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The Imperative of Training for Women Economic Empowerment-Statistical Evidence from Indonesia

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Abstract: The vital role of training in any economic empowerment programme cannot be overemphasized. While this is particularly felt to be true in the case of developing societies, a more scientific substantiation would certainly add value to this assertion. This paper presents a statistical analysis of the impact of a training programme designed to economically empower disadvantaged women in Dumai, Indonesia. The case in point was a government initiated tailoring training workshop involving 115 women participants. A questionnaire survey was conducted and logistic regression techniques were applied to determine significant factors that influenced the post-training utilisation of the participants' tailoring skills and income generation. The results showed that with respect to the post-training skill utilisation only the cognitive factor was the significant predictor variable. By contrast, the cognitive and affective factors, as well as previous training and ownership of production equipments were the significant predictor variables of the participants' post-training income generation. In conclusion, while there is no denying that future training programmes need to be holistic for the economic empowerment of women in developing countries to be effective, they would do well to focus on the cognitive enhancement aspects first and foremost.

Key words: Women empowerment · Training impact · Quantitative analysis · Income generation

INTRODUCTION

Women's empowerment is about enhancing women's confidence level so that not only are they enabled to contribute to community development and participate in the political, social and economic life at various local, regional and national levels [1-2] but also to do so in ways that are meaningful to them [3-5]. Economic empowerment is certainly one of the most fundamental components of women's empowerment. Although there is no standard definition of women's economic empowerment, it would appear that the majority of efforts to measure women's economic empowerment programmes focus primarily on quantifiable outcomes such as increased access to credit or increased revenue, more resources dedicated to women's material consumption and personal time, increased women's decision making and control over gainful resources and increased financial autonomy. Activities qualify as economic empowerment if they advance women's financial status in a meaningful and lasting way. Hence the advent of such programmes as micro-credit or micro-finance, fair trade and poverty eradication self help groups for disadvantaged women in developing countries [6-9].

One of the most potent forces of women's economic empowerment is education and training [10-19]. There are direct relationships between women's economic, educational and empowerment status [20]. For example, if disadvantaged women are to become successful entrepreneurs, they should be given training in such technical skills as obtaining business licenses and government procurement and in business skills as cash flow management, accounting/bookkeeping, financial relationships, advertising, marketing, sales, strategic planning and feasibility analyses [20].

There are several ways in which disadvantaged women may avail themselves of training that would empower them economically. Private financial and training institutions may sponsor training programmes for them to work in certain identified sectors. Non- government and

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other voluntary and charitable organisations may run specific poverty alleviation programmes in which women beneficiaries are trained to generate income. Government agencies may embark on specific national development programmes that involve human capital development of the people.

In Indonesia, the government has launched community empowerment programmes to eradicate urban poverty called the National Programme for Urban Community Survival Empowerment (*Program Nasional Pemberdayaan Masyarakat (PNPM)-Mandiri Perkotaan*) . In these women empowerment includes education, capacity building and skills development, participation in the development process and autonomy [18]. The objective of this paper is to analyse the impact of women's training under these programmes by examining the factors that determined the participants' post-training utilisation of the acquired skills and income generation.

Methodology

The Project Background: The community empowerment programs were carried out both by central government and the local government. Under the Urban Community Survival Empowerment each district received a Direct Survival Assistance fund to be distributed to the village poor. The amount of PNPM allocation for each district was announced to the communities, including the donation from the local government or others.

For 2009, the target group of PNPM for urban Dumai was 4,554 poor families. The central government contributed 2,685 million rupiah and local government 1,155 million rupiah. During the first phase, four districts obtained 60 million rupiah and each village received 45 million rupiah. A tailoring training project for local women was implemented with a total of 115 participants and a budget totaling over 113 million rupiah (Table 1).

Data Collection: A questionnaire survey was conducted in four villages, i.e. Bangsal Aceh Village, Lubuk Gaung Village, Tanjung Penyembal Village and Basilam Baru Village. The survey questionnaires were distributed to 115 participants and 92.2 percent responded. Two statistical techniques were employed to analyse the data viz. descriptive and inferential analyses. Frequencies and means were used to describe participants' background and the impact of the training. The Chi Square test was conducted to identify the differences between training impact and participants' background. Logistic regression was calculated to determine significant factors that influenced utilisation of tailoring skills and income generation. Age, marital status, number of children, education, previous training, availability of sewing machine and the cognitive, psychomotor and attitudinal traits of participants were among the predictor variables examined [21 -22].

RESULTS AND DISCUSSION

Utilisation of Sewing Skills: There were two types of training impact of the tailoring workshop examined. One was participants' utilisation of the tailoring skills acquired and the other, participants' additional income generated from their tailoring activities after the training workshop. As indicated in Table 2, after attending the sewing workshop, 71.7 percent of the participants did use their newly acquired tailoring skills to sew their own family clothes and 17 percent did gain extra income from the sewing activities. Only 11.3 percent were not doing any sewing activity.

