frequently volunteers price hikes in response to external challenges like climate impacts, oil price fluctuations, or currency valuation changes that increase costs for the farmers. Unlike the typical industry approach where cooperatives might have to initiate price renegotiation due to such external factors—with no guarantee of a favorable response due to pre-existing contract—Unifrutti proactively adjusts purchasing prices. When queried about their rationale for these spontaneous price adjustments, company representatives highlight their in-depth understanding of the break-even price for bananas. They recognize the effects of supply shocks on operational costs and therefore believe it unjust to diminish the farmers' profit margins unduly. Regarding how Unifrutti manages the financial implications of these price increases, they refer to the company's diversified roles across the value chain, with each contributing to the firm's profitability. This financial robustness enables the company to extend necessary support to their grower partners.

The Unifrutti model demonstrates how skills training and supervision in the workplace must account for the cultural context of the BARMM. It is not only important what information is shared but also under whose authority the information is being imparted. There is certainly no standard template that can guide the establishment of authority or cultural sensitivity in the workplace. The practices at Unifrutti did not develop overnight; rather, they often resulted from continuous dialogues, sometimes even occurring after conflicts. Building trust is paramount, which means that skills training or the capacitating of smallholders (e.g., in contract growership schemes) are not mere requirements to ensure and enhance productivity and profits but necessary expressions of mutual aid.

The LGU-driven Model

Partners “beyond the chain” include LGUs, financial intermediaries (typically, microfinance institutions), social enterprises, NGOs, and other civil society organizations (e.g., academe, faith-based groups). The success of their interventions depends on their ability to build stable relationships with main value-chain players, such as institutional buyers, consolidators, and smallholder groups. In cases where value chain actors are not forthcoming, the role of the LGU leaders, as the main orchestrators of public, private, and civil society interventions, comes to the fore.

Three LGU-driven approaches are briefly presented here to demonstrate how local governments can effectively deliver agriculture and training services based on the provisions of Republic Act No. 7160 or the Local Government Code. Notably, success depends on the ability of LGU leaders to broker partnerships within government agencies and leverage public investments to incentivize the collaboration of external partners. This is essential to complete the minimum bundle of resources and interventions needed to address the systemic problems faced by smallholders.

In the case of San Jose, Nueva Ecija, one sees the importance of the LGU provision of both agricultural extension and cooperative development, as well as the proactive stance of the municipal mayor. Former Mayor Marvic Belena, in particular, reached out to the Jollibee Group Foundation (JGF) to address the problems of the onion farmers, whose crops were then being plagued by the *harabas* or armyworm. Since Jollibee required a specific variety of onions not produced in the region, capacitating the farmers required extensive collaboration with JGF and the municipal agricultural office. Agricultural extension workers were fielded in every barangay for more granular and focused assistance not only in terms of production but also in organizing the farmers in cooperatives. The municipality earmarked almost Php 2 million annually as support to the farmers under the FEP, providing them with critical human resource services for training, mentoring, and coaching on “organizing, agriculture technology, marketing, financing, cluster/cooperative management, and leadership development” (Capacio, Mulder, and De Dios 2018, 78).

Meanwhile, the experience of the municipality of Alabat, Quezon demonstrates the impact of LGU support on economic diversification. It is an example of a supply-driven approach, in which the LGU leverages its own resources to provide processing facilities, technology transfer, trucking services, and perhaps, most importantly, financing for land preparation. Partnerships with JGF, UP Los Baños, and other government agencies were critical in ensuring that the LGU investments in physical infrastructure were complemented and made productive through market access, research and development (R&D), and further subsidies for land preparation.

In 2021, the municipality of Alabat received the 2020 Galing Pook Award for its Coco Sugar project. The following year, the municipality of Piddig, Ilocos Norte was granted the same recognition for its “Basta Piddigueño, AgriHenyoy:

Consolidated Farm Production System.” What distinguished the Piddig model is the proactive visioning and planning that enabled the LGU to tap critical projects and resources from various national agencies in alignment with the true spirit of the “National Convergence Initiative.” This was introduced in 1999 as a mechanism for institutional coordination to achieve sustainable rural development. The LGU local development plan was used as a magnet for public resources, with local leaders proactively knocking on the doors of various department secretaries. In a virtuous cycle of resources, successful implementation records, and community support, the limited LGU resources generated maximum impact on the smallholders’ incomes. The follow-through from plans to implementation, including monitoring and evaluation to further improve future plans, honed the capacity of local leaders and administrators for the overall benefit of farmers.

LGUs, therefore, become the frontliners of skills and enterprise development if they fulfill their tasks to provide broad agri-fishery extension and use their resources as leverage for drawing in more national support, especially in the provision of basic infrastructure.

BARMM Skills Development: Lessons and Strategies

Various lessons can be distilled from the brief presentation of alternative approaches, particularly on how to address the problems presented earlier in the previous section.

