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A Complementary Currency Model Proposed for Orang Asli Community: an Empirical Analysis

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Abstract

The study proposes the complementary currency (CC) model to the Malaysian *Orang Asli* community since the *Orang Asli* accounts for about 20 per cent of the nation's hardcore poor. It also attempts to measure the acceptance level of the community if the complementary currency system were to be introduced for their economics activities. Using primary data collected from the survey among *Orang Asli*, the study analyzes the collected data using statistical tools such as frequencies, cross-tabulation and logistic regression to meet the objectives of this study. The results of study indicate that Ringgit Malaysia (RM) remains as an important selection of medium of exchange among the members of *Orang Asli* community even though CC could have a potential to be used instead. In other words, CC could probably be used to support the national currency as it might not be able to play its main roles and the best mechanism that could be used as CC is the 'agricultural product'. The results also infer that high probability of the community will opt for the CC if the members are at moderate level of education and they ever heard about CC in other countries. It is expected that the findings will assist the policymakers in implementing the CC model to the *Orang Asli* community in realizing the vision of the nation to be a developed nation.

Keywords: Complementary currency, Orang Asli, Malaysia, Logit model

1. INTRODUCTION

The essence of the critique of capitalist credit-money revolves around the way that money is created in contemporary capitalist society. It is argued that the problem lies in the way in which conventional money is created as debt by the banking system. On this basis, advocates of monetary reform propose complementary forms of money which can fulfill different societal functions. In particular, the complementary currency enable local communities to use new ways to offer people employment, and to pay for local services like education, child care, health care, waste management, fire and police protection, infrastructure, and administration. They have unmet needs in the community for these services, and at the same time there are underutilized resources available that could fill the gaps. The main barrier to matching the unmet needs with the underutilized resources is a lack of money. Complementary Currency (CC) allows localities and regions to create real wealth in their local economy by matching the unmet needs with the underutilized resources. It also provides a way for the wealth that is produced locally to benefit local people. Complementary currency systems were borne from the social, economic, and environmental dynamics that existed in the late 1980s and early 1990s. To some degree, they reflect the interests of various social movements, evolving during the same period. These social movements, (ie. complementary currencies, fair trade, and organic food production) sought to create sustainable and just alternatives to emerging global issues rather than simply protesting injustices. 'Complementary currencies' (CCs) refers to a wide range of new exchange systems which are designed to address specific economic, social and environmental needs which conventional money neglects, and which complement 'ordinary' monetary exchange.

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The CC movement has been growing rapidly since the 1990s, and includes a diverse range of systems in developed and developing countries (DeMeulenaere, 2007). Since the early 1980s a range of different complementary currencies have emerged, many of them from civil society (see Kent, 2005; North, 2010; Schroeder, Miyazaki & Fare, 2011). Such currency systems have been researched from a variety of different perspectives, such as policy tools (Williams et al., 2001) and social movements (North, 2006). Many of these have explicit links to sustainability objectives and the green movement (Helleiner, 2000; Longhurst & Seyfang, 2011; North, 2010; Seyfang, 2009), and some environmental writers argue that monetary reform and the development of multiple currency systems are critical factors in achieving environmental sustainability (Douthwaite, 1999).

CC can also be defined as “something else than a legal tender (ie. national money) that can be used as a medium of exchange, with the purpose to link unmet needs with otherwise unused resources” (Lieter & Hallsmith, 2006). Given the facts that Orang Asli community are good in producing agricultural products (such as corn or rice) and they are always abundant and they also in needs of other goods and services such as basic education, transportation etc., the proposed model of CC seems very suitable to be developed within this community (see Figure 1 as an example) to improve the community’s standard of living. Normally, the CCs are issued by a group of local activists or an organization and one of the characteristics is their limited area of circulation. By types, the CCs could be fully backed by the national currency, backed by guarantees from members of the exchange system, backed by goods or backed by services. According to Lieter & Kennedy (2008), in 2007 there were about 2,600 CCs in the world, of which 55% were in Europe, 36% in Japan, 5% in the US and Canada, 3% in Australia and New Zealand, and only 1% in the rest of the world. Studies on the use of CCs in many countries such as Brazil, Argentina, Iran, Japan and others have shown the successfulness of the model to improve local economic development and resolving social issues such as increase employment opportunities, empowering the poor people, ensuring social engagement and in some cases favoring gender balance.

