



## Influence of Co-production on Customer Loyalty in Financial Services: The Role of Communication, Client Expertise, Commitment and Internal Justices

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### ABSTRACT

Customer loyalty has become a significant element for the success of organizations around the globe, and this aspect demands new literature and policymakers' emphasis. Hence, the present article investigates the impact of interactional justice, communication, affective commitment and client expertise on the co-production and co-production role on customer loyalty related to financial services of the Islamic banks in Malaysia. The study also examines the mediating role of co-production among predictors and customer loyalty and also investigates the moderating role of trust among co-production and customer loyalty. The study collected data from the customers of Islamic banks in Malaysia using survey questionnaires. The study also checks the data reliability and relationships among constructs using smart-PLS. The outcomes indicated that interactional justice, communication, affective commitment and client expertise have a positive association with co-production, and co-production has a positive impact on customer loyalty related to the financial services of the Islamic banks in Malaysia. The outcomes also exposed that the trust also positively moderated among co-production and customer loyalty related to financial services of the Islamic banks in Malaysia. The study guides the policymakers in making policies related to achieve customer loyalty using effective communication, client expertise, trust, commitment and internal justice.



## **Introduction**

Customer attitudinal loyalty is an umbrella term covering cognitive loyalty and effective loyalty. The term conveys that customers have positive thinking and good emotions for some particular brand regarding product features and service quality. In attitudinal loyalty, customers retain with the company instead of switching to competitors for making the next transactions to meet their needs (Agyeiwaah, Dayour, & Zhou, 2022). Attitudinal loyalty comes into existence as a byproduct when a customer has a positive experience with the company. Customers are a critical part of a business to survive and run. Attitudinal loyalty enables a business to keep on running and flourish over a long period. Attitudinal loyalty determines fast growth for the company by adding to company revenues, reducing risks, eliminating costs, and improving company goodwill (Ferm & Thaichon, 2021). A company's functioning depends on the customers. The customers' attitudinal loyalty develops persistence at the sales level to an extent. But it raises the total sales by creating new customers when these customers become a piece of mouth for the company to share good experiences with the products and services. Attitudinal loyalty reduces the total costs by eliminating the costs of attracting and catching new consumers to make purchases from the company. So, there is a consistent rise in company revenues. When customers remain loyal to the company, they share the market trends and consumers' novel requirements with the hope of innovation that proves to be a competitive advantage and enables the company to be successful in the market (Choi & Kim, 2020).

Co-production is a business strategy to improve and maximize production and a step to attain customer attitudinal loyalty. Under this strategy, customers provide support, cooperation, involvement, and engagement in processes, and the products and services are designed, commissioned and delivered (Saini & Singh, 2020). Customers' engagement may be in the form of sharing ideas, informing the market trends, disclosing the deficiency in production politely, solving issues, and taking physical participation to some extent. In the case of co-production, company representatives and customers have a chance to come closer to and understand one another. So, it refines the relations among them and develops attitudinal loyalty (Dandis & Al Haj Eid, 2022). Some client-associated factors like communication, client expertise, affective commitment, and interactional justice are something to do in co-production success. Communication is the transfer of information from company representatives to customers. Communication with the customers may be through speaking, writing, or using some other medium. Transparent, honest, and courteous communication may attract and enable customers to participate in production procedures (Vigolo, Bonfanti, & Brunetti, 2019). Client expertise is the clients' capabilities through which they consider, judge, and evaluate the products and service quality and firm performance and can take part in its functioning. So, client expertise encourages co-production (Lindenmeier, Seemann, Potluka, & von Schnurbein, 2021). Customer commitment refers to customers' cognitive or emotional attachment to the company. And in affective commitment, customers find their personal interests, values, and priorities in company products and services and, therefore, are emotionally attached and feel it better to be a part of an organization. This leads to co-production effectiveness (Steiner, Farmer, Yates, Moran, & Carlisle, 2023). Interactional justice is the just and equitable behavior of company representatives toward customers while interacting with them, advertising or marketing their products and services. Such behavior saves a soft corner in customers' hearts and catches their attention to participate in production (Smith, 2021).

The study focus is on co-production and attitudinal loyalty in Islamic financial institutions like banks in Malaysia. In Malaysia, Islamic banking refers to a banking system that is regulated by Islamic Law, known as Shariah law. These banks are governed by the principles like profit and loss sharing among parties, accountability, fairness, and transactions that include only underlying

business activities or assets. There are a total of 16 banks in Malaysia offering Islamic financial products and services in the country (Ishak & Asni, 2020). Besides these banking firms, there are some non-bank intermediaries who offer syariah-based products and services. The well-growing Islamic banks in Malaysia are Affin Islamic Bank Berhad, Al Rajhi Banking and Investment Corporation (Malaysia) Bhd, Islamic Bank Berhad, Asian Finance Bank Berhad, Bank Islam, and Bank Negara Malaysia etc. (Ab Hamid, Maulan, & Wan Jusoh, 2022) Malaysia provides the third largest Islamic banking market as compared to the world banking system, and here Islamic financing contributes about 41% to local banking-system loans as per 2022 statistics (Mohd Thas Thaker, Mohd Thas Thaker, Khaliq, Allah Pitchay, & Iqbal Hussain, 2022).