1. Regarding the chicken-and-egg problem, the above-mentioned cases showed that a lead actor who can effectively broker partnerships is needed to break the paralysis or status quo. There have been numerous cases, wherein either public, private, or even civil society groups would initiate projects to help stakeholders, only to fail in terms of raising smallholder income due to fragmented efforts that have not been harnessed to ensure that the minimum tri-bundle of training and organizing, financing, and market access would be completed. Ideally, the lead actor should also be the lead firm, as this would almost automatically embed this bundle of interventions into the value chain. Since gaps in any of the tri-bundle raise the transaction costs and risks associated with dealing with smallholders,

the complementarity of private, public, and civil society investments is crucial.

When the lead firm acts, it effectively attracts other types of public and social investments that assure smallholders of credible prospects for increased incomes (Figure 3). Once this point is reached, the smallholders are incentivized to invest in their own assets, allowing them to better absorb and maximize the investments contributed by their private, public, and other social partners. The difference between the concept of subsidies and investments lies precisely in the ability of the latter to stimulate self-help or co-investments of the smallholders themselves. Subsidies, on the other hand, are typically associated with fragmented interventions, lacking the critical scale, and hence, the credibility to raise smallholder incomes effectively and sustainably.



■ Figure 3. Skills training embedded in value chains (Balaoing-Pelkmans 2019)

In the case of BARMM, where lead firms or private consolidators and intermediaries motivated to transition towards inclusive business models are scarce, the role of the LGUs become even more prominent. LGUs can be the key

provider of human resources for training as seen in San Jose; key production facilities, as observed in Alabat; or as facilitators of long-term implementable local plans, as demonstrated in Piddig. Nevertheless, one important commonality is their role as the main orchestrator or broker of stakeholder partnerships that ensure the completion of the minimum tri-bundle of interventions.

2. There are numerous reasons for the apparent reluctance of the private sector to collaborate with TVETs or other agencies' skills building and employment generation initiatives. In the context of agri-fisheries, reducing the transaction costs when dealing with smallholders depends not only on the availability of skills but also on the access to key public goods and sustained support for enhancing the capabilities of smallholders. If the partnership and contributions of LGUs and other critical social partners are neither forthcoming nor credible due to their short-term and unstable nature, private sector collaboration will not be sufficiently incentivized. In successful cases of private sector participation, such as the Dizon Farms/EastWest seed project with the farmers of Lupao, Nueva Ecija, the commitment of the LGU has been sufficiently demonstrated.
3. The importance of cooperatives cannot be overemphasized, especially in the agri-fisheries sector. Cooperatives are the main platforms for organizing, skills training, financing, and accessing public assistance and subsidies from both the local and the national government. The Cooperative and Social Enterprise Authority (CSEA), BARMM's counterpart for the Cooperative Development Authority of the Philippines (CDA), has maximized its efforts to deliver its services despite being in the early stages of institution-building. However, the challenges ahead are daunting. At present, the Bangsamoro Cooperative and Social Enterprise Bill has yet to be approved and passed. Additionally, structural issues, such as the low level of basic literacy in the region, pose additional challenges to capacity-building efforts aimed at enhancing financial literacy and other management/administrative capabilities of cooperative leaders.
4. In order to become and remain registered cooperatives, groups need to submit reportorial requirements, which include filled-out forms and financial statements duly audited by a certified public accountant (CPA). These must be submitted on time either in person or online. Most of these are required annually, but new ones must be turned in when obliged. Up-

to-date registration documents and business permits are requisites for receiving development projects and, in some cases, for signing business agreements. Unfortunately, for most cooperatives, handling both front-office, such as policymaking and day-to-day management, and back-office, such as reporting, accounting, and proposal-making, is burdensome. Scarce human resources and limited access to reliable information make reporting and compliance difficult. These are the often-cited reasons for lapsed registration. It is not uncommon for BARMM cooperatives to pay, on top of standard CDA fees, around Php 5,000 or more to third parties to prepare these requirements, making re-registration prohibitive for many small and newly-formed cooperatives. While CSEA could, in principle, provide these extension services, the agency's human and financial resources are still limited to fulfill this role sufficiently. Thus, it is not surprising that only 11.7 percent of all the registered cooperatives in the region were able to comply with the regulations set by CSEA.⁹

5. Another major hurdle is the difficulty to align CDA or CSEA cooperative governance policies with the Moro traditional decision-making practices, wherein the authority of the *datu* and the recognized community leaders must be respected. In situations where family, clan, and other ties prevail over democratic rules in cooperatives, informal rules and connections are layered on top or become parallel to mechanisms in cooperatives. These and other kinship, cultural, and religious institutions could challenge the legitimacy of cooperatives.