Thus, the present study attempts to proposed few CC models to *Orang Asli* community in Malaysia and to assess the probability that the members of community will accept the proposed models of the CC. To achieve the objectives, survey questions are designed and primary data are collected through a survey on a sample of *Orang Asli* population. The analysis of data is conducting using some statistical tools. The rest of the paper is outlined as follows. Section 2 will discuss the background of *Orang Asli* community. Section 3 will focus on the data collection and methodology. Section 4 will presents the results from the study and finally the last section 5 concludes this study

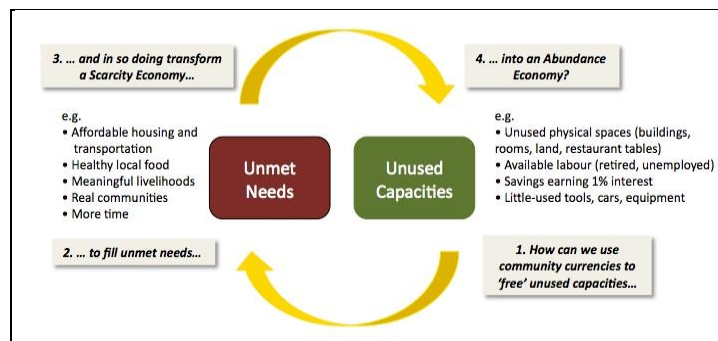


Fig 1. Complementary Currency

2. ORANG ASLI COMMUNITY: THE BACKGROUND

The *Orang Asli* are the indigenous people of Peninsular Malaysia. They reside mostly in Peninsular Malaysia, with an estimated total population of 178,197 which represents approximately 0.6 per cent of the total population in Malaysia (Pelan Strategik Kemajuan Orang Asli 2011-2015). Officially classified into three main ethno-linguistic groups called the Senoi, Proto-Malays and Negritos, the largest population of *Orang Asli* resides in Pahang, with a total number of 67,504 out of the total population. The *Orang Asli* are among the most marginalized and impoverished of Malaysia’s inhabitants (Nicholas,2002). Despite making up of only 0.6 per cent of the total national population, the *Orang Asli* accounts for about 20 per cent of the nation's hardcore poor (Nicholas, 2011). Table 1 below presents the distribution of *Orang Asli* population in accordance to states in Malaysia.

Table 1. Number of villages and populations of Orang Asli by States in Malaysia, 2011

States	Number of Villages	Population			Hardcore Poor	Ethno-linguistic Group			Total
		Male	Female	Total		Senoi	Melayu-Proto	Negrito	
Pahang	262	35,323	32,123	67,506	3,335	29,439	37,140	925	67,504
Perak	255	27,716	25,583	53,299	1,529	50,281	605	2,413	53,299

Selangor	73	9,254	8,333	17,587	385	5,073	12,512	3	17,588
Kelantan	118	7,140	6,317	13,457	1,282	12,047	29	1,381	13,457
Johor	58	6,702	6,437	13,139	360	55	13,084	1	13,140
N. Sembilan	68	5,461	5,070	10,531	342	96	10,435	0	10,531
Melaka	14	778	737	1,515	43	28	1,486	1	1,515
Terengganu	3	474	419	893	39	818	31	34	893
Kedah	1	155	115	270	6	19	0	251	270
TOTAL	852	93,003	85,194	178,197	7,321	97,856	75,332	5,009	178,197

Source: Jabatan Kemajuan Orang Asli (JAKOA), Centre for Orang Asli Concerns (www.coac.org.my)

A study by Howell et.al (2006) on this Orang Asli community implies the importance of uplifting the economic well-being of this group of community. Looking at the economic background of the group, which mainly based on agricultural activities, it is proposed that the model of complementary currency (CC) might be suitable in an attempt of improving the economic development of the community.

3. DATA AND METHODOLOGY

On assessing the acceptance of the Orang Asli community on the proposed CC model, the study is conducting a survey. The survey questions are designed to measure the acceptance level of the community if the complementary currency system were to be introduced for their economics activities. For preliminary analysis, a collection of data from Batu 12, Gombak, Selangor is used. The sample size data is 123.