The Islamic banking system is growing in Malaysia, but its growth rate is slow, especially after the economy getting decelerating and covid-19 pandemic disaster impacts. Clients are the fundamental part of an Islamic banking institution, just like others (Saad & Alshehri, 2021). So, there is a need to focus on clients for the growth of the Islamic banking system. The current study meets this need as it emphasizes client co-production and attitudinal loyalty. The current study doesn't present a simple replication of previous literature, but it has contributed much to the literature. First, in previous literature, most of the authors have simply talked about the firm-client interaction role in co-production instead of highlighting the individual role of interactional justice, communication, affective commitment and client expertise in this regard. The present article, which examines with detail the influence of interactional justice, communication, affective commitment and client expertise in co-production, has novelty in literature. Second, the role of co-production in attitudinal loyalty has been a subject of discussion among researchers. But the mediating role of co-production between interactional justice, communication, affective commitment and client expertise and attitudinal loyalty. The current study analyzing the mediating role of co-production between interactional justice, communication, affective commitment and client expertise and attitudinal loyalty adds to the literature. Third, there is also a literary contribution in that authors have recorded the moderating role of trust in the relationship between co-production and attitudinal loyalty. The current article presenting a guideline for co-production and attitudinal loyalty for Islamic financial institutions like banks in Malaysia makes a great addition to the literature.

The current article is composed of the following parts: the second part is the review of existing literature regarding the relationship among communication, client expertise, effective commitment, interactional justice, trust, co-production, and attitudinal loyalty. In the third part, there is a short account explaining research methodologies. In the fourth part, the authors come to have exact research findings. In the very next part, the research findings are confirmed in the light of similar studies, and there is an end to study implications, conclusion, and limitations.

## **Literature Review**

Customers who show attitudinal loyalty have an internal attachment to a company and are willing to buy again and again from the same brand, being impressed by previous good experiences. Customers with attitudinal loyalty are a source of sustainable revenues, protection against financial disaster, contribute to company image, and attract more customers (Nyagadza, Mazuruse, Muposhi, & Chigora, 2022). In client co-production, customers are invited to participate in the internal production programs, and customers themselves show an inclination to devote themselves to value-adding production. Co-production assures the company's immediate response to market shifts and consumers' innovative demands contributing to attitudinal loyalty (Mainardes, Rosa, & Nossa, 2020). The factors like interactional justice, communication, affective commitment and client expertise, and trust add to co-production and clients' attitudinal loyalty. Several authors have discussed the relationship between interactional justice, communication, affective commitment and

client expertise, trust with co-production and attitudinal loyalty. The relationships among interactional justice, communication, affective commitment and client expertise, trust, co-production, and attitudinal loyalty are explained below in the light of previous literature.

The company representatives communicate with the customers through documents, pamphlets, social media apps, or direct conversations. The way they communicate and the content of communication both affect the customers' views and behaviors of the company. If company influencers succeed in their work while communicating with the customers, they may attain customers' cooperation and promote co-production, a sign of company success (Jackson, 2021). Tuurnas (2020), examines the relationship between public sector communication and co-production. The authors analyzed a case of a co-production program in a neighborhood community development in Tampere, Finland. The case analysis serves as an instance of the significant contribution that communication makes to the administration and planning of co-production initiatives. The study implies that the companies which have effective public communication may leave impacts on their perception and set their tendencies. This results in customers' willing engagement in company production processes. Similarly, van Gestel, Kuiper, and Hendrikx (2019), also checks the role of communication in co-production. The authors have the view that an effective communication flow between firm personnel and customers leads to customers' involvement in production processes letting them show good results. So, it can be said:

**H1:** Communication has a positive relation with co-production.

Client expertise encompasses the cognitive abilities, senses, and physical skills of customers through which they may evaluate the quality of the goods and services they receive from different brands and have experience. If clients are experts in recognizing the features of the product and service quality, they may give the best suggestions for improvement in production processes and have an inclination for this (O'Connor, Zhang, Trout, & Snibsoer, 2021). Zieba and Kończyński (2020), wrote about the role of client expertise in co-production. The research was conducted on the basis of a thorough examination of literature devoted to client co-production in knowledge-intensive business services (KIBS) firms and the case studies' investigation. The authors adopted a theoretical and experimental approach to investigate the factor affecting client co-production in KIBS firms from the perspective of both customers and service renders. The study states that client expertise enables them to have fruitful engagement in product design as per market requirements. Yang and Northcott (2019), also claims that the presence of clients with quality expertise contributes to client co-production for the firms. That is why it can be hypothesized:

**H2:** Client expertise has a positive relation with co-production.

Some clients, being impressed and stirred by the service quality received from marketing personnel who come in contact with them for advertising or selling their products, develop an emotional attachment to the firm. They get committed to doing something in favor of the firm and get their production to continue. Thus, effective client commitment towards the firm may contribute to firm co-production (Fusco, Marsilio, & Guglielmetti, 2020). In an article on environmental quality, Jiang et al. (2023) checks the relationship between affective commitment, customer environmentally friendly co-production and customer environmental satisfaction. The data were collected by distributing self-developed questionnaires to urban residents in China. The study posits that if the customers have social consciousness, cognitive and emotional attachment out of the positive prior experience, and want to have quality products in satisfaction of their needs, they cooperate with the firm. As a result, customers are involved in co-production. A study

was also conducted by Fleming et al. (2023), claiming that affective commitment from clients to firms enables firms to implement co-production programs effectively. So,