Perhaps more important is the fragile social trust, resulting in cooperatives being organized solely based on ethnicity and family ties. This is even more apparent when matters concern money. Consolidating land and organizing smallholders into cooperatives are, therefore, no mere feats. Even in other parts of the country, successful cooperatives consist of strong polyvalent ties (consisting of family, close friends, and neighbors) that facilitate monitoring and compliance. This is even most evident in the BARMM, where conflicts can easily escalate into *rido* or clan war.

9 See Chapter 7, p. 147 of the Second Bangsamoro Development Plan.

6. Agri-fisheries extension services are critical public goods that smallholders depend on for developing of technical, organizational, and management skills. These services cover a wide range of support, including “training, farm or business advisory, demonstration and information and communication support services” (PCAARRD et al. 2015, quoted in Ani and Correa 2016). They assist smallholders in diagnosing issues and proposing solutions related to production, logistics, marketing, financing, input sourcing, and processing, among many others. No policies, regardless of their soundness, can succeed without agri-fisheries extension on the ground.

The scarcity of agricultural extension in the BARMM is not only due to the lack of political will in some LGUs to prioritize productivity growth in the agri-fisheries sector, which results in a failure to fill *plantilla* items¹⁰ for agricultural extension workers per municipality and even barangay. It is also due to inadequate training support for these workers themselves. Since it takes skills to create skills, the migration of a significant portion of middle-level supervisors, trainers, and technicians out of the region means that there are not enough *plantilla* items for agricultural extension specialists and workers. Addressing this problem requires a significant infusion or allocation of local budget towards the skills development of midlevel trainers and specialists.

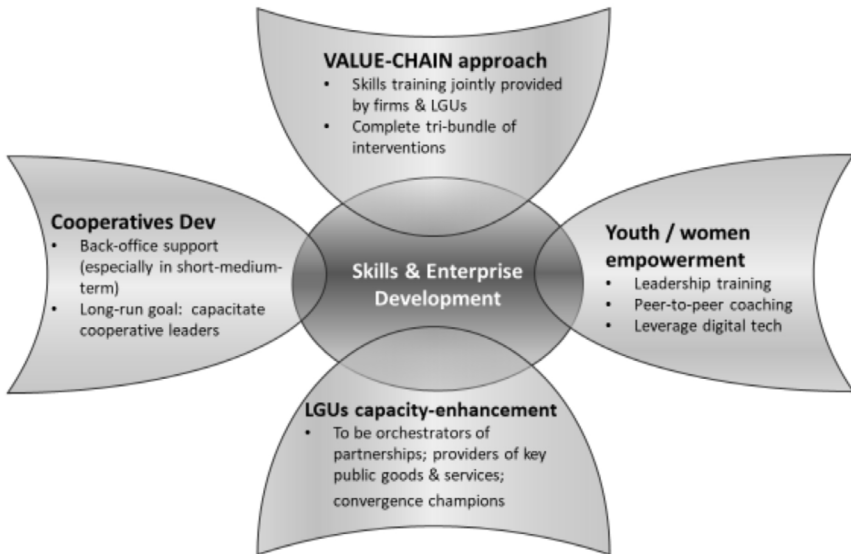
7. One-size-fits-all policies are particularly inappropriate for the BARMM, given the significant cultural differences between the Bangsamoro and the predominantly Christian Filipino population. Scarce fiscal resources also require careful customization of policies to avoid unnecessary waste. However, bottom-up approaches take considerable time, resources, purposeful learning, and experimentation. For example, the institutionalization of FEP training for lead partners came after almost a decade of hands-on leadership and values formation training by JGF and its partners. This evolved into more peer-to-peer coaching by trained FEP farmer leaders and eventually towards module and curriculum development by academic partners such as Xavier University and Central Luzon State

10 *Plantilla* positions pertain to regular jobs in Philippine government agencies.

University. While this route towards skills development is relatively longer, it leads to lasting impact compared to ready-made training templates.

Exploring Strategies of Skills and Enterprise Development in Agriculture and Fisheries

In order to facilitate the targeting of priority interventions, Figure 4 presents key elements of a proposed BARMM Skills and Enterprise Development Strategy. They pertain to the major challenges of the agri-fisheries sectors and lessons learned from the approaches discussed in the previous section.



■ Figure 4. Key Elements of proposed BARMM Skills and Enterprise Development Strategy

The first element is based on a value chain approach, where skills training for smallholders is jointly provided by stakeholders (i.e., firms, LGUs, and social partners). This underscores the indispensability of the complementarity of public, private, and social investments in effective upskilling and enterprise development. In the context of the BARMM, where institutional firms as lead actors are likely to be scarce, local and regional government leaders would be the ideal brokers of partnerships between smallholder communities and institutional buyers and consolidators. However, an important precondition is that the

government itself should be a credible partner and provider of crucial public goods and services, such as agricultural extension and cooperative development services, post-harvest facilities, farm-to-market roads, and public utilities.

