

Assessment of alliance-wide rewards experience of alliance-wide loyalty programmes offered by alliance carriers.

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Abstract:

This study evaluates the key factors which explain the customers' experiences of the rewards offered by airlines belonging to an alliance-wide loyalty programme. The study suggests that, after experiencing alliance-wide rewards, customers determine the alliance-wide loyalty programme's rewards experience by holistically synthesising their perceptions and experiences associated with the services (rewards) offered by alliance-wide loyalty programme members. The results of the study demonstrate that alliance-wide loyalty programmes' rewards experience are perceived by four dimensions: perceived co-harmonisation, perceived co-expediency, perceived co-availability, and perceived co-accessibility.

Key words: Airline loyalty programme, Alliance-wide loyalty programme, coalition-based loyalty programme, Airline rewards programme, Rewards Experience.

1.Introduction:

Value creation has not only become an omnipresent and a pooled development instrument (Tournois & Teller, 2004) it has also become a value enhancing and network driven mechanism to facilitate value for customers (Vargo & Lusch, 2010). The importance of value creation and co-creation is evident in several businesses: especially in marketing spheres. In the airline industry, airline alliance carriers (alliance members) have employed collaborative systems (de Boer,2018) to acquire (Wang,2014) and to retain customers (Tsantoulis & Palmer, 2008) by developing alliance-wide loyalty programmes. The expansion and increasing momentum of alliance-wide loyalty programmes can be seen as a direct result of customer relationships mechanisms employed by the alliance carriers (de Boer,2018) when they nurture their value creation dynamics.

Alliance-brand loyalty programmes (Yoo et al, 2018) have not only helped businesses dovetail their service capabilities (O'brien & Jones, 1995), they have also permitted the alliance partners to develop avenues for enhancing their points (Wang et al, 2018) and rewards management systems (Washburn et al, 2004). In the case of airline alliances, each alliance carrier is not only managing their own brand, their customer relationships, and their loyalty programme independently (Weber,2005), but they are also engaged in the holistic development of their alliance-wide loyalty programme as well. These engagements have facilitated them to create joint marketing mechanism to pool and integrate their capacity inputs of each alliance carrier's loyalty programme. In addition, they have also co-ordinated their intricate structures, services capabilities, and service capacities (onboard and offboard) to facilitate seamless service provision and service delivery to their customers (de Boer, 2018). In light of these observations, few studies have addressed the customers' prominent benefits of airline alliance-based loyalty programmes (Goh & Uncles,2003; Weber,2005) and non-airline partnership schemes alike (Yoo et al, 2018). However, the leveraging effects of the alliance-wide loyalty programme redemption schemes on customers' rewards experiences per se remains blurry to date.

Whilst rewards provision of alliance-wide loyalty programme is one part of the equation, how customers perceive and experience the rewards is the other. In other words, although alliance-wide loyalty programmes offer several rewards provision schemes, how customers perceive the experiences of the rewards provision and delivery can hugely effect the alliance-wide loyalty programme's omni-partner engagements, their scale and scopes. Therefore, the principal orientation and objective of this study is to develop an understanding of the customers' experiences of the airline alliance-wide loyalty programme rewards provision and rewards delivery elements. Based on the abovementioned observations, the main research objective of this study is to comprehend what sort of factors could determine customers' rewards experiences of an alliance wide loyalty programme. In other words, after experiencing alliance-wide rewards and redemption services, what sort of factors could determine the customers' perceived rewards experience of the alliance-wide loyalty programme.

2.Theoretical framework:

2.1. Loyalty Programme:

Loyalty programmes are considered as derivatives of customer relationship management (Smith, 2010), relationship marketing (Meyer-Waarden, 2008) and loyalty marketing (Dowling & Uncles, 1997). By building on the concepts of loyalty marketing, loyalty programme was described as a system of collective marketing activities undertaken by businesses for building customised and

personalised relations with customers to seek loyalty (Meyer-Waarden, 2008). Furthermore, by developing value-added relations and interactions from loyalty marketing practices, loyalty programme assists in customer identification, maintenance, and revenue enhancement (Capizzi et al, 2003). The key components of the loyalty programme rely on points accrual, cash-in rewards, and rewards based on customer tier level systems (Kopalle et al, 2012). The point accrual systems help customers earn the points from their purchases. Depending on the points accrued, customers can seek the rewards either through cash-in reward schemes or through tier level-based rewards set by the loyalty programme. However, these tier level-based rewards depend on the points accrued by customers and classified into levels such as Diamond, Platinum, Gold, and Silver (Kopalle et al, 2012). Based on these underlying components and service capacities, businesses use their un-utilised inventory to create rewards for their customers (Ng et al, 1999). Therefore, rewards schemes not only boost customer's purchase frequency and spending, but it drives brand engagement process (Kumar & Shah, 2004). All these practices which were once a part of stand-alone loyalty programme have now evolved to create coalition-based loyalty programmes for bridging customer relationships of all the partners involved in the network (Capizzi et al, 2005).