**H3:** Affective commitment has a positive relation with co-production.

Applying traditional ways or some modern communication channels, firms try to approach consumers and interact with them (Gale, Brown, & Sidhu, 2019). The customers of the company must hold the same worth, and if the company representatives adopt just behavior to interact with the customers, they may influence the potential customers and make them act according to their production and marketing planning. There is resultant effective co-production management (Lember, Brandsen, & Tönurist, 2019). A study was conducted by Jemine, Puyou, and Bouvet (2023), to examine the association between technological innovation, interactional justice, and co-production. Specific small accounting firms were selected as the research sample, which is 20 in number and surveys were conducted with small accounting firms' managers to collect data through interviews. The study claims that the representatives reflect the company onto customers by applying interactional justice; they build good relations with customers and offer them to participate in company production practices. Therefore,

**H4:** Interactional justice has a positive relation with co-production.

The execution of policy of co-production practices lets the customers look into the company's tendencies, its functioning, and the quality of its products. They may judge whether the company is working under the assigned legal boundaries and in favor of social welfare. Finding satisfaction, customers develop attitudinal loyalty (Reinhoudt-den Boer, Huijsman, & van Wijngaarden, 2021). Behnam, Sato, and Baker (2021), analyzed the relationship between co-production and attitudinal loyalty. A cross-sectional research design was decided, and using a convenience sampling technique, the members of 15 fitness clubs in Urmia, Iran, were visited. Data were obtained through questionnaires, where 559 questionnaires were considered valid. The CFA, descriptive statistics, correlations, Fornell & Larcker, criteria 1981, Harman's single factor test, and structural equation modelling were applied to analyze the quantitative data in hand and extract results. According to research findings, co-production gets the company representatives and customers close and understand one another. In this situation, customers think positively and have attitudinal loyalty. Hence,

**H5:** Co-production has a positive relation with attitudinal loyalty.

If the firms recognize the influence of their communication with customers and take care of the nature and effectiveness of customer communication, they make the customers know about firm strategies related to product quality (Hilali, Hovelaque, & Giard, 2023). The increase in knowledge stirs the customer's thinking, and they may share the best production ideas in response to consumers' requirements in the market. The effectiveness of co-production brings remarkable and contributing changes in product value. Finding a consistent improvement in product value, customers develop behavior to be linked and continue to purchase the same products. So, co-production is a linkage between communication and attitudinal loyalty (Mortensen, Brix, & Krogstrup, 2021). Janjua and Ramay (2020), investigate the association between communication, co-production, service quality, relationship quality, and attitudinal loyalty in an educational context. The empirical data were collected from 818 students associated with private and public universities located in major Pakistani cities. The multidimensional model was tested through SEM with the help of AMOS 24. The results indicate that the effectiveness of customer communication

let them have an influence on company strategies and administration for production. This influence satisfies customers' nerves leading to attitudinal loyalty. So,

**H6:** Co-production is a mediator between communication and attitudinal loyalty.

Customers who have an interest in the specific field and the relevant professional skills are in a position to understand the production mechanism, recognize deficiencies in products, determine the reason for deficiency, and have solutions. So, the clients with expertise can take part in production processes, and the assurance of needs fulfilment creates attitudinal loyalty in customers (Rodríguez-Rad & del Rio-Vázquez, 2023). Landi and Russo (2022), made an investigation of the association among client expertise, co-production and attitudinal loyalty. The study highlighted the availability of customers with expertise who not only have knowledge of the market trends, customers' needs, and competitors' products but have the ability to show efforts for improvement in production. Their own contribution to product quality gives them a sense of satisfaction and creates attitudinal loyalty. Thus,

**H7:** Co-production is a mediator between client expertise and attitudinal loyalty.

Under affective commitment, the customers are overall satisfied with the company's services and offerings. It denotes a bond between customers and the company on account of their increasing trust and reliability of the company itself. The affective commitment of customers creates space in the company for co-production (Rodríguez-Rad & del Rio-Vázquez, 2023). Grantham, McNeil, Taylor, and Leak (2021), argues that when customers observe the value of the company and have an influence on its functioning, they show attitudinal loyalty. Yalley (2022), integrate the relationship among effective commitment, co-production, and attitudinal loyalty among students in the education field. Online systematized questionnaires were used to acquire data for effective commitment, co-production, and attitudinal loyalty, and 317 students in Ghana universities were the participants. SEM techniques were used to analyze the data for research findings. These findings reveal that affective commitment is a step to implement co-production, and the rise in co-production adds to customers' attitudinal loyalty. Therefore,

**H8:** Co-production mediates between effective commitment and attitudinal loyalty.

Interactional justice shows affectionate and responsible firm behavior to its clients and the public. The customers who experience such behavior from the firm get ready to devote their skills and efforts to the best interest of the firm. In this situation, it is possible to implement co-production, which further improves the relationship between the firm and its customers, adding to attitudinal loyalty (Opata, Xiao, Nusenu, Tetteh, & Asante Boadi, 2021). In a Research article, Prentice, Dominique-Ferreira, Ferreira, and Wang (2022) examines the association among interactional justice, co-production, and attitudinal loyalty. The research was performed at geriatric hotels rendering services in different regions of Portugal. When data were being collected, one of the researchers was from senior executives of these hotels. These hotels were private to provide accommodation to senior citizens for the short- or long-term. An exploratory factor analysis technique was applied for the study. The study explains that co-production becomes effective when interactional justice is being practiced, and it increases attitudinal loyalty. Hence, it is suggested:

**H9:** Co-production is a mediator between interactional justice and attitudinal loyalty.

When firm personnel show trust in clients and allow them to share the information they collect from the market or acquire from personal experience, they may have efficient engagement in the

production of goods and services. If the rate of co-production is getting higher, the clients' involvement leads to attitudinal loyalty. Hence, trust strengthens the relationship between co-production and attitudinal loyalty (Zhou, Li, & Meng, 2022). Hendler, LaTour, and Cotte (2022), identifies the relationship between temporal orientation, trust, co-production, and attitudinal loyalty. The qualitative research approach was applied. Under the ZMET interviewing technique, three visits were made to customers at a Las Vegas mega resort hotel and casino. Interviews with one-on-one participants were performed. The responses were audiotaped, and images were also saved. Questionnaires were also filled out by customers. The three authors, trained in ZMET, analyzed the collected data and presented results. The research findings denote that in case firms have clients' trust, they may work efficiently on co-production, which further arouses attitudinal loyalty in customers.