Access to financing is another important bottleneck that must be addressed. Stable market access to institutional buyers and the provision of public goods should lower the risk attached to financing smallholders, thus facilitating the collaboration of financial intermediaries. However, this might not fully address the need to comply with Islamic financing principles. In the short run, access to financing is another externality or institutional void that the government must address (e.g., Alabat, Quezon model). However, in the long run, Islamic financing institutions must be developed to address problematic dualisms in the actual practice of financing.¹¹

In any case, completing the tri-bundle of interventions, namely, smallholder organizing and training, market access, and even financing, has a higher success rate in the context of value chain partnerships (see Annex for illustrative examples).¹²

The **second element** is fast-tracking cooperative development through the provision of professional services or back-office support for financial and general administrative services. In the Transformational Business Partnership model of Unifrutti, the company itself has been assisting its partner cooperatives in this area, based on the idea that farmers should best specialize in what they do best—land care, production, and labor management—while the corporate partner

11 The informal financing channels are highly dualistic: with concessional or interest-free financing (through family ties, *zakah*) on one hand, and highly usurious lending on the other hand. Standard formal channels are mostly not Shari'ah-compliant since the ecosystem for Islamic financing is not yet in place.

12 One concrete idea is to institutionalize regular “call for value-chain partnerships” patterned after JGF’s process of selecting lead partners for their Farmer Entrepreneurship Program. This facilitates access to information regarding what benefits participants can enjoy (i.e., government support and training, access to public goods, access to markets), as well as what are the commitments and qualities required from potential partners. This entails piloting, iterations, proper documentation, and monitoring in order to understand what works and what does not in the BARMM context. The cooperation of a knowledge or academic institution, such as the Mindanao State University, would be useful to facilitate the learning-by-doing process.

focuses on its areas of expertise such as financial management, logistics, and marketing. The efficiency and competitiveness of a value chain depend on the division of labor among partners, fostering higher productivity. However, in the absence of value chain relationships, these types of assistance to cooperatives can be considered essential public goods that the government should provide. Unfortunately, public resources, as well as management know-how, are often limited. One possible strategy is to develop professional services for cooperatives through a semi-private approach. Examples include law school students assisting cooperatives in preparing their legal requirements for CDA registration for free, as well as private consultants charging relatively high fees in the BARMM for the same purposes. While the former is not easily scalable, the latter is undesirable from a social equity perspective.

The Ministry of Agriculture, Fisheries, and Agrarian Reform (MAFAR) and partner LGUs could initially consider subsidizing and organizing professional services for cooperatives with the help of private experts and academic institutions. They could also develop a business model, such as a service subscription system, so that public subsidies could eventually be phased out. In close partnership with cooperative leaders and management committees, the current concept of Shared Services Facility (SSF) of the Department of Trade and Industry (DTI) could be expanded to include arms-length, transparent, and accountable back-office support to cooperatives. This would involve concrete support for writing project proposals, filling out forms, and churning financial reports.¹³ Back-office functions or ancillary services could also include accounting, records maintenance, regulatory compliance, and IT services.

In more developed economies, agricultural cooperatives are highly specialized (e.g., production, logistics, marketing) precisely because they are serviced by private entities or other cooperatives that specialize in providing administrative, financing, and overall management support to cluster of cooperatives. In the context of the BARMM, such an approach not only addresses deep trust issues between clans or ethnic groups by promoting transparency in financial management, but is also more efficient than capacitating individual cooperatives, whose leaders often lack the educational background to absorb training.

13 Shared Services Facilities of the Department of Trade and Industry largely pertain to physical assets (e.g., machineries, processing facilities).

Depending on the ambitions of particular cooperatives, these ancillary services can eventually be taught to cooperative leaders and management in a learning-by-doing and mentoring environment. This is important so leaders and managers of cooperatives can (i) check the correctness of back-office services and/or (ii) perform the functions themselves. When the back-office functions are handled by this third-party group, a communication strategy must be developed to inform the members about the activities. The goal is to increase their trust in the process, which could eventually enhance their trust in cooperatives.

Possible details like the setup of the third-party group, their appropriate remuneration, and other mechanisms should be left open for consultations, as these are contingent on factors like culture. The acceptability of the eventual mechanism/s would depend on their embeddedness in cultural, ethnic, and religious worldviews.

The third element focuses on the capacity of LGUs and leaders to act as the main orchestrators of stakeholder partnerships and champions of policy convergence. They have the potential to be kick-starters of skills and enterprise development by leveraging their resources to bring-in more private and social investments. Additionally, they can utilize their endorsement power to foster trust among various factions in their communities. This entails proactive leadership and management skills but, more importantly, it necessitates shifts in mindsets and willingness to build a political culture of service. As champions of convergence, they must learn how to prepare and present project proposals based on an articulated vision, developed through broad-based stakeholder dialogues.