From a stand-alone loyalty programme perspective, studies suggest that service experiences (Keh & Lee, 2006), utilitarian, hedonic and symbolic factors (Mimouni-Chaabane & Volle, 2010) the quality and services offered for the price paid (Bolton et al, 2000), can be instrumental forces for driving the benefits of the loyalty programme. It has also been observed that customers determine value of loyalty programme based on cash value, aspirational value, relevance (Yi & Joen, 2003) redemption options and its usage expediency (O'Brien & Jones, 1995). Furthermore, Bridson et al, (2008) suggested that customer satisfaction of loyalty programme was driven by an amalgamation of hard (coupons, vouchers & discounts) and soft attributes (customers' trust and their sense of meaning & belonging). Therefore, loyalty programme offers not only value for their customers (Demoulin & Zidda, 2008), but it influences their satisfaction (Bridson et al, 2008, Vesel & Zabkar, 2009) and their behavioural intentions (Meyer-Waarden, 2008) as well.

Unlike stand-alone loyalty programme, coalition-based loyalty programmes are made of partners who endorse collaborative agreements for sharing their data ownerships, operating costs, marketing, branding and sales expenses (Capizzi et al, 2003). Furthermore, it permits the partners to share their points accrual and redemption schemes through joint agreements (Capizzi & Ferguson, 2005). Regardless of flights flown (either the marketing airline or the operating airline), passengers can decide on which alliance carrier's they wish to earn and accumulate their miles. These deals facilitate customers to pool their miles and tier levels swiftly and seek rewards (cash-in and tier based privileged service rewards) promptly on elevated scales than stand-alone loyalty programmes. In addition to these benefits, based on the tier-level status attributed by each alliance carrier, alliance-wide loyalty programmes have also attributed alliance-wide common tier-level schemes. Each alliance carrier's tier status is identified and categorised under one common alliance-wide tier-based system. This sort of approach helps all the alliance carriers and their respective customers to understand their respective position of the tier-level status under the common tier policy set by alliance-wide loyalty programme (de Boer, 2018; Wittmer et al, 2020). Therefore, unlike stand-alone loyalty programmes, alliance carriers' alliance-wide loyalty programme offers higher scopes (alliance wide tier-based rewards), broader privileged services (access of airport lounges & other priority services) and enhanced benefits (complementary reward tickets for international destinations) to their respective customers on a wider level. This is made possible due to the increased and pooled inventories offered by the alliance carriers

which function at a global level (de Boer,2018). Despite these obvious advantages, little is known on how customers make their evaluative judgements, after experiencing alliance-wide rewards and redemption services. In other words, how customers experience rewards in coalition-based loyalty programme remains murky. Therefore, the assessment of customers' perceived rewards experience of the alliance-wide loyalty programmes' services remains unexplored to date and hence the aim of this study.

3.Research Methodology:

The initial phase of this study was subjected to an exploratory study, which was carried out through semi-structured interviews in English with participants who had previously used alliance carrier's loyalty programmes. The guidelines offered by Gerbing & Anderson (1998) facilitated the conduction of the study. As suggested by Dagger et al (2007) the extracts from qualitative data analysis were used to develop a questionnaire. Eventually the survey was launched online in English in three sections. The first two sections sought demographic and geographic data. Whilst the other was developed by using 5-point Likert scale to seek participants perceptions of alliance-wide loyalty programmes' rewards and redemption practices. The principal objective of this design was to obtain measures for different dimensions of rewards experience to be identified during the quantitative data analysis. 296 respondents participated in the survey, which consists of participants from both genders, who had travelled and used alliance-wide loyalty programmes. Respondents were from North America, Europe, Asia, Australia, New Zealand, Middle East, and North Africa and had travelled with three main airline alliances on varying flight durations and frequency. A detailed information of the sample is illustrated in Table 1.