**H10:** Trust is a significant moderator between co-production and attitudinal loyalty.

## **Research Methods**

The article investigates the impact of interactional justice, communication, affective commitment and client expertise on the co-production and co-production role on customer loyalty and also examines the mediating role of co-production among predictors and customer loyalty and also investigates the moderating role of trust among co-production and customer loyalty related to financial services of the Islamic banks in Malaysia. The study collected data from the customers of Islamic banks in Malaysia using survey questionnaires. The variables are measured by items, and these items are taken from past literature such as communication is measured with four items extracted from Bultman and Svarstad (2000), client expertise is measured with two items taken from Bell, Auh, and Smalley (2005), affective commitment is measured with six items adopted from Vandenberghe, Bentein, and Stinglhamber (2004), internal justice is measured with four items extracted from Maxham III and Netemeyer (2003), co-production is measured with three items taken from Cheung and To (2011), trust is measured with six items adopted from Suh and Han (2003), and attitudinal loyalty is measured with four items extracted from Ferm and Thaichon (2021). These variables with measurements are given in Table 1.

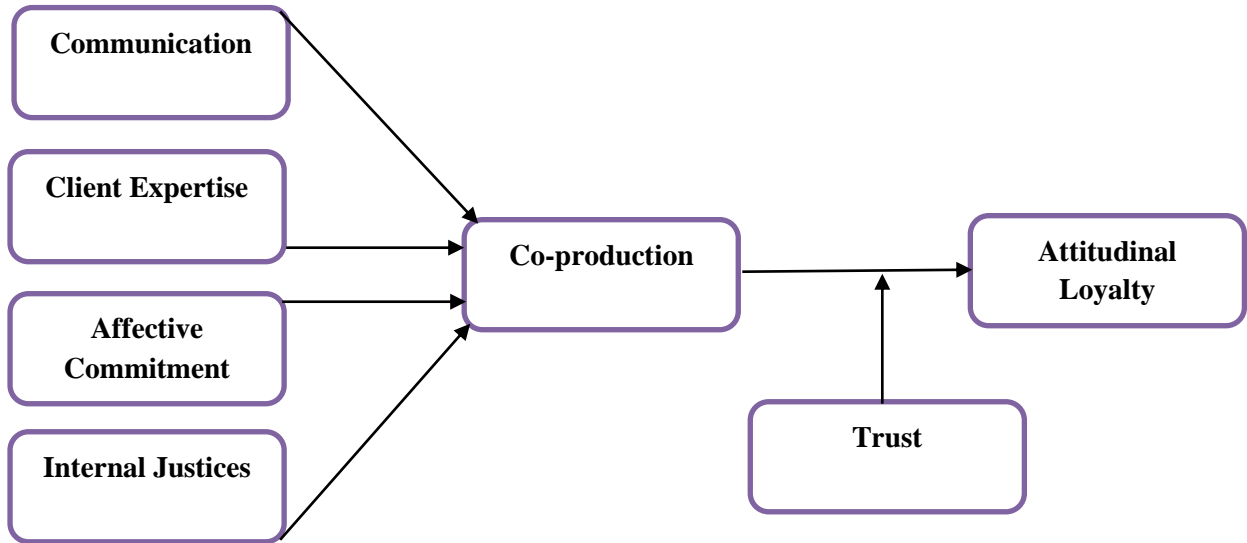
**Table 1:** Items and Variables

<b>Items</b>	<b>Statements</b>	<b>Sources</b>
<b>Communication</b>		
CM1	Encourages expression of problems.	(Bultman & Svarstad, 2000)
CM2	Asks about concerns.	
CM3	Listens to your concerns.	
CM4	Helped solve problems.	
<b>Client Expertise</b>		
CEX1	I possess good knowledge of financial planning services and products.	(Bell et al., 2005)
CEX2	I am quite experienced in this area.	
<b>Affective Commitment</b>		
ACM1	This organization has a great deal of personal meaning for me.	(Vandenberghe et al., 2004)
ACM2	I feel a sense of “belonging” to my organization.	
ACM3	I am proud to belong to this organization.	
ACM4	I feel emotionally attached to my organization.	