While such training might not be entirely new, there is a need to fill gaps not only in terms of various aspects of project management (such as designing realistic targets, as well as monitoring and evaluating indicators to support implementation up to the so-called “last-mile phase and activities”) but also in aligning local projects with existing programs of the various agencies of the national, regional and provincial governments. Learning visits to LGUs with ample experience with convergence projects could be organized, and concrete experiments (or proof of concept pilots) could be initiated with close mentoring support from successful LGUs and academe partners. According to Capacio et al. (n.d.), “the operationalization of the national convergence initiative (and now, with the whole-of-nation approach) depends largely on the local governments.” Projects do not converge on their own. They need able mayors and other key LGU

officials as orchestrators of linked projects. Through the National Convergence Initiative Project, LGUs spearheaded these projects:

public goods, like infrastructure (e.g., farm-to-market roads, flood control dam); farm equipment (e.g., tractors); rice and coffee processing facilities; agriculture technology and agriculture extension services (including soil suitability tests to determine quality of soil); inputs (e.g., organic fertilizer); agriculture financing; crop insurance; marketing facilities; and land tenure services (e.g., land titling) (Capacio et al. n.d.)

There are also informative cases of how LGUs can provide cooperative support by hiring retired professionals to coach and assist the farmer leaders. This involves setting up systems to make processes effective, efficient, transparent, and accountable, as well as back-office support, as discussed previously.¹⁴

The fourth addresses the all-too-important need to develop youth and women leaders who can empower their peers through example and mentoring. Developing a youth ambassadors' program for agri-fisheries development in the BARMM is one concrete example of a peer-to-peer initiative aimed at building skills. Efforts along these lines can draw valuable lessons from the Youth Agri-preneurship, and the Kapatid Agri Mentor Me Program (KAMMP) in 2021.

14 The Food and Security and Nutrition Roadmap of the BARMM, formulated by the Ministry of Agriculture, Fisheries, and Agrarian Reform in 2020, noted the following challenges that can be addressed by the LGU capacity-building process, which was discussed in this paper. Among the challenges noted were, “the coordination problems in bridging policies, plans and actions across scales and sectors, considering the presence of the current framework of collaboration and the institutions involved in setting policy, oversight, regulation and providing specialized support functions; the absence of an overarching authority with the capacity to mobilize leadership and resources, develop legal and regulatory frameworks for adaptation, and plan for long time horizons in response to issues of climate change. This result to unharmonized and often overlapping plans and programs between and among government agencies” (BARMM 2020).

The Agricultural Training Institute (ATI)¹⁵ can be tapped as a key partner in the strategies proposed here, given its network of youth leaders in the BARMM, from which the pool of youth trainers can be selected.

Tapping youth leaders who are already working in the agri-fisheries sector not only enhances the effectiveness of training services but also ensures the proper contextualization of approaches and content of training modules. It also lays the foundation for creating a community of leaders in the BARMM agri-fisheries sector. A strong focus on the youth is not only sensible from the skills-building perspective but also in changing the mindsets of smallholders to embrace modern agri-fisheries practices. Leveraging digital technologies in agriculture and fisheries, for instance, can lead to a surge in productivity, further enhancing the sector's attractiveness for the youth.

Likewise, women leaders serve as interlocutors in self-organizing “informal economic” activities. The “economy of care” or the social welfare skills of the members of the Social Welfare Committee (SWC) of the Bangsamoro Islamic Women Auxiliary Brigade (BIWAB) of the MILF are potent forces for enhancing the gender and social inclusion policies and strategies in the BARMM. Women are also active agents in conflict prevention, making them assets in community organizing and social entrepreneurship.

Another policy area that is critical for ensuring implementation and overall impact is a cohesive communication strategy directed at both major beneficiaries (e.g., workers, students), as well as the stakeholders (e.g., government agencies, enterprises, consolidators).¹⁶ It would also be useful to develop a common media platform (e.g., social media, website) for the BARMM Skills and Enterprise Development Strategy. It must be noted that traditional media platforms, like two-way radios, remain highly important channels of information-sharing and exchange, especially in the island provinces.

15 The key to ATI's success is their long-run investment in in-depth needs analysis and comprehensive leadership training, which sometimes span a period of two years before full project implementation. Although these investments have longer gestation periods, they yield durable results. As of the time of writing, there is no ATI extension office in the BARMM.

16 The 2021 World Bank Study on Smallholder-based agriculture also highlighted the importance of an effective communication strategy.

Addressing the information gaps and needs of the geographically isolated and disadvantaged areas (GIDA) communities in the BARMM is imperative to combat misinformation and disinformation. Since this encompasses the competencies of various government agencies, it is advisable to consider lodging the management of this platform under a coordinating agency (e.g., Office of the Chief Minister) or under a newly-created entity that can facilitate public-private partnerships for skills and enterprise development. This platform could consolidate announcement of job and serve as a communication medium for sharing good practices in value-chain partnerships, among other functions.