Insert Table 1 about here

4. Data Analysis method:

The preliminary part of the data analysis was conducted through Exploratory factor analysis (EFA) and Confirmatory factor analysis (CFA) by using IBM SPSS 26 & AMOS 26 software. Half of the randomised data was used for conducting EFA and the other half for CFA. EFA is not constrained by existing theories, and it facilitates in uncovering the unknown relations between the items under study. It also facilitates the study to explore and undertake preliminary validation of factorial structures Therefore, EFA is tested before conducting CFA to observe how factors could develop naturally in the study's settings. To complete the EFA process, Principal axis factoring with Promax rotation ($Kappa=4$) facilitated the study in obtaining four dimensions derived from 21 items, which had factor loadings >0.4 . Employing communalities >0.5 and Eigenvalues >1 as thresholds, the 4-factor model provided a total variance of 68.80% with an overall reliability of 0.93, surpassing the Cronbach Alpha threshold value of 0.70 (Hair et al, 2006). The first factor was termed as Perceived co-harmonisation provided 43.09% variance and Cronbach alpha value of 0.928. The second factor was termed as Perceived co-expediency provided 10.26% variance and Cronbach alpha value of 0.858. The third factor was termed as Perceived co-availability provided 8.93% variance and Cronbach alpha value of 0.862. Lastly, the fourth factor was termed as Perceived co-accessibility provided 6.51% variance and Cronbach alpha value of 0.790. To confirm sampling suitability, Bartlett's test value was assessed which provided significant results, suggesting a correlated sample. KMO test for sampling adequacy of 0.870 was obtained. The result surpassed the threshold value of 0.60 (Tabachnick & Fidell, 2001)

suggesting that the data could be pooled into lesser set of underlying factors. These results are illustrated in Table 2.

Insert Table 2 about here

After conducting the EFA, all the variables were put together to conduct the Confirmatory Factor Analysis (CFA), which permits the study to assess the convergent validity and discriminant validity of the factors which emerged from the assessments of EFA. In the first phase the internal consistency reliability or composite reliability of the measures are considered essential. It is suggested that the threshold value for reliability should be 0.70 or higher (Nunnally, 1978). Furthermore, McDonald Construct Reliability (MaxR(H)) threshold value >0.7 (Hancock & Muller, 2001), AVE $>$ Maximum Shared Variance (MSV) criterion (Hair et al, 2010) were also opted as guidelines. Concerning the validity, measure of convergent validity of each construct is considered highly valuable. Convergent validity is the degree to which the construct converges to describe the respective variance of its corresponding items. The Average Variance Extracted (AVE) is utilised as a metric to assess the convergent validity of each construct. The threshold value of AVE should 0.50 or higher, which suggests that the construct explains at least 50% of the variance of the items in a construct (Hair et al, 2019). AVE is assessed by square loading of each indicator of the construct and by computing the mean value. In addition, discriminant validity is also employed in the of validity assessments. Discriminant validity can be described as the degree to which a construct is distinct from other constructs employed in the model (Hair et al, 2012; Hair et al, 2019). To understand discriminant validity, the square root of the AVE value for each construct should be greater than inter-construct correlation values of other constructs (Fornell & Larcker, 1981).

Furthermore, HTMT (Heterostraint-Monostrait Ratio) assessment is also conducted to assess Discriminant validity, wherein the threshold value >0.85 is considered acceptable (Hensler et al, 2015). The last phase involved the confirmation of Model fit to support the steadiness of the assessment. To assess the model fit, chi square/df threshold value <5 (Schumacker & Lomax, 2004), Comparative Fit Index (CFI) value >0.9 (Hu & Bentler, 1999), Tucker-Lewis Index (TLI) value >0.9 (Bentler & Bonnet, 1980; Byrne, 1994) Normed Fit Index (NFI) value >0.9 (Bollen, 1989), Incremental Fit Index (IFI) value >0.9 (Bollen, 1989), Standardised Root Mean Square residual (SRMR), the threshold value <0.08 (Hu & Bentler, 1999), Parsimonious Normed Fit Index (PNFI) value >0.5 (Meyers et al, 2005) and Parsimonious Comparative Fit Index (PCFI) value >0.5 (Meyers et al, 2005) are considered as threshold values. In terms Root Mean Square error (RMSEA), threshold value <0.08 is considered suitable. However, it is also suggested that values between 0.05 and 0.10 could also be considered as a fair or moderate fit (MacCallum et al, 1996).