The descriptive analysis and some statistical tests are conducted in this analysis. Besides, the logistic model is developed to analyze the probability that respondents are willing to opt for the complementary currency as an alternative currency. This is a nonlinear regression model specifically designed for binary dependent variables. Unlike linear probability model, this model adopts a nonlinear formulation that forces the predicted values to be between 0 and 1 by using cumulative probability distribution function (c.d.f.) which is denoted by F . Apart from using logit regression, probit regression could also be used in modeling binary dependent variables. The difference between logit and probit regressions is that probit regression uses the standard normal c.d.f. and logit regression uses the “logistic” c.d.f.¹. The logistic cumulative distribution function has a specific functional form, defined in terms of the exponential function. The population logit model of the binary dependent variable Y with multiple regressors could be expressed as:

$$\Pr(Y = 1|X_1, X_2, \dots) = F(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k) = \frac{1}{1 + e^{-(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k)}} \quad (1)$$

The main reason for using logit regression is that the logistic c.d.f. could be computed faster than the normal c.d.f. (Stock and Watson, 2007). Logistic regression model is estimated to predict a categorical (usually dichotomous) variable from a set of predictor variables. For the purpose of this study, the dependent or the outcome variable of interest was constructed as dichotomous indicator based on the response to survey questionnaire item number 22, part C: “The complementary currency can be an alternative for the national currency”. Respondents who answered ‘Agree/strongly agree’ is coded as 1 and those who answer ‘Disagree/strongly disagree’ is coded as 0. For predictor variables, among the variables included are “familiar with concept of CC”, “heard about CC in Malaysia” and “heard about CC in other countries”. All predictors are categorical variable. To simplify, we develop a Logit Model as follows:

$$L_i = \ln\left(\frac{P_i}{1 - P_i}\right) = \beta_0 + \beta_1 (FAMILIAR_CC)_i + \beta_2 (HEARDCC_M'SIA)_i + \beta_3 (HEARDCC_OTHERCNTRY)_i + \nu_i \quad (2)$$

where L_i is a dummy variable with value of 0 or 1. $L_i = 0$, if there is disagreement that CC can be an alternative currency and $L_i = 1$ if there is agreement that CC can be an alternative currency. In the model (equation 2), if we take the antilog of the j th slope coefficients (β 's), subtract one from it, and multiply the result by 100, we will obtain the *percent change* in the odds for a unit increase in the j th regressor. The percentage change could be interpreted as probability that the opt for the model will change (increase or decrease) due to a unit increase in independent variables such as demographic and other independent variables.

¹ Refer to Stock and Watson (2007) for detail explanation.

It is also important to note that the R^2 is a poor measure of fit for the linear and nonlinear probability model (Stock and Watson, 2007). Therefore, we use another measure of fit for this model of binary dependent variable, namely “fraction correctly predicted”. Besides, we will also perform Pearson χ^2 -type tests of goodness-of-fit, namely Hosmer-Lemeshow (1989) and Andrews (1988a, 1988b).

4. EMPIRICAL FINDINGS

4.1 Demographic information

Based on data obtained from the present study, it is found that the majority of respondents are female, that is 68.3 percent (31.7 percent are male). The respondents are mostly having level of education up until the secondary level. Specifically, 30.9 percent of respondents have no education, 23.8 percent are having primary level of education and 42.3 percent are having secondary level of education. Only 4.1 percent are at pre-university/diploma levels and none of them are educated higher than this level. Majority of respondents are married (76.4 percent) and the highest number of them is home-makers (35.8 percent) as of the job status. Among them, 18.7 percent are working in the government sector and 13.8 percent are working in the private sector. Interestingly, 18.7 percent of them are self-employed which equivalent to those in the government sector jobs (refer to Table 2).