Table 3 indicates that there was a significant difference between the age group of the participants and training impacts. This means that the older the age the higher the utilization of tailoring skills for the family. The highest percentage of those who did not utilise their sewing skills was among youth of less than 20 years of age (28.6 percent). In terms of marital status, the chi square value obtained indicates that marital status was not related to the utilisation of the tailoring skills. Similar test indicates that there was no significant difference between participants' level of formal education and the application of their newly acquired tailoring skills.

Table 1: Budget for Dumai women's tailoring training, 2009

Village	Number of Participants	Sewing Training Budget (Rp)
Bangsal Aceh	20	26,390,000
Lubuk Gaung	40	33,577,000
Tanjung Penyembal	25	29,392,000
Basilam Baru	30	23,904,000
Total	115	113,263,000

Source: PNPM Mandiri, 2009 [18]

Table 2: Sewing Activity after the Workshop

Activity	Frequency	Percent
No activity	12	11.3
Sewing clothes for family	76	71.7
Sewing clothes for income	18	17.0
Total	106	100.0

Table 3: Impact of training -predictor variables of the utilisation of tailoring skills

	Age				
Utilization of Tailoring Skills	< 20 year	21-30 year	> 31 year	Total	Chi square test value
No activity	28.6%	10.2%	2.8%	11.3%	12.543, df=4, p<.05
Sewing clothes for family	61.9%	65.3%	86.1%	71.7%	
Sewing clothes for income	9.5%	24.5%	11.1%	17.0%	
Total percentage	100.0%	100.0%	100.0%	100.0%	
Total number of participants	21	49	36	106	
	Marital Status				
	Single	Married	Total		
No activity	17.2%	9.1%	11.3%		v =2.274, df=2, p=.321
Sewing clothes for family	72.4%	71.4%	71.7%		
Sewing clothes for income	10.3%	19.5%	17.0%		
Total percentage	100.0%	100.0%	100.0%		
Total number of participants	29	77	106		
	Level of Education				
	SD	SMP	SMA	Total	
No activity	14.0%	12.5%	.0%	11.3%	4.711, df=4, p=.318
Sewing clothes for family	74.4%	64.6%	86.7%	71.7%	
Sewing clothes for income	11.6%	22.9%	13.3%	17.0%	
Total percentage	100.0%	100.0%	100.0%	100.0%	
Total number of participants	43	48	15	106	
	Previous Training				
	Without previous training	With previous training	Total		
No activity	14.8%	0.0%	11.4%		25.148, df=2 p<.001
Sewing clothes for family	77.8%	50.0%	71.4%		
Sewing clothes for income	7.4%	50.0%	17.1%		
Total percentage	100.0%	100.0%	100.0%		
Total number of participants	81	24	105		
	Availability of Sewing Machine				
	Without sewing machine	With sewing machine	Total		
No activity	17.9%	0%	11.3%		24.639, df=2 p<.001
Sewing clothes for family	77.6%	61.5%	71.7%		
Sewing clothes for income	4.5%	38.5%	17.0%		
Total percentage	100.0%	100.0%	100.0%		
Total number of participants	67	39	106		

Table 4: Logistic Regression on Utilization of Sewing Skills

Predictor variables	Beta	Std. Error	Exp(B)
Age	-30.236	4832.062	.000
Education	.443	1.134	1.557
Previous training	-18.592	5100.531	.000
Availability of sewing machine	-42.901	6036.853	.000
Cognitive	.918**	.438	2.503
Psychomotor	.574	.392	1.776
Affective	.559	.443	1.749
Constant	46.517	7903.103	1.593

Note : Nagelker R^2=.675, df=1, **p< .05

Table 5: Post-training income from sewing

Income (Rupiah)	Number of participants	Percent
No income	88	83.0
< 300000	5	4.7
300001-600000	13	12.3
Total	106	100

By contrast, previous training experience did make a significant difference: among the participants who had attended previous training courses or workshops, 77.8 percent were able to at least engage in sewing clothes for their family as compared to the 50 percent of those who never had prior training experience. Finally, the availability of sewing machines and equipments also had some impact on the utilisation of the participants' tailoring skills acquired from the training workshop of the Dumai Urban Community Survival Empowerment programme.

Factors of Skills Utilisation: Table 4 shows the results of the logistic regression on the utilisation of participants' sewing skills after attending the training. A total of 67.5 percent of the variance (R^2=0.675) in the ability to apply the training skills was described by the independent variables. However, only the cognitive factors (eg. knowledge of textile materials) really influenced the application of the participants' skills after attending the tailoring workshop. In other words, the other predictor variables of age, psychomotor (sewing skills and maintenance), affective behaviour (self confidence), formal educational level, previous training experience and the availability of a sewing machine did not affect the utilisation of the participants' sewing skills after attending the sewing training workshop.

Income Generated from Sewing Skills: Another way to evaluate the impact of training on women economic empowerment through the Dumai experiment is to analyse the participants' additional income generated from their tailoring activities after the training workshop. As indicated in Table 5, after attending the sewing workshop, a large majority or 83.0 percent of the participants did not gain any monetary income from their newly acquired tailoring skills.