Results and discussions:

The procedures for assessing the measurement model followed the directions and thresholds to check the values of composite reliability, convergent validity, discriminant validity and the Model fit assessments. The results of this study suggests that the composite reliability (CR) values of all the constructs are >0.70 threshold value. In terms of discriminant validity, the results suggest that all the constructs distinct from other constructs and are statistically significant ($p < 0.001$). Furthermore, all the values of AVE $>$ MSV, and HTMT results surpassed the threshold

values of 0.85. The values of composite reliability, convergent validity, discriminant validity, HTMT assessment, CFA results are illustrated in the Table 3, Table 4 and Table 5 respectively.

Insert Table 3 about here

Insert Table 4 about here

Insert Table 5 about here

In terms of results of the Model fit, the modelled results suggest a reasonable fit with chi square/df=2.301, $p < .05$, CFI=0.9; IFI=0.90, PNFI=0.60, PCFI=0.65, Standardised Root Mean Square residual (SRMR) =0.72, TLI=0.86; NFI=.84, and Root Mean Square error (RMSEA)= 0.90. The results of the Model fit are illustrated in Table 6. Results of this study suggest the assessments employed meet the desired thresholds. Except for TLI & NFI the results are closer to the threshold value and hence approximately meet the desired thresholds.

Insert Table 6 about here

The research model suggests that the perceived rewards experience of alliance-wide loyalty programme is determined by perceived co-harmonisation, perceived co-expediency, perceived co-availability, and perceived co-accessibility dimensions respectively. The detailed information about the items (including factor loadings) and the respective factors are described in Table 7, mentioned in Appendix A. Perceived co-harmonisation in this context refers to customers feeling of experiencing harmonised rewards services (cash-in and tier-based rewards) offered by the alliance carriers through their joint and collective services. Perceived co-expediency refers to customers' ability to seek rewards services (cash-in and tier-based) with ease through the alliance carriers' collectively and joint efforts to deliver rewards expediently. Perceived co-availability refers to the customers' feeling of seeking rewards (cash-in and tier-based rewards) more promptly due to extended opportunities and disposability of rewards offered through joint and collective efforts of alliance carriers to enhance their inventory of rewards service. Perceived co-accessibility refers to the customers' feeling of seeking access to rewards and redemption schemes effortlessly due to the joint and collective systems set in place by the alliance carriers. All the above-mentioned dimensions begin with the prefix "co". The prefix "co" is employed herewith to demonstrate the alliance carriers' ability to work together cohesively and share their responsibilities to facilitate co-creating mechanisms for alliance-wide loyalty programme services. These co-creating mechanisms can be described through co-harmonisation, co-expediency, co-availability, and co-accessibility services, which emerged from this study. Therefore, this study suggests that the four dimensions, which emerged from this research can be considered as joint mechanisms drivers for alliance-wide loyalty programme's rewards management and its eventual development. To summarise, the results of this study provide a fresh perspective on how to consider and evaluate alliance-wide loyalty programmes' rewards services holistically through joint mechanisms aspects (dimensions) which emerged from this study. Therefore, these observations provide some insights beyond our previous understanding of the deployment of unpooled engagements widely seen in stand-alone loyalty programmes, as against the joint mechanisms and omni-partner engagements observed in alliance-wide loyalty programmes.

Conclusion:

This study has explored and tried to understand the underlying factors which drive the customer's evaluative judgements of the rewards offered by alliance carriers. We also examined on how the joint mechanisms of services facilitate the alliance-wide loyalty programmes to create mutually beneficial rewards services for their customers. From a theoretical perspective, this study suggests that the rewards experience of an alliance-wide loyalty programme framework could be assessed by the four factors and their underlying items. The four underlying factors which emerged from this study can be employed as an instrumental tool to assess customers holistic experiences of the rewards offered by alliance-wide loyalty programmes. From a managerial perspective, this study not only helps us understand how alliance wide loyalty management can assess customers rewards experiences, it can also assist the alliance carriers to comprehend what sort of rewards could be relevant for their customers and how these rewards can be delivered consistently in a harmonised and holistic framework. Furthermore, this study can give an understanding on how alliance carriers could design new provisions of rewards and its delivery with their existing or new alliance partners from not only omnichannel mechanisms but also omni-partner mechanisms. These mechanisms can assist the alliance carriers to enhance the overall services and rewards experiences, which could facilitate the alliance carriers to further develop the scopes of the alliance wide loyalty programme. Overall, this study has provided some insights about the way customers perceive and holistically synthesise the different forms of rewards provision associated in varying tier structures and services of the alliance-wide loyalty programme. However, there are still some unexplored areas. This study does not focus on the rewards perceived by customers concerning the non-airline alliance partners of the alliance-wide loyalty programme, such as credit cards, hotels, etc. Moving forward, this study can offer a gateway for future research to understand how customers perceive and experience the rewards of peripheral actors (non-airline partners, such as Hotels, Car rentals etc).