Table 2. Distribution of Respondents by Gender, Education level, Marital Status and Job status

		Frequency	Percent
Gender	Male	39	31.7
	Female	84	68.3
Education level	No education	38	30.9
	Primary level	28	22.8
	Secondary level	52	42.3
	Diploma/pre-university	5	4.1
	Bachelor degree	0	0
	Post graduate degree	0	0
Marital Status	Single	28	22.8
	Married	94	76.4
	Divorced	1	0.8
Job status	Private sector	17	13.8
	Government sector	23	18.7
	Self-employed	23	18.7
	Home-maker	44	35.8
	Retired	4	3.3
	Student	11	8.9
	Missing value	1	0.8

4.2 The use of national currency among *Orang Asli* community

When asking on the experience using Ringgit Malaysia (RM), all respondents report that they are using RM in everyday activities and they also stated that they prefer to use RM within local community. Table 3 displays the cross-tabulation between male and female respondents on the experience of using RM. As shown on the table, 100 percent of the respondents, with majority are females, are use to RM in their daily activities and they are also prefer to use RM in local community as this is the only currency introduced to them especially when dealing in trade with other people outside the local community.

Table 3. Cross-Tabulation of the Use of National Currency (RM) in Daily Activities and Gender

	By Gender		Total (N)
	Male	Female	
Did you ever use Ringgit Malaysia (RM) in everyday activities?	Yes: 38 (31.4)	Yes: 83 (68.6)	121
	No: 0	No: 0	0
	Missing value: 2		2
	By Gender		Total (N)
	Male	Female	
Did you prefer to use Ringgit Malaysia (RM) among members of local community?	Yes: 39 (31.7)	Yes: 84 (68.3)	123
	No: 0	No: 0	0

Notes: Valid percentage in parentheses

Table 4. Cross-Tabulation of the Use of National Currency (RM) in Daily Activities and Education Level

	By education level (Answer: YES)				Total (N)
	No education	Primary level	Secondary level	Diploma/pre-university	
Did you ever use Ringgit Malaysia (RM) in everyday activities?	35 (29.4) No: 0	28 (23.5) No: 0	51 (42.9) No: 0	5 (4.2) No: 0	119
Missing value: 4					
	By education level (Answer: YES)				Total (N)
	No education	Primary level	Secondary level	Diploma/pre-university	
Did you prefer to use Ringgit Malaysia (RM) among members of local community?	36 (29.8) No: 0	28 (23.1) No: 0	52 (43.0) No: 0	5 (4.1) No: 0	121
Missing value: 2					

Notes: Valid percentage in parentheses

Observing the cross-tabulation between similar questions on RM used and level of education, it is found that those who ever use RM and prefer to use RM are mostly among those having secondary level of education (see Table 4). This is followed by those who are not having any educational qualification. In general, it could be inferred that knowledge of using money as medium of exchange is somehow relevant to make a decision on the preferred mechanism for the trading system among members of community.

Table 5. The Purposes of Using National Currency (RM)

Purpose	Frequency	%
Buying goods and services	115	92.7
Selling goods and services	45	36.3
Paying debt	26	21.0
Giving pocket money to family members	42	33.9
Saving	20	16.1
Investment	2	1.6
Donation/charity	9	7.3

The purposes of using RM among the respondents, as shown in Table 5, are mostly to buy goods and services (92.7 percent), to sell goods and services (36.3 percent), to give pocket money to family members (33.9 percent) and to pay debt (21.0 percent). Very small number of respondents uses RM for investment (1.6 percent), donation/charity (7.3 percent) and saving (16.1 percent). Since members of community are depending mostly from the local activities for daily income, they can hardly save a lot of money as well as use them for investment or even for charity. It is assumed that those who are working at private or public sectors are the one that able to save and invest. The self-employed jobs are only sufficient to support the daily life of the family members. The respondents were also asked on the reason why RM is preferable to be used in economic activities. In Table 6, it is shown that about 85.4 percent of respondents use RM because majority of members in community are using it as a medium of exchange. About 61.3 percent of respondents say that RM is used because it is acceptable by all members in the local community and outside the community. The third popular reason is that RM is easy to be carried (37.9 percent). The reasons of stable value, RM has a legal tender in the country, it can be used as a defer payments and other reasons score less than 30 percent among the respondents. Table 4 provides detail frequencies and percentages of reason selections among respondents of using RM in their everyday transactions.

