



## **PROFIT-LOSS SHARING VERSUS INTEREST-BASED CONTRACT: A SYSTEMATIC REVIEW**

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### **ABSTRACT**

Profit-loss sharing contract (PLSC) is a contract that shares business risks between participants, while interest-based contract (IBC) requires entrepreneurs to bear total business risks. *Islamic* scholars believe that PLSC is fairer and more profitable than IBC besides inducing a more stable economy with lower income gap. Despite the strong belief of PLSC positive impact, market participants (i.e., the government, financial sectors, banking industry, companies, and individuals) still adopt IBC when dealing with financial transactions. The refusal in embracing PLSC has raised many questions regarding PLSC and the superiority of IBC against PLSC. Drawing on multiple literature sets, this study applied a systematic literature review (SLR) methodology by using the snowball sampling method (SSM) to classify the findings based on six main constructs: Fair-Justice, Feasibility, Profitability, PLSC ratio, Stability and 'Others' (i.e., definition, evolution, and general comparison). Some 116 studies were found, which rigorously discussed various aspects of IBC and PLSC together, with 70% published after 2001, 80% applied theoretical approach, 36% had been indexed by Web of Science (WoS) and Scopus database, whereby feasibility was the most frequent topic. Despite the positive growth in a number of studies, the literature suffers from a lack of empirical studies.

JEL Classification: G10, G19, G41, P49

Key words: Profit-loss sharing contract, Interest-based contract, Systematic literature review, *Islāmic* finance, Risk sharing

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## 1. INTRODUCTION

*Islāmic* finance acceptance in the global financial market in recent decades has stimulated application of profit-loss sharing contract (PLSC) instead of interest-based contract (IBC). *Islāmic* scholars believe that PLSC is the best *Islāmic* contract because of its fairness and justice in wealth creation and income distribution (Usmani and Zubairi, 2002; Muhammad Nejatullah Siddiqi, 1991); in addition, IBC is against *Islāmic* principles because of the usury (*ribā'*) element (Ali, 2011; Siddiqi, 2004).

PLSC refers to a mutual contract whereby the entrepreneur's physical or mental ability is combined with the financier endowment (fund). By applying PLSC, financiers and entrepreneurs agree to participate in a specific business in lieu of a share of oncoming profit or loss (if any). The share is determined by negotiation before signing the contract. As parties accept to share the business outcome, which is exposed to many types of risks, they will share in both the risks and returns (Ajija, Annisa, and Hudaifah, 2012; Mirakhor and Zaidi, 2007; Farooq, 2007; Chapra, 1992; Siddiqi, 1991, 1985).

It should be noted that PLSC, had been a dominant contract for 800 years before the Middle Ages (Askari, Iqbal, and Mirakhor, 2010; Rehman, 2007; Lopez, 1976). That period was so successful for trading that it was also known as "the age of the commercial revolution" (Lopez, 1976). In fact, the prohibition of usury (*ribā'*) is associated with the Abrahamic religions of Judaism and Christianity (Vincent, 2014; Wilson, 1997). Even non-religious groups, such as the Greek and Roman philosophers, the Code of Hammurabi (1760 BC), Hindu law (400 BC), and even Plato had condemned *ribawi contracts* (Graeber, 2014; Rehman, 2007; Taylor and Evans, 1987; Anwar, 1987). While Islam strictly prohibits *ribā'*, it encourages Muslim traders to use profit sharing contracts.

IBC is also a mutual contract, like PLSC, but it behaves completely different in distributing the underlying business risks. By applying IBC, the financier requests a pre-determined rate for each unit of money lending regardless of the actual return produced by the underlying business. It means that the financier shifts the business related risks entirely to the entrepreneur. However, it does not mean

the financier is totally free of any risks; unlike PLSC, the financier's return in IBC is free of the underlying investment risks.