References:

- Bentler, Peter M., and Bonett. Douglas G (1980), "Significance tests and goodness of fit in the analysis of covariance structures." *Psychological bulletin*, Vol. 88, No. 3, p. 588 - 606.
- Bollen, Kenneth A. (1989), "A new incremental fit index for general structural equation models," *Sociological methods & research*, Vol.17, No. 3, p.303-316.
- Bolton, R. N., Kannan, P. K.; Bramlett, M. D. (2000). "Implications of loyalty program membership and service experiences for customer retention and value," *Journal of the academy of marketing science*, Vol 28, No 1, p. 95-108.
- Bridson, K., Evans, J; Hickman, M. (2008). "Assessing the relationship between loyalty program attributes, store satisfaction and store loyalty," *Journal of Retailing and consumer Services*, Vol 15, No.. 5, p. 364-374.
- Byrne, Barbara M. (1998) *Structural equation modelling with LISREL, PRELIS, and SIMPLIS: Basic Concepts, Applications, and Programming*, Mahwah: Lawrence Erlbaum Associates Publishers, 426 p.

Capizzi, Mike.; Ferguson, Rick.; Cuthbertson, Richard (2003). "Loyalty trends for the 21st century," *Journal of Targeting, Measurement and Analysis for Marketing*, Vol. 12, p. 199-212.

Capizzi, Michael T.; Ferguson, Rick (2005). "Loyalty trends for the twenty-first century." *Journal of Consumer Marketing*, Vol. 22, No 2, p. 72- 80.

Dagger, T.S.; Sweeney, J.C.; Johnson, L.W 2007. A hierarchical model of health service quality: scale development and investigation of an integrated model. *Journal of service research*, 10(2), pp.123-142.

de Boer, Evert R (2018). "The Different Types of Frequent Flyer Programs," in E.R. de Boer (Ed), *Strategy in Airline Loyalty: Frequent Flyer Programs*, Palgrave Macmillan, p. 29-57.

Demoulin, N. T.; Zidda, P. (2008). "On the impact of loyalty cards on store loyalty: Does the customers' satisfaction with the reward scheme matter?,". *Journal of Retailing and Consumer Services*, Vol 15, No. 5, p.386-398.

Dowling, Graeme R.; Uncles, Mark (1997). "Do Customer Loyalty Programs Really Work?," *Sloan Management Review*, Vol. 38, No 4, p. 71-82.

Fornell, Claes.; Larcker, David F (1981). "Structural equation models with Unobservable variables and measurement error," *Journal of Marketing Research*, Vol. 18, No 1, p. 39-50.

Gerbing, David W., and Anderson, James C (1988) "An updated paradigm for scale development incorporating unidimensionality and its assessment." *Journal of marketing research*, Vol. 25, No. 2, p. 186-192.

Goh, Kevin.; Uncles, Mark (2003). "The benefits of airline global alliances: an empirical assessment of the perceptions of business travellers," *Transportation Research Part A: Policy and Practice*, Vol. 37, No 6, p. 479-497.

Hair, Joseph F.; Risher, Jeffrey J.; Sarstedt, Marko.; Ringle, Christian M (2019). "When to use and how to report the results of PLS-SEM," *European Business Review*, Vol. 31, No 1, p. 2-24.

Hair, Joseph F.; Sarstedt, Marko.; Pieper, Torsten M.; Ringle, Christian M (2012). "The use of partial least squares structural equation modelling in strategic management research: A review of past practices and recommendations for future applications," *Long range planning*, Vol. 45, No 5-6, p. 320-340.

Hair, J.; Anderson, R.; Tatham, R.; Black, W (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Prentice-Hall, 730 p.