Table 6. The Reasons of Using National Currency (RM)

Reason	Frequency	%
It is used by majority of people in the community	105	85.4
Easy to be carried	47	37.9
It is accepted by all people in the community and outside the community	76	61.3
It has stable value	26	21.0
It is a legal tender in the country	26	21.0
It could be used for defer payments	16	12.9
Other reasons	4	3.2

4.3 The proposed complementary currency for *Orang Asli* local community

The study proposes several mechanisms to be used as complementary currency for *Orang Asli* community such as barter system, agricultural products, time/hour, unused tools and unused space of land. From the list, only 'agricultural products' is chosen as suitable complementary currency among the respondents. For other mechanisms, the percentages of responses of 'not agree' is higher than the percentages of 'agree' selection, excluding the missing value. Thus, it could be inferred from the results that 'agricultural product' has a potential to be complementary currency for the *Orang Asli* community as compared to other types of CC.

Table 7. Types of Complementary Currency Suitable for Orang Asli Community

Type of Complementary Currency	Strongly Disagree (SDA)	Disagree (DA)	Agree (A)	Strongly Agree (SA)
Bartering	4 (3.2)	58 (46.8)	56 (45.2)	5 (4.0)
Agricultural product	4 (3.2)	56 (45.2)	59 (47.6)	3 (2.4)
Time/hour	12 (9.7)	72 (58.1)	36 (29.0)	1 (0.8)
Unused tools	1 (0.8)	59 (47.6)	59 (47.6)	0 (0)
Unused space of land	8 (6.5)	64 (51.6)	47 (37.9)	0 (0)

Notes: Percentage in parentheses. The missing value is existed in some cases.

Given the proposed CC selected by most of respondents is the 'agricultural product', the characteristics of the CC which are expected to be there to become the CC in the local community are listed on Table 8. The percentage of respondents that agree and strongly agree on these criteria are more than 70 percent.

Table 8. Criteria Suggested for the Proposed Complementary Currency for Orang Asli Community

Criteria of Proposed Complementary Currency	Strongly Disagree (SDA)	Disagree (DA)	Agree (A)	Strongly Agree (SA)
It should be backed by national currency (RM)	1 (0.8)	22 (17.7)	92 (74.2)	4 (3.2)
It should have stable value	0 (0)	15 (12.1)	101 (81.5)	3 (2.4)
It should be accepted by all members in community	1 (0.8)	10 (8.1)	99 (79.8)	8 (6.5)
It should be convenience	0 (0)	11 (8.9)	99 (79.8)	8 (6.5)
It should be able to be kept for future transactions	1 (0.8)	11 (8.9)	95 (76.6)	11 (8.9)
It should be able to be saved (long lasting)	1 (0.8)	11 (8.9)	89 (71.8)	18 (14.5)

Notes: Percentage in parentheses. The missing value is existed in some cases.

Table 9. The Willingness to Use Complementary Currency

Statement of willingness to use	Strongly Disagree (SDA)	Disagree (DA)	Agree (A)	Strongly Agree (SA)
1. I will use complementary currency if it benefits me and my family.	0 (0)	13 (10.5)	89 (71.8)	14 (11.3)
2. I will use complementary currency if it is also used by other members of community.	0 (0)	21 (16.9)	84 (67.7)	14 (11.3)
3. I will use complementary currency if Head of community instructs me to use it.	0 (0)	21 (16.9)	91 (73.4)	6 (4.8)
4. I will use complementary currency if it increases economic activities in the local community.	1 (0.8)	17 (13.7)	90 (72.6)	10 (8.1)

Notes: Percentage in parentheses. The missing value is existed in some cases.

The respondents are also stated that they will use CC with several conditions. Those are that if it will benefit them and family members, if it is also used by other members of community, if heads of community instruct them to use it and if CC increases economic activities in the local community. In general, the scores for these conditions are more than 75 percent as displayed in Table 9. Respondents are also being asked on the potential of CC to be used among the *Orang Asli* community (see Table 10). As regard to whether CC can be an alternative of the current national currency (RM), the scores for the responses of 'disagree' and 'strongly disagree' reveal small marginal differences. Those who are strongly disagree and disagree are about 55.6 percent and those who are agree and strongly agree are about 40.3 percent. It is perceived that RM remains as an important medium of exchange among the members of *Orang Asli* community even though CC could have a potential to be used instead. Intuitively, the CC could probably be used to support the national currency as it might not be able to play its main roles in some situations. This results obviously supported by the score of 66.1 percent responses that agree that CC should support the objectives of national currency. In fact, 55.7 percent of responses are agree that CC has a great potential in the future to boost economic activities of the local community especially during recession when national currency (RM) is unable to play its main role.