ACM5	I feel as if my organizations' problems are my own.	
ACM6	I feel like a “part of the family” at my organization.	
<b>Internal Justices</b>		
IJ1	In dealing with my problem, (firm) personnel courteously treated me.	(Maxham III & Netemeyer, 2003)
IJ2	During their effort to fix my problem, the firm’s employee(s) showed a real interest in fairness.	
IJ3	Firms’ employee(s) worked as hard as possible for me during the recovery effort.	
IJ4	Firms’ employees (s) were honest and ethical in dealing with me while fixing my problem.	
<b>Co-production</b>		
CP1	I am willing to put in great effort to help the bank provide service to me.	(Cheung & To, 2011)
CP2	I help new bank employees when they seem uncertain.	
CP3	I am willing to tell new customers who do not know where to queue.	
<b>Trust</b>		
TR1	This bank is trustworthy.	(Suh & Han, 2003)
TR2	I trust in the benefits of the decision of this firm.	
TR3	This firm keeps its promises and commitments.	
TR4	This firm keeps customers’ best interests in mind.	
TR5	This firm would do the job right even if not monitored.	
TR6	I trust this firm.	
<b>Attitudinal Loyalty</b>		
ALY1	I feel emotionally attached to my bank.	(Ferm & Thaichon, 2021)
ALY2	I have a sense of belonging to my bank.	
ALY3	I feel like part of a family as a customer of my bank.	
ALY4	My relationship with my bank has a great deal of personal meaning.	

The study selected the customers of Islamic banks in Malaysia as respondents. The respondents were selected using simple random sampling. The surveys were sent to the customers by personal visits to the Islamic banks in Malaysia. The researchers distributed around 465 surveys, but after a few weeks, only 291 valid responses were received. These valid responses have approximately 62.58 per cent response rate. Moreover, the study also checks the data reliability and relationships among constructs using smart-PLS. It is an effective tool that deals with primary data (Hair, Gabriel, & Patel, 2014). It provides the best outcomes even if the researchers used complex frameworks or large data sets (Hair Jr, Howard, & Nitzl, 2020). In addition, the study used four predictors named communication (CM), client expertise (CEX), affective commitment (ACM) and internal justice (IJ). Moreover, the study also used one mediating variable named co-production (CP), one moderating variable named trust (TR) and one dependent variable named customer loyalty (CLY). These variables are presented in Figure 1.





**Figure 1:** Theoretical framework

### Research Findings

The study checks the items' correlation using Alpha, and outcomes exposed that values are more than 0.70. It is also examined using composite reliability (CR) and also exposed that the values are larger than 0.70. In addition, it is also checked using factor loadings, and values are bigger than 0.50. Finally, it was also examined using average variance extracted (AVE), and exposed values are higher than 0.50. These values exposed a high correlation among items. These results are given in Table 2.

**Table 2:** Convergent Validity

Constructs	Items	Loadings	Alpha	CR	AVE
Affective Commitment	ACM1	0.812	0.838	0.887	0.614
	ACM2	0.719			
	ACM4	0.851			
	ACM5	0.863			
	ACM6	0.649			
	Attitudinal Loyalty	ALY1			
Attitudinal Loyalty	ALY3	0.852			
	ALY4	0.867			
Client Expertise	CEX1	0.854	0.741	0.883	0.791
	CEX2	0.923			
Communication	CM1	0.858	0.883	0.919	0.740
	CM2	0.921			
	CM3	0.890			
	CM4	0.764			
Co-production	CP1	0.628	0.703	0.836	0.635
	CP2	0.852			
	CP3	0.885			
Internal Justice	IJ2	0.922	0.785	0.873	0.699
	IJ3	0.852			

Trust	IJ4	0.722			
	TR1	0.855	0.911	0.931	0.694
	TR2	0.798			
	TR3	0.894			
	TR4	0.693			
	TR5	0.850			
	TR6	0.891			

The study also checks the variables' correlation using Fornell Larcker, and the first value in the column is larger than the rest of the values in the same column. These values exposed a low correlation among variables. These results are given in Table 3.

**Table 3:** Fornell Larcker

	ACM	ALY	CEX	CM	CP	IJ	TR
ACM	0.783						
ALY	0.531	0.865					
CEX	0.696	0.437	0.889				
CM	0.427	0.608	0.362	0.860			
CP	0.702	0.493	0.571	0.508	0.797		
IJ	0.693	0.478	0.438	0.471	0.753	0.836	
TR	0.413	0.311	0.201	0.291	0.459	0.648	0.833

The study also checks the variables' correlation using cross-loadings, and the values that exposed the linkages with the variable itself are larger than the values that exposed the linkages with other variables. These values exposed a low correlation among variables. These results are given in Table 4.