Hair, Joseph.F.; Black, William.C.; Babin, Barry J.; Anderson, Rolph E (2010) *Multivariate Data Analysis: A global Perspective* (7th ed.), Harlow: Prentice Hall, 816 p.

Hancock, Gregory R.; Mueller, Ralph O. (2011) "The reliability paradox in assessing structural relations within covariance structure models." *Educational and Psychological Measurement*, Vol. 71, No. 2, p. 306-324

Henseler, Jörg, Christian M. Ringle, and Marko Sarstedt. (2015) "A new criterion for assessing discriminant validity in variance-based structural equation modeling." *Journal of the academy of marketing science* 43.1: 115-135.

Hu, Li-tze, and Bentler, Peter M (1999). "Cutoff criteria for fit indexes in Covariance structure analysis: Conventional criteria versus new alternatives," *Structural equation modelling: A multidisciplinary journal*, Vol 6, No. 1, p. 1-55.

Kopalle, Praveen K.; Sun, Yacheng.; Neslin, Scott A.; Sun, Baohong.; Swaminathan, Vanitha (2012). "The joint sales impact of frequency reward and customer tier components of loyalty programs," *Marketing Science*, Vol. 31, No 2, p. 216-235.

Kumar, Vikas.; Shah, Denish (2004). "Building and sustaining profitable customer loyalty for the 21st century," *Journal of Retailing*, Vol. 80, No 4, p. 317-329.

MacCallum, Robert C.; Browne, Michael W.; Sugawara, Hazuki M (1996). "Power analysis and determination of sample size for covariance structure modeling," *Psychological methods*, Vol 1, No. 2, p. 130 - 149.

Mimouni-Chaabane, A. ; Volle, P. (2010). "Perceived benefits of loyalty programs: Scale development and implications for relational strategies,". *Journal of Business Research*, Vol 63, No. 1, p. 32-37.

Meyer-Waarden, Lars (2008). "The influence of loyalty programme membership on customer purchase behaviour," *European Journal of Marketing*, Vol. 42, No 1/2, p. 87-114

Meyers, Lawrence S.; Gamst, Glenn.; Guarino, A.J. (2006). *Applied multivariate research: Design and interpretation*, Thousand Oaks: Sage Publication, 760 p.

Ng, Irene C L.; Wirtz, Jochen.; Lee Khai Sheang (1999). "The strategic role of unused service capacity." *International Journal of Service Industry Management*, Vol. 10, No 2, p. 211– 244.

Nunnally, Jum C (1978). "An Overview of Psychological Measurement," in B. Wolman (Ed), *Clinical Diagnosis of Mental Disorders: A Handbook*, Springer, p. 97-146.

O'Brien, Louise.; Jones, Charles (1995). "Do rewards really create loyalty?." *Harvard Business Review*, Vol. 73, No 3, p. 75-82.

Schumacker, Randall E.; Lomax, Richard G (2004), *A beginner's guide to structural equation modelling*, Mahwah: Lawrence Erlbaum Associates Publishers, 304 p.

Smith, Alan (2010). "Retail-based loyalty card programmes and CRM concepts: An empirical study," *International Journal of Innovation and Learning*, Vol. 7. No 3, p. 303-330.

Tabachnick, Barbara G.; Fidell, Linda S. (2007), *Using Multivariate Statistics* (5th ed.). New York: Allyn and Bacon, 966 p.

Tournois, Nadine.; Teller, Robert (2004). "From the creation of financial value to the management of substantial value in French banks," in M. Fischer (Ed), *Handbuch Wertmanagement in Banken und Versicherungen*, Gabler Verlag, p. 65-84.

Tsantoulis, Michael.; Palmer, Adrian (2008). "Quality convergence in airline co-brand alliances," *Managing Service Quality, An International Journal*, Vol. 18, No 1, p. 34-64

Uncles, Mark D.; Dowling, Grahame, R.; Hammond, Kathy (2003). "Customer loyalty and customer loyalty programs," *Journal of Consumer Marketing*, Vol. 20, No 4, p.294-316.

Vargo, Stephen L.; Lusch, Robert F (2010). "From repeat patronage to value co-creation in service ecosystems: a transcending conceptualization of relationship," *Journal of Business Market Management*, Vol. 4, No 4, p.169-179.

