

Transforming Indigenous Knowledge and Skills for Achieving Sustainable Business: Evidence from MSMEs in Nepal

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Abstract – This study aims to identify the factors responsible for the sustainability of the enterprise based on Indigenous Knowledge, Skills, and Resources (IKSaR). A questionnaire survey, Key Informant Interview, and case study method were used for this study. The findings show that adaptive enterprises that were based on the IKSaR were found to be more sustained in the ever-changing market and competitive business environment. The study also finds that family-based businesses passing through generations, being adaptive to improved technologies, having the courage and passion to bear risks, and avoiding quick returns were achieving sustainability in their business. The study also notes the urgency of integrating IKSaR with improved know-how and know-why to gain a sustained growth of enterprise in Nepal. The primary reason for such integration was the IKSaR-based strength of the Micro, Small, and Medium Enterprises (MSMEs). It is observed that the Government of Nepal's flagship programs such as the Micro Enterprise Development Programme (MEDEP), Micro Enterprise Development Program for Poverty Alleviation (MEDPA), and Youth and Small Entrepreneur Self Employment Fund (YSEF) also attempt to mobilize the IKSaR, promote an entrepreneurship culture, develop enterprises, generate employment, and alleviate poverty. However, the growth and sustainability of the enterprises based on IKSaR are still awaiting a major transformation.

Keywords: *indigenous knowledge, skills, and resources; family-based business, business sustainability, improved technology*

I. INTRODUCTION

Indigenous knowledge, skills, and resources (IKSaR) are considered as a driver of Micro, Small, and medium enterprises (MSMEs) in Nepal. Their use for enterprise development conserves the prevailing assets and paves way for the sustainability of enterprises. For the purpose of this study, sustainability refers to the growth, expansion, and continuation of existing business.

Since the formulation of the first national periodic plan in 1956, the Government of Nepal (GoN) has given priority to enterprise development, employment generation, poverty reduction, and the development of IKSaR. The priority of Nepal has always been on both the paths of developing indigenous skills and technology and the transfer of foreign technology as well [1]. The recent 15th five-year plan (2019/20-2023/24) also emphasizes the promotion, protection, and upgradation of IKSaR for increasing domestic production and promoting youth and women entrepreneurship [2]. In view of

increasing employment, reducing poverty, and mobilization of local knowledge, skills, and resources, the GoN launched the Micro Enterprise Development Programme (MEDEP) in 1998. After implementing MEDEP for two decades, the GoN introduced Micro Enterprise Development Program for Poverty Alleviation (MEDPA) in 2018 as a flagship program under the Ministry of Industry, Commerce, and Supplies (MoICS) for sustainable micro-enterprise development. The program is being implemented at all 753 local levels across the country [3]. Similarly, the GoN has been implementing Youth and Small Entrepreneur Self Employment Fund (YSEF) and creating self-employment opportunities among youth through collateral-free business loans [4]. Eventually, the MoICS envisioned Growth Potential Enterprise Promotion Program (GPEPP) realizing the urgency of identifying and supporting growth potential enterprises.

Despite the deliberate and constant efforts of the government to promote IKSaR-based enterprises, substantial growth of the enterprises remains very limited. The study of the MEDEP/MEDPA evaluation report shows no significant growth of micro-enterprises [5]. This study aimed to uncover the factors responsible for the sustainability and growth of enterprises. It also attempted to explore the significance of technological adaptation for the sustainability of such enterprises.

II. MATERIALS AND METHODS

The principal research method employed for this study was case studies. Out of nine case studies, three of them that were carried out with the enterprises that have been utilizing IKSaR and adapting contemporary technology for their business are presented in this study. Key Informant Interviews (KII) were conducted with concerned stakeholders working in the sector of entrepreneurship development. Besides, a questionnaire survey was carried out with those entrepreneurs who received support from the ISPs- MEDPA and YSEF, and with the entrepreneurs who did not receive support from any ISPs. In total, 384 entrepreneurs were surveyed. The sample size was calculated using the formula of W.G. Cochran (1977): $Sample\ size\ (n) = \frac{z^2 pq}{e^2} = 384.16$ where, z is 1.96 at 95% confidence level, p is the estimated proportion of the population, q is 1-p and e is margin of error.