**Table 4:** Cross-loadings

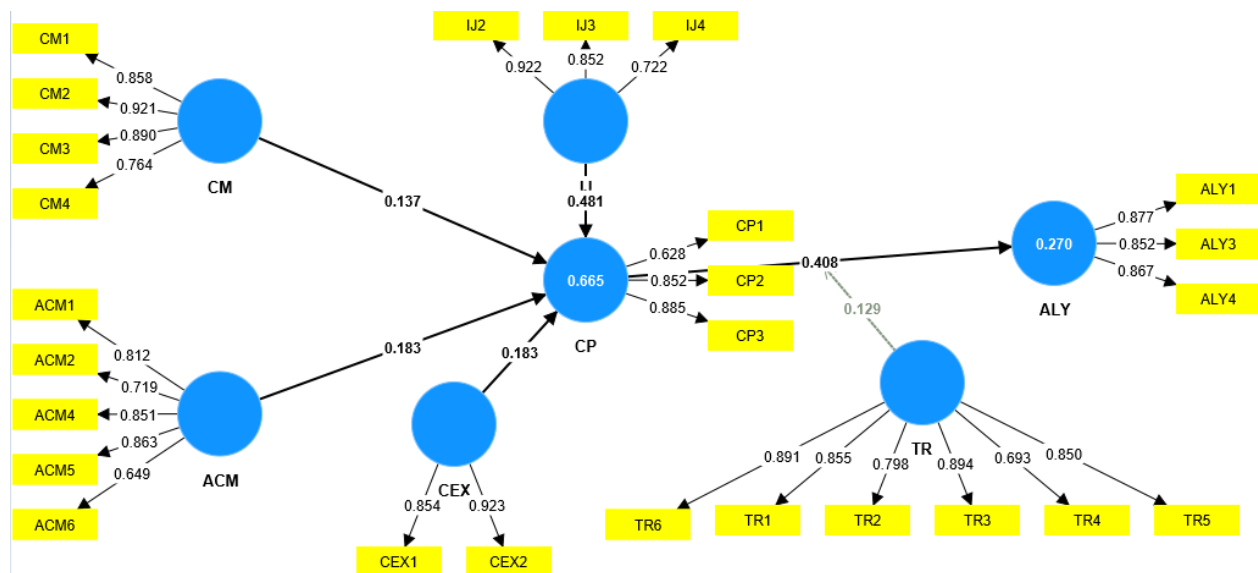
	ACM	ALY	CEX	CM	CP	IJ	TR
ACM1	<b>0.812</b>	0.363	0.637	0.356	0.504	0.396	-0.193
ACM2	<b>0.719</b>	0.477	0.456	0.310	0.610	0.658	-0.419
ACM4	<b>0.851</b>	0.428	0.622	0.357	0.534	0.381	-0.196
ACM5	<b>0.863</b>	0.372	0.636	0.361	0.522	0.440	-0.252
ACM6	<b>0.649</b>	0.407	0.372	0.277	0.542	0.782	-0.516
ALY1	0.449	<b>0.877</b>	0.382	0.572	0.461	0.481	-0.300
ALY3	0.468	<b>0.852</b>	0.395	0.516	0.403	0.375	-0.288
ALY4	0.463	<b>0.867</b>	0.357	0.486	0.411	0.376	-0.215
CEX1	0.541	0.365	<b>0.854</b>	0.343	0.424	0.338	-0.201
CEX2	0.682	0.410	<b>0.923</b>	0.310	0.574	0.432	-0.163
CM1	0.301	0.505	0.227	<b>0.858</b>	0.380	0.348	-0.204
CM2	0.361	0.507	0.330	<b>0.921</b>	0.474	0.475	-0.304
CM3	0.475	0.675	0.415	<b>0.890</b>	0.537	0.488	-0.325
CM4	0.287	0.328	0.222	<b>0.764</b>	0.295	0.241	-0.101
CP1	0.423	0.387	0.428	0.379	<b>0.628</b>	0.327	-0.279

CP2	0.588	0.391	0.504	0.414	<b>0.852</b>	0.642	-0.392
CP3	0.643	0.411	0.443	0.427	<b>0.885</b>	0.764	-0.410
IJ2	0.657	0.448	0.429	0.434	0.738	<b>0.922</b>	-0.551
IJ3	0.532	0.426	0.359	0.502	0.663	<b>0.852</b>	-0.526
IJ4	0.557	0.302	0.295	0.188	0.436	<b>0.722</b>	-0.587
TR1	-0.314	-0.225	-0.159	-0.191	-0.287	-0.455	<b>0.855</b>
TR2	-0.358	-0.294	-0.084	-0.280	-0.430	-0.665	<b>0.798</b>
TR3	-0.334	-0.247	-0.202	-0.198	-0.354	-0.499	<b>0.894</b>
TR4	-0.387	-0.287	-0.212	-0.350	-0.517	-0.601	<b>0.693</b>
TR5	-0.306	-0.224	-0.159	-0.189	-0.281	-0.452	<b>0.850</b>
TR6	-0.327	-0.244	-0.183	-0.194	-0.351	-0.486	<b>0.891</b>

The study also checks the variables' correlation using Heterotrait Monotrait (HTMT) ratio, and the values are less than 0.90. These values exposed a low correlation among variables. These results are given in Table 5.

**Table 5:** Heterotrait Monotrait Ratio

	ACM	ALY	CEX	CM	CP	IJ	TR
ACM							
ALY	0.630						
CEX	0.873	0.553					
CM	0.482	0.680	0.433				
CP	0.898	0.651	0.786	0.628			
IJ	0.844	0.576	0.558	0.513	0.453		
TR	0.456	0.348	0.249	0.292	0.553	0.769	



**Figure 2:** Measurement Model Assessment

The outcomes indicated that interactional justice, communication, affective commitment and client expertise have a positive association with co-production and accept H1, H2, H3 and H4. The outcomes also exposed that the co-production has a positive impact on customer loyalty related to

the financial services of the Islamic banks in Malaysia and accept H5. The outcomes also exposed that the trust also positively moderated among co-production and customer loyalty related to financial services of the Islamic banks in Malaysia and accept H10. These linkages are given in Table 6.