The seemingly negligible differences between IBC (dominant contract) and PLSC in sharing risks has been an incentive for many studies over recent decades to continuously research on this issue. From a microeconomic point of view, PLSC is a fairer and more profitable contract than IBC due to risk sharing (Abdul-Rahman et al., 2019; Othman et al., 2017; Haque and Mirakhor, 1986; Hasan, 1985). On the other hand, it is claimed that the PLSC increases the financier's risk further compared to IBC (Abdul-Rahman and Mohd Nor, 2017). Moreover, PLSC is not as efficient as IBC because it suffers from asymmetric information (Abdul-Rahman et al., 2020; Innes, 1990; Gale and Hellwig, 1985). From the macroeconomic standpoint, since IBC does not share the risks, it creates a dichotomy between the money market and real economy; thus, the pervasiveness of IBC in the global economy amplifies this dichotomy. A more intensive dichotomy destabilizes the economy by encouraging investors' speculative behavior in the financial market (Sutherland and Hoeller, 2012; Reinhart and Rogoff, 2010; Wolfson, 2002; Allais, 1999; Minsky, 1977). A fragile economy is sensitive to any small negative shocks. Therefore, this dichotomy is the root of economic crisis and financial instability. In contrast, PLSC prevalence in an economy lowers the dichotomy by creating a direct link between the money market and the real economy, and automatically reducing fragility (Chapra, 2002; Zarqa and Thinking, 1983). PLSC also raises the investment level in the economy as riskier investment opportunities are simply financed under PLSC (Haque and Mirakhor, 1986). Consequently, PLSC prevalence becomes an engine for economic growth. Also, PLSC pervasiveness will reduce income/wealth discrimination and improve total welfare as a result of risk sharing (Sugema et al., 2010). Despite the existing vast literature, however, no comprehensive review of the literature has shown the state of the art. Therefore, this study aims at highlighting the current knowledge regarding PLSC and IBC. The information is helpful in making suggestions for novel research in the future.

Systematic literature review (SLR) is a suitable method for providing a critical review of the literature to create an ability to assess individual studies qualitatively (Babatunde et al., 2017) for identifying, organizing, and analyzing existing literature. The relevant studies should specifically focus on the various aspects of PLSC and IBC together. In order to collect relevant studies within the scope of the paper, the snowball sampling method (SSM) has been applied. It

is the best method in collecting the relevant studies as it is possible to ignore the studies that are apparently (based on their titles) related to the objective but in fact are not. Furthermore, this technique allows researchers to find studies apparently unrelated to the objective (just based on titles), but actually relevant as proven by reading through the articles. For instance, Berger (1998) and Trester (1998) apparently did not focus on comparing PLSC and IBC. In fact, they discussed various aspects of debt and equity-based contracts, which was directly related to the research objective of this study. To apply the SSM, the relevant high-cited studies published recently were reviewed, such as Askari et al. (2014). Then a cumulative SSM was applied to generate a complete set of the most relevant studies. By applying SLR and SSM, this study tries to answer the following questions:

1. What characteristics of PLSC and IBC have been discussed in the existing literature?
2. How did the existing theoretical and empirical literature evolve over time?
3. To what extent has the existing literature been able to elucidate the different dimensions of these two contracts?

This paper contains five sections. Section 2 focuses on the definition of PLSC and IBC and provides a brief discussion on their similarities and differences. The methodology and classifying criteria will be discussed in Section 3. Section 4 presents the analytical results and Section 5 gives the concluding remarks, as well as suggestions for future studies.

## 2. LITERATURE REVIEW

The IBC and PLSC are two financial contracts in the global financial market that have their own specific features. While both of them are equal in their functions, channelling money to investment opportunities, they have different effects on risk-adjusted return of the involved participants and macroeconomic variables. Furthermore, while IBC is a popular contract in the global financial market, it is against *Islāmic* principles. On the other hand, PLSC, which is the best *Islāmic* financial contract, is a newborn in terms of market acceptance. While both PLSC and IBC are applicable contracts in the real world, IBC is a dominant contract in the conventional financial system nowadays. Before the appearance of Islam, PLSC was a popular contract in the Hejaz (Askari et al., 2014), especially in sharecropping,

share-fruiting and other forms of agrarian economy (Dar, 1997). Nowadays, PLSC is a regular contract not only in the banking system in Iran, Indonesia, and Pakistan (Sadr and Gholami, 2020), but also in different sectors, such as agriculture (Crane and Leatham, 1993) or oil industry (Ghandi and Lin, 2014). Therefore, various types of PLSC are adopted in different economic sectors around the world.