The provision of essential public goods ultimately lays down the solid foundation for skills and enterprise development in the region. The recently launched Second Bangsamoro Development for 2023–2028 has outlined an impressive array of strategies and programs under the banner themes of “Inclusion, Justice, and Equity.” This shows that the dominant challenges faced by the region are still in the sphere of governance and institution-building.¹⁷ Indeed, economic development cannot be fast-tracked simply through the propagation of fragmented projects. The efficient and inclusive delivery of public goods and services requires strong governance fundamentals, and achieving this takes time and sustained focus.

Call for Policy Action

This strategy paper aims to pinpoint specific policy areas for immediate action and identify where quick wins can be achieved. Recognizing the impracticality of addressing all pressing issues in skills and enterprise development simultaneously, the emphasis on “stayers” (defined here as BARMM workers primarily engaged in local agriculture and fisheries) is likely to sharpen and amplify policy impacts. This does not rule out the development of emerging sectors like manufacturing, services, and exports. However, given the inherent

17 According to the Bangsamoro Information Office (2019), this is all the more evident in the Enhanced 12-point agenda of the BARMM, namely: “enactment of priority bills; integration of development plans; establishment of appropriate bureaucracy; continuity of existing government services; special programs for transitioning combatants; support for the on-going Marawi rehabilitation; development of enabling policy environment; activation of job-generating industries; enhancement of security; maximizing synergistic partnerships; ensure environmental compliance; and exploration of the Bangsamoro economic potentials.”

trade-offs in strategic policies, it is crucial to explicitly prioritize the majority of the workforce reliant on a thriving agri-fisheries sector for their livelihoods.

The decision to prioritize agri-fisheries workers, especially those who are low-skilled, inevitably puts the spotlight on LGUs. After all, it is here where basic decisions are made to allocate resources for hiring municipal and barangay agricultural extension workers, providing assistance for cooperative development and developing local programs that can tap into regional and national financing windows, among others. Frontliner support for LGUs is, therefore, urgent and could be organized through an integrated capacity-enhancement program, which includes program management, agri-enterprise development, partnership brokering skills, missions to other successful municipalities, learning-by-doing pilot programs, values formation, and organized dialogues with key stakeholders such as institutional buyers/investors, national agencies, smallholders' associations, as well as civil society groups.¹⁸ Simultaneously, key indicators can already be set by the Bangsamoro Transitional Authority in terms of the number of municipal agri-fisheries extension workers employed and trained, the number of programs developed under the convergence framework, and the number of public goods and services delivered, such as post-harvest facilities and consolidation points.¹⁹

The extremely low compliance rates of BARMM cooperatives (11.7 percent) means that the majority of organized smallholders cannot access the critical resources and support from government and other aid and financial donor agencies. In addition, a great number of smallholders in the agri-fisheries sectors are not even organized yet. Once again, cooperative development must be pushed up further in the policy agenda if the priority is to empower the largest segment

18 There is also the emerging organization called the "Philippine Women Council Incorporated." While members are from elite families and clans are potential allies in terms of resource mobilization and gender-inclusive socio-cultural initiatives, their involvement can also strengthen social capital.

19 The Second Bangsamoro Development Plan made mention of various programs meant to capacitate LGUs. For instance, the Bangsamoro Local Economic Support Services (BLESS) Program, intended to "capacitate LGUs with infrastructure support facilities to enable them to operate and sustain income-generating enterprise-based economic support facilities to spur local economic growth, promote economic activities, and generate job opportunities for their constituents" (2nd BDP, 313).

of the BARMM workforce. The problems surrounding BARMM cooperatives are wicked, but breaking down the challenges into feasible phases and categorizing cooperatives depending on their readiness and specific contexts could help reduce the complexity of the task.

Since the Bangsamoro Cooperative and Social Enterprise Bill is yet to be approved and passed, crafting a short- to medium-term Cooperative Development Plan might be opportune. This plan will account for the special circumstances of cooperatives in the BARMM and provide more institutional space for piloting innovative approaches. The creation of region-wide back-office support is just one of the possible approaches. More dialogue is needed to address the “elephant-in-the-room” issues, such as the alignment of cooperative governance structures with those of the traditional systems practiced in the Bangsamoro region.

Value chain approaches are the most optimal in stimulating skills and enterprise development in the BARMM. However, this does not simply involve mapping supply chains and identification of gaps. Instead, it entails understanding how inclusive relationships can be built among the main actors in the value chain. Such an approach is, therefore, collaboration-intensive and requires a strong lead and coordinator of efforts. It involves mapping out who the main players are and completing the tri-bundle of interventions in a step-wise fashion.

Simply linking smallholders to markets may generate initial gains. However, to meaningfully increase incomes, smallholders must access the know-how, financing, and public goods that would increase their productivity and enhance their bargaining power in the value chain. As a first step, it is important that the BARMM government accesses and learns to use firm-level data (now available in Philippine Statistics Authority [PSA] data enclaves) to provide local LGUs and regional agencies with the information on who does what and where.²⁰ Such data would help organize and direct efforts up to the local levels, allowing policymakers to map the terrains of existing value chains in the region.