Table 10. The Potential of Complementary Currency

Statement of Potential of Complementary Currency	Strongly Disagree (SDA)	Disagree (DA)	Agree (A)	Strongly Agree (SA)
1. The complementary currency can be an alternative for the national currency	5 (4.0)	64 (51.6)	48 (38.7)	2 (1.6)
2. The complementary currency should support the objectives of national currency	1 (0.8)	35 (28.2)	77 (62.1)	5 (4.0)
3. There are great potential of the complementary currency in the future to boost economic activities of any local community especially during recession.	0 (0)	50 (40.3)	57 (46.0)	12 (9.7)

Notes: Percentage in parentheses. The missing value is existed in some cases.

4.4 Logistic regression

In the survey conducted, responses on the question whether 'CC can be an alternative currency to RM' are converted into binary numbers '0' and '1' in order to develop logistic regression. The responses of Strong Agree and Agree are computed as '1' and the responses of Strongly Disagree and Disagree are computed as '0'. The set of predictors includes in the model are categorical variables of 'familiar to the concept of CC', 'heard about CC in Malaysia' and 'heard about CC in other countries'. These categorical variables have 4 items ie. Strongly Disagree (SD), Disagree (D), Agree (A) and Strongly Agree (SA).

From Table 11, the regression results show that the significant predictors are 'Education at primary level', 'Income level between RM1000 to RM1500' and those 'Agree heard about CC in other countries'. All significant independent variables are categorical variables in which the coefficients or betas are the difference between the existed category as compared to the base category. The positive value of beta (β) for Education at primary level, that is 1.365, indicates that an increase in independent variable score as compared to the base category (no education) will result in an increased probability of the case recording a score of 1 in the dependent variable (ie. the use of CC as an alternative to RM). Similarly, the coefficient of Agree_heard about CC in other countries' is positive and significant (2.232) which also indicates that an increase in the variable score as compared to the base category, ie. 'Strongly disagree_heard about CC in other countries', will contribute to an increased probability of the case recording a score of 1 in the dependent variable. On the other hand, the negative beta value for variable 'Income RM1501 to RM2000' indicates that an increase in the independent variable score as compare to the base category of 'Income less than RM500' will result in a decreased probability of the case recording 1 in the dependent variable or use the CC as the alternative to RM. Other variables did not contribute significantly to the model.

Table 11. Logistic regression

Independent variables	Binary logistic	
	Dependent variable: CC CAN BE AN ALTERNATIVE CURRENCY TO RM	
	(1)	
	B	Exp(B)
Constant	-1.78 (1.25)	0.168
Gender	0.55 (0.58)	1.737
Age	0.005 (0.021)	1.005
Education_none		
Education_primary	1.365* (0.702)	3.916
Education_secondary	-0.252 (0.734)	0.777
Education_diploma/pre-U	0.473 (1.197)	1.605
Marital status_single		
Marital status_married	0.352 (0.724)	1.422
Marital status_divorce	20.538 (40192)	8E+008
Income_<RM500		
Income_up to RM1000	-0.607 (0.598)	0.545
Income_up to RM1500	-1.866**	0.155

	(0.924)	
<i>Income_up to RM2000</i>	0.016 (1.462)	1.016
<i>Income_>RM2000</i>	-22.604 (26095)	0.000
<i>Familiar concept CC_SD</i>		
<i>Familiar concept CC_D</i>	0.706 (1.287)	2.026
<i>Familiar concept CC_A</i>	0.650 (1.451)	1.916
<i>Familiar concept CC_SA</i>	23.184 (19687)	1E+010
<i>Heard CC in M'sia_SD</i>		
<i>Heard CC in M'sia_D</i>	-0.987 (1.25)	0.373
<i>Heard CC in M'sia_A</i>	0.284 (1.403)	1.329
<i>Heard CC in other cntry_SD</i>		
<i>Heard CC in other cntry_D</i>	0.456 (1.018)	1.578
<i>Heard CC in other cntry_A</i>	2.232* (1.262)	9.321
<i>Heard CC in other cntry_SA</i>	-41.995 (30866)	0.000
<i>% correct classification</i>		74.5
<i>Omnibus Chi-square stat.</i>		33.961 (sig = 0.019)
<i>Hosmer & Lemeshow Test stat.</i>		3.668 (sig.= 0.886)
<i>Cox & Snell R-square</i>		0.274
<i>Nagelkerke R-square</i>		0.369

Note: Standard errors are in parentheses; ***statistically significant at the 1% level; **5% level; *10% level.