Vesel, P. ; Zabkar, V. (2009). "Managing customer loyalty through the mediating role of satisfaction in the DIY retail loyalty program,". *Journal of Retailing and Consumer Services*, Vol 16, No. 5, p. 396-406.

Wang, Stephen W (2014), "Do global airline alliances influence the passenger's purchase decision?," *Journal of Air Transport Management*, Vol. 37 (2014), p. 53-59.

Washburn, Judith H.; Till, Brian D.; Priluck, Randi (2004). "Brand alliance and customer-based brand-equity effects," *Psychology & Marketing*, Vol.21, No 7, p. 487-508.

Weber, Karin (2005). "Travellers' perceptions of airline alliance benefits and performance," *Journal of Travel Research*, Vol. 43, No 3, p. 257-265.

Wittmer, Andreas.; Hinnen, Gieri.; Linden, Erik (2020). "Airline passengers," in L. Budd and S Ison (Eds), *Air Transport Management: An International Perspective*, Routledge, p. 165-178.

Yoo, Myongjee.; Berezan, Ori.; Krishen, Anjala S (2018). "Do members want the bells and whistles? Understanding the effect of direct and partner benefits in hotel loyalty programs," *Journal of Travel & Tourism Marketing*, Vol. 35, No 8, p.1058-1070.

Appendix A:

Table 1. Description of the sample

		Number	% of tot
Gender:	Men	195	65.9
	Women	101	34.1
Age:	30 years or less	182	61.4
	30 – 50 years	68	23.0
	More than 50 years	46	15.6
Profession:	Organisational Employees	99	33.4
	Entrepreneurs & Others	197	66.6
Region:	Europe	52	17.5
	North America	131	44.2
	Asia	56	19.0
	Australia/New Zealand	18	06.1
	MENA*	15	05.0
	Others	24	08.2
Flights Flown:	1-4 times/year	182	61.5
	5-9 times/year	28	09.5
	10 times or more/year	86	29.0
Airline Alliance flown:	Star Alliance	117	39.5
	Sky Team	81	27.4
	One World	98	33.1
Class Travelled:	First & Business	96	32.4
	Premium Economy	164	55.4
	Economy	36	12.2
Reason for travel:	Work & MICE**	82	27.7
	Tourism/VFM***	214	72.3
Flight Duration:	3 – 5 hours	42	14.2
	5 – 7 hours	42	14.2
	More than 7 hours	212	71.6
Total		296	100.0

*Middle East & North Africa; ** Meetings, Incentives, Conferences and Exhibitions; *** Visiting Friends & Family

Table 2. Factor loadings & related assessments for EF

Items	1	2	3	4
PHA 1	.866			
PHA 2	.853			
PHA 3	.814			
PHA 4	.794			
PHA 5	.764			
PHA 6	.679			
PHA 7	.681			
PHA 8	.776			
PCE 1		.806		
PCE 2		.734		
PCE 3		.690		
PCE 4		.674		
PCE 5		.516		
PAL 1			.698	
PAL 2			.556	
PAL 3			.905	
PAL 4			.746	
PAB 1				.587
PAB 2				.446
PAB 3				.630
PAB 4				.613
Cronbach's Alpha	0.928	0.858	0.862	0.790
Eigen Value	9.050	2.155	1.877	1.368
Percent of Variance	43.096	10.260	8.939	6.513

Total Cronbach's Alpha 0.933

Percent of total Variance explained: 68.808

Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .870

Bartlett's Test of Sphericity approximate Chi-Square: 2127.449

Bartlett's Test of Sphericity df: 210.

Bartlett's Test of Sphericity sig. value: .000

Table 3. Composite Reliability and Convergent Validity.

Latent variables (number of items)	CR	AVE	MSV	MaxR(H)
PHA: Perceived Co-Harmonisation (8)	0.956	0.732	0.309	0.962
PCE: Perceived Co-Expediency (5)	0.884	0.605	0.517	0.886
PAL: Perceived Co-Availability (4)	0.872	0.631	0.517	0.876
PAB: Perceived Co-Accessibility (4)	0.908	0.718	0.427	0.950

Minimum threshold acceptability

> .7*

> .5**

AVE > MSV***

> .7****

Composite Reliability (CR); Average Variance Extracted (AVE); Maximum Shared Variance (MSV); McDonald Construct Reliability (MaxR(H))
* (Nunnally, 1978); ** (Fornell & Larcker, 1981) *** (Hair et al, 2010) **** Hancock & Muller (2001)

Table 4. Discriminant validity.