20 Now also available in Region XII SOCCSKSARGEN.

Secondly, a study of existing value chain partnerships will not only help in understanding the driving forces given the unique BARMM context but also trigger demonstration effects for other potential value chain lead agents. For instance, the emerging partnership of Newtech—one of the biggest abaca pulp mills in the world—located in Lanao del Norte, with agrarian reform beneficiaries cooperatives and the Philippine Fiber Industry Development Authority (PhilFIDA), illustrates how a private firm can bundle its resources with that of the government to increase the productivity of smallholders. There are also instances wherein key technology is the main mover of value chain partnerships. The introduction of a solar-powered ice maker in Basilan was made possible by the collaboration of the provincial government with foreign donor agencies, as well as the technology provider, who in turn forged partnerships with local fisherfolk groups to generate additional auxiliary jobs.

The challenge lies in accompanying and enhancing these partnerships so that value-chain models can be developed, replicated, and scaled up in the entire region. The attempt to present specific skills development strategies for the BARMM is meant to stimulate more granular ideas as stakeholders come together to implement the ambitious goals outlined in the Second Bangsamoro Development Plan. While political will is important, concrete progress is necessary to sustain confidence in the possibility of productive and sustainable peace. In the context where every problem is urgent, there is one imperative that stands out: jobs for all. Every success achieved in this arena serves as an anchor that will advance and secure the gains of lasting peace.

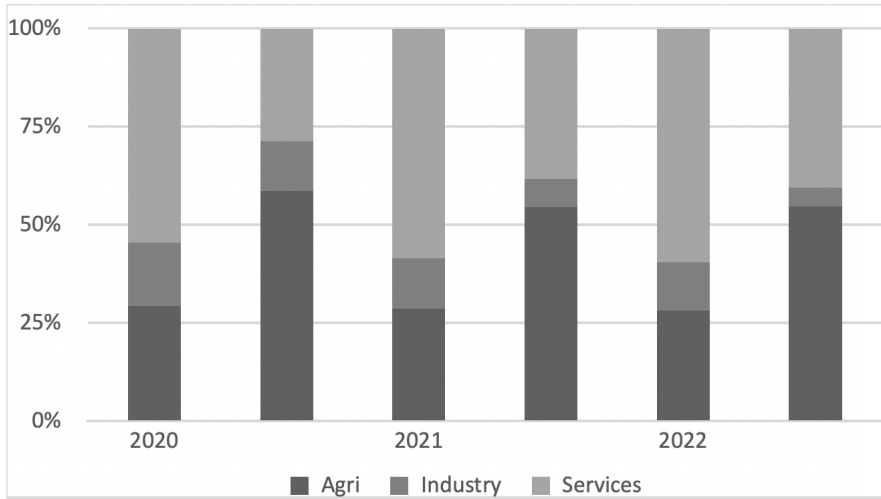
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Annex

Figure A1. Sectoral shares in total employment



■ Source: Philippine Statistics Authority

Table A1. Basic Labor Force profile, national vs BARMM, 2021-2023

	Working Age Population (15 +)		Total persons in Labor Force		Total Employed		Total Unemployed		Total Underemployed	
	PH	BARMM	PH	BARMM	PH	BARMM	PH	BARMM	PH	BARMM
2021	75,301	2,557	47,741	1,570	44,017	1,425	3,724	145		
2022	76,373	2,948	48,398	1,860	45,634	1,719	2,764	141	6,389	318
2023	77,260	3,015	49,562	2,252	47,342	2,155	2,220	97	6,107	213
	Labor Force Participation Rate		Employment rate		Unemployment rate		Underemployment rate			
	PH	BARMM	PH	BARMM	PH	BARMM	PH	BARMM		
2021	63.4	61.4	92.2	90.8						
2022	63.4	63.1	94.3	92.4	5.7	7.6	14.0		18.5	
2023	65.1	72.9	95.5	95.7	4.5	4.3	12.9		9.9	

■ Source: Philippine Statistics Authority

Table A2. Distribution of BARMM labor force by occupations, 2016–2022

BARMM	2016	2017	2018	2019	2020	2021	2022
Managers	17%	16%	15%	13%	10%	7%	3%
Professionals	3%	3%	3%	3%	3%	3%	3%
Technicians & Associate Professionals	0.9%	0.9%	1.0%	1.3%	0.7%	1.4%	1.2%
Clerical Support Workers	0.9%	1.2%	0.8%	0.8%	0.8%	1.1%	1.3%
Service & Sales Workers	6%	5%	7%	10%	10%	14%	18%
Skilled Agri. Forestry & Fishery Workers	40%	50%	47%	41%	44%	37%	37%
Craft & related Trade Workers	2%	2%	3%	4%	3%	5%	5%
Plant & Machine Operators & Assemblers	2%	4%	5%	5%	5%	7%	7%
Elementary Occupations	27%	17%	18%	22%	23%	24%	23%
Armed Forces Occupations	0.4%	0.4%	0.5%	0.3%	0.4%	0.4%	0.4%