The odd ratio (Exp (β)) for variable 'Education at primary level' is 3.196. This could be interpreted that the odds of a person answering yes, that CC can be an alternative to RM, is 3.916 times higher for someone who have education at primary level as compared to those who have no education, all other factors being equal. The odds of a person answering yes, that CC can be an alternative to RM, is 9.321 times higher for someone who reports they agree that they heard about CC in other countries as compared to those who are strongly disagree that they heard about CC in other countries, all other factors being equal. The odd ratio of 0.155 for the variable of 'Income RM1501 to RM2000' indicates that for those who has income at this category as compared to the base category of income less than RM500, the odds of him/her reporting he/she will choose CC as an alternative currency decreases by a factor of 0.155, all other factors being equal. Overall, the probability that the Orang Asli community opts for the CC as an alternative currency is higher among those with better level of education but not necessarily highly educated. A similar probability is also higher for those who have knowledge about CC in other countries. However, the probability to opt for the CC is lesser among higher income respondents.

In the classification table, with no predictor, the overall percent of correctly classified cases is 58.5%, In this case, SPSS classified (guessed) that all cases would not agree to use CC. When a set of predictor variables is entered, it improves the accuracy of this prediction to 74.5%. Since the Omnibus tests of Model coefficients in Block 1 are significant (p-value < 0.05), the model with set of variables used as predictors is better than the SPSS's original guess shown in Block 0, which assumed that everyone would disagree of using CC. The Chi-square value in this test is 33.961 with 19 degree of freedom. The Hosmer & Lemeshow test also supports the 'goodness of fit' of the model with the Chi-square statistics of 3.668 and significance level of 0.886. The pseudo R-square statistics (Cox & Snell R-square and Nagelkerke R-square) between 27% and 37% of the variability in the dependent variable explained by the set of predictor variables.

5. CONCLUSION

The present study attempts to proposed few CC models to *Orang Asli* community in Malaysia and to assess the probability of acceptance on the proposed models of the CC among them. To achieve the objectives, survey questions are designed and primary data are collected through a survey on a sample of *Orang Asli* population. The descriptive analysis and some statistical tests are conducted in this analysis. Besides, the logistic model is developed to analyze the probability that respondents are willing to opt for the complementary currency as an

alternative currency. The study proposes several mechanism to be used as complementary currency for *Orang Asli* community. From the list of the mechanisms proposed, only 'agricultural products' is chosen as suitable complementary currency among the respondents. Two main characteristics are identified if CC is chosen to be as a medium of exchange. Those are 'accepted by all members in the local community' and 'convenience' (easily carried). The respondents also stated that they will only use CC if it is benefiting the respondents and family members and increasing economic activities in the local community. Interestingly, 55.6 percent of respondents strongly disagree and disagree that CC can be as an alternative of national currency (RM). It is perceived that RM remains as an important medium of exchange among the members of *Orang Asli* community even though CC could have a potential to be used instead. Intuitively, the CC could probably be used to support the national currency as it might not be able to play its main roles. The logistic regression results show that the probability that the *Orang Asli* community opts for the CC as an alternative currency is higher among those with better level of education but not necessarily highly educated as well as for those who have knowledge about CC in other countries. However, the probability to opt for the CC is lesser among higher income respondents. Overall, the findings reveal the fact that CC is having great potential to improve the standard of living among the *Orang Asli* community in this country by using the mechanism that they are familiar with such as any agricultural product. However, the introduction of this new medium of exchange might require the acceptance of all members of community. This owes more explanation and information on the advantages of CC to this group of local community which could be well done through regular workshops and seminars from government bodies and NGOs.

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