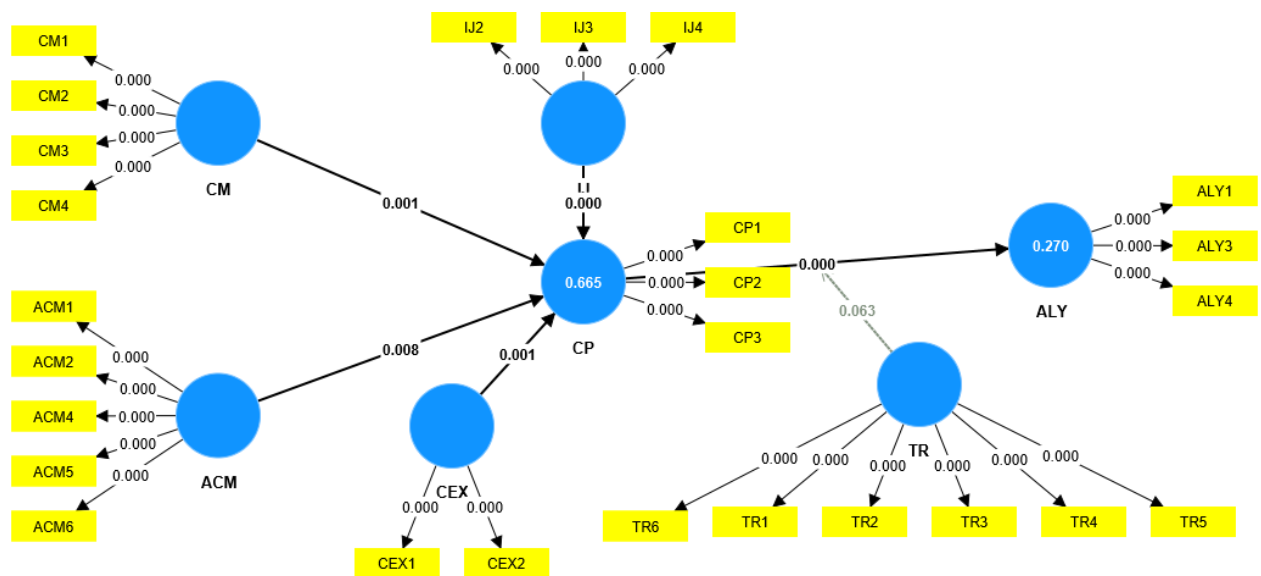
**Table 6:** Direct Path Analysis

Relationships	Beta	Standard deviation	T statistics	P values
ACM -> CP	0.183	0.068	2.677	0.008
CEX -> CP	0.183	0.053	3.452	0.001
CM -> CP	0.137	0.041	3.313	0.001
CP -> ALY	0.408	0.070	5.868	0.000
IJ -> CP	0.481	0.048	9.970	0.000
TR x CP -> ALY	0.129	0.069	1.862	0.063

The outcomes indicated that co-production significantly mediates among interactional justice, communication, affective commitment and client expertise and customer loyalty related to the financial services of the Islamic banks in Malaysia and accept H6, H7, H8 and H9. These linkages are given in Table 7.

**Table 7:** Indirect Path Analysis

Relationships	Beta	Standard deviation	T statistics	P values
ACM -> CP -> ALY	0.075	0.033	2.243	0.025
CEX -> CP -> ALY	0.075	0.024	3.139	0.002
CM -> CP -> ALY	0.056	0.022	2.557	0.011
IJ -> CP -> ALY	0.196	0.035	5.537	0.000



**Figure 3:** Structural Model Assessment

### Discussions

The study results showed that communication has a positive relation with co-production. These results are in line with Addis, Miniero, and Ricotta (2021), which examines the communication role in co-production. The study implies that any kind of communication with the clients

influences their knowledge and behavior. If the communication is transparent, responsible, courteous, and effective, clients may have thorough, correct, and favorable knowledge about the banking institution and its dealings. With the acquired knowledge and satisfaction, the clients take an interest in banking functioning and are willing to participate in co-production. The study results showed that client expertise has a positive relation with co-production. These results agree with Mugica and Berne (2020), where there is a discussion about the client's expertise role in co-production. Suppose clients have expertise like knowledge, cognitive abilities, quick sensation, physical skills etc. In that case, they may consider the goodness hidden in bank policies, the need for the bank services for the community, the quality of the bank products, the benefits which a particular firm provides to its clients, and firm customer services. So, they are able to make judgements and have involvement in product or service production.

The study results showed that effective commitment has a positive relation with co-production. These results match with Wulandari and Nasution (2019), which implies that some clients have an emotional attachment or mental connectivity with some particular institution dealing in financial services; the clients' attachment or connectivity may be because of prior experience with the same institution or listening to the bank's good image among the public. The effective clients' commitment to the institution catches management's attention and motivates them to provide assistance for further services or product production. Thus, effective client commitment contributes to co-production. The study results showed that interactional justice has a positive relation with co-production. These results are supported by Xiao, Opata, Tetteh, John Narh, and Hinson (2020), which is about the interaction justice among customers and its impact on co-production effectiveness. The study posits that a company's representatives' interaction with the clients shows its behavior and intentions towards customers. If the company representatives show justice while providing financial services to customers or interacting with them in any way, they may influence clients and can have co-production.

The study results showed that co-production has a positive relation with attitudinal loyalty. These results are supported by Behnam et al. (2021), which claims that if somehow, a financial institution or any other firm may participation in and contribution to the production of services or products, they may develop a friendly link with the clients, achieve their support, and influence their thinking further. In such circumstances, it is easy to attain attitudinal loyalty from clients. The study results showed that co-production is a mediator between communication and attitudinal loyalty. These results are in line with Sesan et al. (2021), which states that if the firms dealing with financial instruments and services focus on the nature and effectiveness of communication with the public whom they have come to interact with for advertising or selling their products, they may have their cooperation while designing their products. As a result, there is effective co-production and during co-production, clients have better opportunities to observe and influence the quality of financial services and products. Their satisfaction leads them to develop attitudinal loyalty.