■ Source: Philippine Statistics Authority

Table A3. Distribution of BARMM labor force by type of workers, 2016–2022

BARMM	2016	2017	2018	2019	2020	2021	2022
Wage and Salary Workers	20.0%	20.6%	24.1%	25.5%	21.5%	31.5%	29.6%
Worked for private household	0.8%	0.7%	0.8%	0.9%	0.6%	1.1%	1.0%
Worked for private establishment	12.2%	12.1%	15.8%	16.4%	13.7%	20.9%	18.9%
Worked with pay in own family-operated farm business	0.1%	0.0%	0.1%	1.1%	0.3%	3.0%	3.2%
Worked for gov./government corporation	6.8%	7.7%	7.3%	7.1%	6.8%	6.4%	6.5%
Self-employed without any paid employee	57.1%	63.7%	61.9%	32.7%	60.6%	58.0%	60.6%
Employer in own family-operated farm or business	1.5%	3.7%	3.1%	28.2%	1.9%	0.2%	0.4%
Without pay in own family-operated farm or business	21.5%	12.0%	10.9%	13.6%	16.1%	10.3%	9.4%

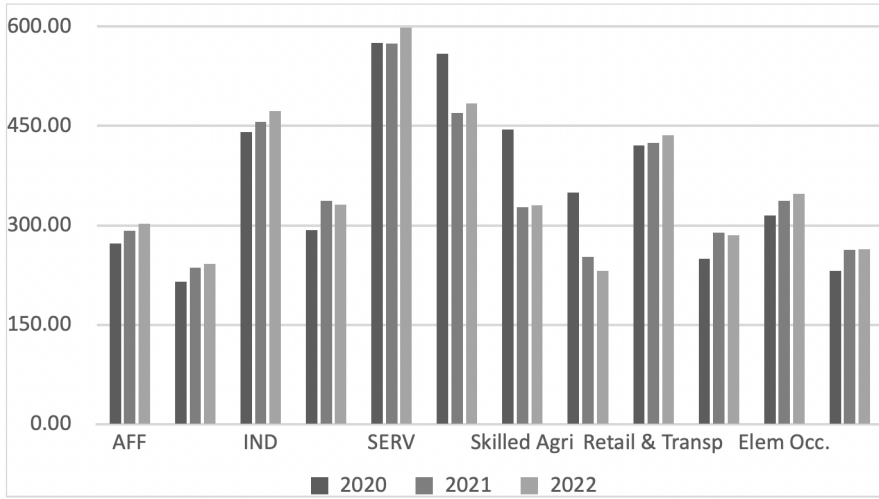
■ Source: Philippine Statistics Authority

Table A4. Highest educational attainment of employed in BARMM, 2016–2022

BARMM	2016	2017	2018	2019	2020	2021	2022
No Grade Completed	11%	12%	12%	12%	9%	3%	3%
Elementary	45%	47%	47%	46%	46%	48%	47%
Undergraduate	30%	33%	31%	31%	31%	37%	36%
Graduate	15%	14%	16%	16%	15%	12%	11%
High School	29%	25%					
Undergraduate	11%	10%					
Graduate	18%	15%					
Junior School			26%	27%	27%	29%	30%
Undergraduate			11%	10%	12%	17%	17%
Graduate			15%	17%	15%	12%	13%
Senior School			1%	1%	1%	4%	4%
Undergraduate			0%	0%	1%	2%	2%
Graduate			0%	0%	0%	1%	1%
Post Secondary	2%	3%	2%	3%	1%	2%	1%
Undergraduate	0%	0%	0%	2%	1%	1%	0%
Graduate	2%	3%	2%	1%	0%	1%	1%
College	13%	13%	12%	11%	15%	14%	15%
Undergraduate	7%	7%	7%	4%	6%	7%	7%
Graduate and Higher	6%	6%	5%	7%	9%	7%	8%

■ Source: Philippine Statistics Authority

Figure A2. Average daily wages, national vs BARMM, 2020–2022



The UP CIDS Discussion Paper Series

The UP CIDS Discussion Paper Series features preliminary researches that may be subject to further revisions and are circulated to elicit comments and suggestions for enrichment and refinement. They contain findings on issues that are aligned with the core agenda of the research programs under the University of the Philippines Center for Integrative and Development Studies (UP CIDS).

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Established in 1985 by University of the Philippines (UP) President Edgardo J. Angara, the UP Center for Integrative and Development Studies (UP CIDS) is the policy research unit of the University that connects disciplines and scholars across the several units of the UP System. It is mandated to encourage collaborative and rigorous research addressing issues of national significance by supporting scholars and securing funding, enabling them to produce outputs and recommendations for public policy.

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