III. RESULTS AND DISCUSSION

The findings from the questionnaire survey of the study indicate that almost 69.6% of the enterprises are based on IKSaR. Almost half of them have been using more than 60% of such IKSaR in their enterprise, mainly in terms of raw materials and labor. The findings from interviews and case studies suggest that there is an upsurge of entrepreneurs who have been using IKSaR for enterprise development and income generation. As the government plans and programs are focused on promoting enterprises based on IKSaR, the number of such enterprises was eventually found to be increasing. However, the support from the government was very limited. The implementation of plans, policies and programs to promote such business were more limited to training and capacity-building programs for the entrepreneurs. The additional support required for the scaling up of the enterprise such as access to finance, market linkages, quality assurance mechanisms, intellectual property rights, and technology transfer was inadequate. Further, the case studies suggest that for the sustainability of an enterprise, transforming indigenous knowledge and skills with an adaptation of improved technology was pivotal. The following three cases reflect a few ground realities.

The first case study is about a couple from Rautahat District (Madhesh Province) who is engaged in livestock farming and selling milk to their local community, for generations. After receiving financial support from the ISP and ideas from the supply chain actors, the couple adopted a new technology- a Bulk Milk Cooler. The new technology adaptation integrated into their traditional skills and knowledge that has led to their business expansion, catering their milk supply even to the capital city. While, the similar livestock farming in that community, with no additional innovation in their business, is still limited to their local market.

The second case is a handicraft enterprise led by a lady from Kaski District (Gandaki Province) who acquired handicraft skills from her grandmother. The handicraft business was founded, based on intergenerational skills learned and extraordinary vision, and with an aim to employ and empower poor, vulnerable/marginalized women discriminated against in society. They use locally available resources and raw materials such as natural fiber and fruits to make their product. With the use and transfer of IKSaR, this enterprise has been able to transform the lives of hundreds of women while promoting locally hand-made products. Their handicrafts have made way not only to the domestic but also to the international market. The small organization that commenced with only three working women is now employing more than 600 women and has trained more than 18,000 girls and women. This case presents strong evidence of the transfer of technology and skills across and within generations, which has led to the sustainability of their business.

The third case is about a group of women from Banke District (Lumbini Province) who has utilized their indigenous skills and knowledge of making biodegradable leaf plates using Sal (*Shorea Robusta*) leaves and fine bamboo sticks for income generation. The women groups have been making such leaf

plates for decades for different religious functions and ceremonies. With the formation of their group, they started catering to the nearby local market with their handmade leaf plates but the market was limited. Hence, with the support and idea from MEDPA, the women entrepreneurs procured an innovative technology – a leaf plate-making machine. With the introduction of this technology in their business, the use of products diversified from religious use to further expanding to the local restaurants and street vendors for serving food. The integration of modern technology into the indigenous skills and knowledge of the entrepreneurs acquired from their ancestors led to wide market linkages, business expansion, more income generation, and sustainability. Even with the socio-cultural challenges that women face in Nepal, these entrepreneurs have been able to transform their skills into a full-fledged growing business.

These case studies depict the evidence of IKSaR-based business sustainability and growth by making improvements on their product design and/or delivery with improved technology as needed in the current time and market. The entrepreneurs of those enterprises continued their business mobilizing the IKSaR learned through generations, but their learning by doing approach and appropriate technology adaptation led to sustainability of their business. Other factors such as access to finance, market access, availability of raw materials and labor, and the presence of encouraging policies were equally important. The passion and willingness of the entrepreneur, risk-bearing tendency, determination to utilize the indigenous skills and knowledge, integration and transfer of appropriate technology, and avoidance of quick return-seeking mentality were building the foundation for the sustainability and growth of an enterprise. Conversely, it was found that the enterprises utilizing IKSaR but without any innovation and adaptability in changing contexts, expecting high and quick returns, and those enterprises having a high dependency on borrowed knowledge and resources were doing business to some extent, but their growth and sustainability were largely restricted. The cases presented by this study, in fact, emphasize the importance of innovation in the business by being adaptive to the improved technology and changing market scenario and customers' demand without ignoring the IKSaR for sustainability and growth of MSMEs.

IV. CONCLUSION

With the in-depth case studies and extensive interviews with entrepreneurs, ISPs, government, and other concerned stakeholders, it is concluded that there is a need for innovation of IKSaR with improved technologies for the sustainability of MSMEs. There is an urgency of adaptiveness, continuous improvement in product design and delivery along with entrepreneurial willingness, passion, risk-bearing tendency, and unlearning of quick return/benefit-seeking mentality. The assumption of 'entrepreneurship as a way of life' ensures sustainability and invites growth in business. The study recognizes the importance of adaptability for sustainability and gives high emphasis on the mobilization of IKSaR with improved technology.

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