	PCE	PAL	PAB	PHA
PCE	.778			
PAL	.719***	.795		
PAB	.654***	.520***	.847	
PHA	.556***	.516***	.508***	.856

*** = Correlation significance $p < 0.001$

* (Fornell & Larcker, 1981)

Table 5. HTMT Assessment.

	PCE	PAL	PAB	PHA
PCE	-			
PAL	.803	-		
PAB	.837	.746	-	
PHA	.626	.618	.568	-

Minimum threshold acceptability < 0.85*

*(Hensler et al, 2015)

Table 6. Results of Confirmatory Factor Analysis.

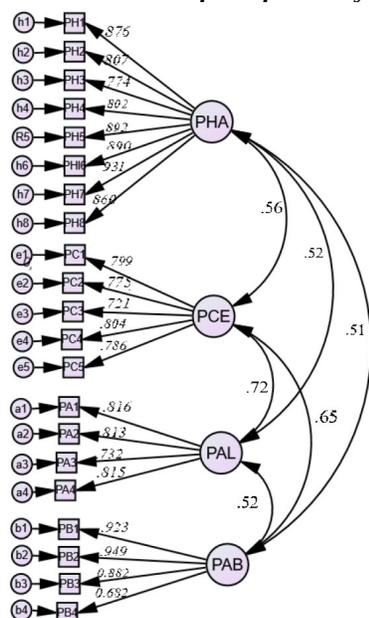


Table 7: Recapitulation of constructs & their respective items with standardised regression weights (5-point Likert scales: 1 Strongly disagree to 5 Strongly agree)

PHA: Perceived Co-Harmonisation of the alliance-wide loyalty programme

- PHA-1: I feel that the airport lounges' service quality is similar to other alliance carrier's airport lounges (.876)
- PHA-2: I feel that the airport lounges offer similar types of services (Food and beverages, Wi-Fi, etc) (.807)
- PHA-3: I feel that the airport lounges offer similar types of facilities (Lounge layout, seating, washroom, etc.) (.774)
- PHA-4: I feel that the alliance carriers provide services with very similar quality standards. (.802)
- PHA-5: I feel that the alliance carriers offer very similar frequent flyer programme tier-based structures (.892)
- PHA-6: I feel that the alliance carriers offer very similar frequent flyer programme tier-based benefits (.890)
- PHA-7: The alliance carriers are very well coordinated to avoid any issues for registering & maintaining users FFP information (.931)
- PHA-8: I feel that the alliance carriers are highly reliable and efficient to fix the passenger's problem (.860)

PCE: Perceived Co-Expediency of the alliance-wide loyalty programme

- PCE-1: This alliance offers accessible services to redeem their airmiles and seek an award ticket from their respective airline carrier (.799)
- PCE-2: This alliance offers useful services to redeem their airmiles and seek an award ticket through a partner alliance carrier. (.775)
- PCE-3: This alliance offers expedient services to reserve an award ticket much better than independent non-alliance carriers. (.721)
- PCE-4: This alliance offers services to avail an award ticket more easily due to their integrated networks & reciprocal services. (.804)
- PCE-5: This alliance offers useful services to get an award ticket easily from the alliance network's increased seat capacities. (.786)

PAL: Perceived Co-Availability of the alliance-wide loyalty programme

- PAL-1: I feel that the passengers have more chances to seek an award ticket more conveniently than non-alliance carriers. (.816)
- PAL-2: The passengers have more chances to seek an award ticket conveniently from one among the many alliance's destinations. (.813)
- PAL-3: I feel that the passengers of this alliance can seek benefits of the increased capacities of the entire airline alliance networks (.732)
- PAL-4: I feel that the passengers of this alliance can seek benefits of the increased destinations of the entire airline alliance network. (.815)

PAB: Perceived Co-Accessibility of the alliance-wide loyalty programme

- PCB-1: I feel that the alliance carriers offer very convenient ways to register air miles on alliance wide basis (.923)
- PCB-2: I feel that the alliance carriers offer very convenient ways to redeem air miles on alliance wide basis (.949)
- PCB-3: I feel that the alliance carriers provide opportunities to accumulate airmiles swiftly through other alliance carriers (0.882)
- PCB-4: I feel that the alliance carriers provide convenient services to register airmiles on other alliance carriers. (0.682)