The study results showed that co-production is a mediator between client expertise and attitudinal loyalty. These results are in line with Casidy, Leckie, Nyadzayo, and Johnson (2022), which examines the co-production role in the attitudinal loyalty of clients to the institution. The study posits that if the firms not only advertise and sell their financial services to clients but keep an eye on the clients' expertise, highlight and polish this expertise by talking to the clients, they may have client participation in production processes. Effective co-production improves company response to market trends and demands and makes the clients develop attitudinal loyalty. Thus, co-production is a link between client expertise and attitudinal loyalty. The study results showed that co-production mediates between effective commitment and attitudinal loyalty. These results are in line with Teixeira, Rêgo, and Silva Filho (2020), which implies that company representatives have

the policy to interact with the customers having an effective commitment to the firm and its products. They develop an inclination in customers to share knowledge and render their services voluntarily to improve production processes and add value to the products and services according to market requirements. The resultant company responsiveness adds to clients' attitudinal loyalty. That is why co-production develops a link between effective commitment and attitudinal loyalty.

The study results showed that co-production is a mediator between interactional justice and attitudinal loyalty. These results align with Lindenmeier et al. (2021), which explains the relationship among interactional justice, co-production, and attitudinal loyalty. According to research findings, co-production serves as a link between interactional justice and attitudinal loyalty. The firms where personnel in the marketing or sales department show justice to customers during interaction can act on co-production and effective results from product quality. The rise in the quality of products satisfies the customers' desires and helps achieve customers' attitudinal loyalty. The study results showed that trust is a significant moderator between co-production and attitudinal loyalty. These results are supported by Senali et al. (2023), which implies that the trust of the client in banking firms' customer service or product features and the trust shown by firm personnel in clients encourage them to keep connected in co-production. The effectively running co-production creates attitudinal loyalty in clients. Thus, trust improves the relationship between co-production and attitudinal loyalty.

## **Implications**

This study reveals the relationship among communication, client expertise, effective commitment, interactional justice, trust, co-production, and attitudinal loyalty on researchers and, thereby, guides them in their academic work. The article has great empirical implications for the banking firms in Malaysia and generally in the world. It gives a set of guidelines on how to attain attitudinal loyalty from customers. The study posits that the banking firms' representatives should develop an effective communication network with the customers for co-production. Just like the study has a guideline that banking firms should polish client expertise to encourage co-production. And there is a suggestion that management should develop effective commitment in bank clients to motivate them for co-production. The study states that financial firms' representatives must show interactional justice towards clients for co-production on the part of clients. The study guides that the managerial personnel in financial institutions like banks should encourage co-production to have attitudinal loyalty. The authors also suggest that bank managers should form an effective communication network with the customers to promote co-production and, thereby, a clear way for attitudinal loyalty. Likewise, the study reveals that banking firms should also focus on Polish client expertise. It would encourage co-production, which would help to attain attitudinal loyalty from clients. The study also implies that management should develop effective commitment from clients to the organization to attain co-production, and this co-production creates attitudinal loyalty. It guides that banks' representatives must show justice while interacting with clients. It would encourage co-production on the part of clients and helps achieve attitudinal loyalty. The study guides the policymakers in making policies related to achieve customer loyalty using effective communication, client expertise, trust, commitment and internal justice. Moreover, the study conveys that the creation of a trust element should be integrated into customers' interactions. It brings improvement in the co-production role in attitudinal loyalty.

## **Conclusion**

The authors started this research with the aim of investigating the relationship among interactional justice, communication, affective commitment and client expertise, and co-production. They were

also to check the role of co-production production among communication, client expertise, effective commitment, interactional justice, and attitudinal loyalty, as well as the role of trust between co-production and attitudinal loyalty. The empirical data were attained from Islamic banks of Malaysia for the research analysis. The results showed a positive relation between communication, client expertise, affective commitment, and interactional justice to co-production and also depicted a positive relation between co-production and attitudinal loyalty. The study results demonstrated that if effective communication is developed with clients, the firm policies, service products, personnel disposition, firm offerings, and marketing structure can be disclosed to clients. These clients' drivability and motivation for co-production. The results indicated that if bank clients have the expertise to recognize and comprehend the company offerings, service quality, product value, firm responsiveness etc., they can evaluate the production and participate in co-production. The results also revealed that the bank clients who are committed to the firm and their commitment is effective, the firm may execute co-production efficiently. Similarly, if banking firms act on the justice principle of interaction while dealing with the clients, they attain the clients favor and their participation cum cooperation in production processes. The results indicated a mediating role of co-production production among communication, client expertise, effective commitment, interactional justice, and attitudinal loyalty. When a banking firm has effective communication, clients with expertise and effective commitment, and interactional justice towards clients, it is possible to act on a co-production program and effective co-production leads the way to attain attitudinal loyalty. The study also highlighted that trust is moderating factor between co-production and attitudinal loyalty. If clients have trust in banks' products and services, co-production runs better and helps achieve clients' attitudinal loyalty.

## **Limitations**

There are also some limitations concerned with the study. Researchers must behave actively and remove these limitations. First, the authors have only analyzed the clients' attributes like communication, client expertise, affective commitment, interactional justice etc., and role in co-production and afterwards take the help of mediation to join these attributes with client attitudinal loyalty. It is expected that future researchers will also examine the direct impacts of these client attributes on attitudinal loyalty. Second, the authors here have used trust as a moderator between co-production and attitudinal loyalty. Trust can better be a mediator between communication, client expertise, effective commitment, interactional justice, and co-production. So, the authors' attention is required.

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