Probing deeper, there was no significant difference between the age of the participants and additional income generated. The percentage of the participants who did not generate additional income after attending the workshop was extremely high (90.5 percent) among participants aged less than 20 years old. There was no significant difference between the marital status of the participants and additional income generated. Neither the 89.7 percent of the unmarried participants nor the 80.5 percent of the married participants did generate any income from their newly acquired tailoring skills (Table 6).

The same goes for the educational level of the participants. There was, nevertheless, a significant difference between participants who had previous training experience and those who had not. Among the participants who had attended the course before, 50 percent did not earn additional income after completing the sewing workshop whereas the corresponding figure was 92.6 percent for counterparts who never had prior training experience. Finally, participants who had sewing machines seemed to be more able to generate revenues after completing the training (Table 6).

Table 6: Impact of training - predictor variables of post-training income generation

	Age				
Post-training Income	< 20 year	21-30 year	> 31 year	Total	Chi square test value
No income	90.5%	75.5%	88.9%	83.0%	7.659, df=4 p=.105
Less than 300,000	9.5%	4.1%	2.8%	4.7%	
300,001 - 600,000	.0%	20.4%	8.3%	12.3%	
Total percentage	100.0%	100.0%	100.0%	100.0%	
Total number of participants	21	49	36	106	

	Marital Status			
	Single	Married	Total	
No income	89.7%	80.5%	83.0%	3.144, df=2 p=.208
Less than 300,000	6.9%	3.9%	4.7%	
300,001 - 600,000	3.4%	15.6%	12.3%	
Total percentage	100.0%	100.0%	100.0%	
Total number of participants	29	77	106	

	Level of Education				
	SD	SMP	SMA	Total	
No income	88.4%	77.1%	86.7%	83.0%	3.538, df=4 p=.472
Less than 300,000	4.7%	4.2%	6.7%	4.7%	
300,001 - 600,000	7.0%	18.8%	6.7%	12.3%	
Total percentage	100.0%	100.0%	100.0%	100.0%	
Total number of participants	43	48	15	106	

	Previous Training			
	Without previous training	With previous training	Total	
No income	92.6%	50.0%	82.9%	26.438, df=2, p < .001
Less than 300,000	3.7%	8.3%	4.8%	
300,001 - 600,000	3.7%	41.7%	12.4%	
Total percentage	100.0%	100.0%	100.0%	
Total number of participants	81	24	105	

	Availability of Sewing Machine			
	Without sewing machine	With sewing machine	Total	
No income	95.5%	61.5%	83.0%	21.815, df=2, p < .001
Less than 300,000	3.0%	7.7%	4.7%	
300,001 - 600,000	1.5%	30.8%	12.3%	
Total percentage	100.0%	100.0%	100.0%	
Total number of participants	67	39	106	

Table 7: Logistic Regression on Additional Income

Predictor Variables	Beta	Std. Error	Exp(B)
Age	2.133	1.617	8.442
Marital Status	-.030	1.904	.970
Number of Children	-1.404	1.615	.246
Education	-.442	.872	.643
Previous Training	-2.600**	.996	.074
Availability of a Sewing Machine	-1.970**	.898	.139
Cognitive	.383*	.198	1.467
Psychomotor	-.255	.207	.775
Affective	.782**	.301	2.185
Constant	-7.129	2.556	.001

Note : Nagelker R^2=.586, df=1, **p<.05, *p< .10.

Factors of Additional Income: The logistic regression scores (Table 7) shows that there were four predictor variables exerting significant influence on the participants' post-training income generation, namely, previous training experience, cognitive skills, affective aspects and the availability of a sewing machine.

Respectively, the previous training factor and the availability of a sewing machine factor contributed 0.7 percent 0.13 percent to the participants' post-training income generation. Higher influence came from the cognitive skills factor which significantly contributed 14.6 percent and the affective behaviour factor which contributed 21.8 percent to the participants' post-training income generation.

The results also show that the other predictor variables of psychomotor, marital status, number of children, educational level and age did not influence the participants' additional income after attending the sewing workshop. This finding is consistent with the previous findings [1-17, 23] confirming that training is an effective instrument of women's economic empowerment.

CONCLUSION

The results of the logistic regression analyses indicate that only the cognitive factor significantly determined the utilisation of the women's newly acquired sewing skills, while the cognitive, affective, previous training and availability of sewing machine determined the women's post-training additional income generation. This means that participants who were the most empowered as a result of the training were those with the better grasp of the knowledge of the trade line coupled with smart (positive, entrepreneurial) attitudes and who benefited from exposures to previous training experiences and facilitated physically with the availability of the production (sewing) equipments.

One obvious implication of this Indonesian experience to future endeavours of women economic empowerment is that while training is imperative, it must be geared, first and foremost, to improving the cognitive, psychomotor and affective aspects of the women participants. The post-training income generation impact of training will follow suit as this self confidence and personal capability are matched with capital and equipments.

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