## 2.1 INTEREST-BASED CONTRACT (IBC)

The IBC refers to any contracts in which the entrepreneur is obliged to pay pre-determined excess money to the financier for each unit of lending regardless of the underlying project return. When an entrepreneur is charged for a fixed or flexible rate for each unit of his borrowing regardless of the underlying business return, the extra amount charged is called interest or usury (*ribā'*). This contract is known as the IBC or *ribawi* contract. It should be noted that the precise meaning of *ribā'* is controversial, but it is usually translated as “usury,” “excess,” “increase,” or “interest” (Pryor, 1985). The most popular example for an IBC is the U.S. government conventional bonds, where the government borrows money from the people (investors) in lieu of a risk-free rate of return for each unit of lending.

How did IBC become popular? Historical evidence showed that massive progress in trade in the post-industrial revolution era created big wealth for traders at that time. Wealthy traders started to loan their money to the government and other traders through short-term contracts in an informal system. Lack of any rules caused the interest rate to record 40%, and even more in some periods (Kohn, 1999). Gradually, this informal mechanism of lending and borrowing changed to a formal system in the form of private banks, commercial banks, and other financial market components. In spite of this evolution in the form of the institution in the financial market, they usually use the same approach of Smith, i.e., borrowing short-term and lending longer-term (Whaples and Parker, 2013). These new and old structures were similar in IBC (Shaikh, 2012).

The main feature of an IBC contract is risk shifting, which means that an IBC investor (the agent who applied IBC to invest his money) shifts all the underlying project associated risks to the entrepreneur. In fact, IBC creates a gap between the actual rate of return and the investor's return. Due to the independence of these two returns, IBC generates a dichotomy between the money sector and the real economic sector, conjecturing that the real outcome of the real

sector would not be an important variable for the money supplier. This is the main distinction between IBC and PLSC.

## 2.2 PROFIT LOSS SHARING CONTRACT (PLSC)

Unlike IBC, PLSC is a contract that completely removes the dichotomy between the money market and the real sector. In fact, PLSC is a mutual contract in which all participants hang together to make a profit by means of investing their assets including money, machinery, labor, management ability, and so forth. Contributors can engage in a PLSC either by engaging cash or commodity (Usmānī, 2002). As this contract is concluded based on mutual consent, the involved participants negotiate on their share (of expected profit) before fulfilling the contract. As they share the profit, which is exposed to business risks, the investor's return is also being influenced by the business risk.

*Islāmic* scholars support the PLSC in an environment whereby IBC is a dominant contract because IBC is strictly against *Islāmic* teachings (Ali, 2011; Siddiqi, 2004). The prohibition of *ribā'* in Islam has stimulated the *Islāmic* countries to establish their own *ribā'*-free financial instruments, especially after 1970, which is known as the revival period of *Islāmic* finance. In this period, in which IBC had been the dominant contract in the global economy, *Islāmic Islāmic* scholars challenged the conventional system by introducing several alternative contracts. Participatory modes, such as partnership and *Mudarabah* (PLSC type), sale-based modes such as *Salam* and *bay'muajjal* and rent-based modes such as *Ijarah* (renting) are the most popular *Islāmic* contracts (Abdul-Rahman et al., 2020; Abdul-Rahman and Mat Nor, 2017; Abdul-Rahman, 2012; El-Gamal, 2006; Zarqa, 1997). Despite the multitude of available *Islāmic* contracts, it is generally accepted that the *Islāmic* finance model should be predominately based on PLSC to be compatible with the spirit of *Shariah* (Azhar and Saiful, 2003; Usmānī, 2002; Khan, 1995; Siddiqi, 1991; Chapra, 1985; Siddiqi, 1983). In fact, the real and ideal objective of *Shariah*, which is sharing both of the risk and return of the underlying business, is manifested in PLSC. For these reasons, *Islāmic* scholars are the main developers of PLSC in theoretical and empirical research.

Various types of PLSC have been accepted in the *Islāmic* framework; namely 1) partnership in the capital and business effort (*Shirkat al-inan/Mushārah*), 2) profit sharing (*Muḍārah*), 3) partnership by reciprocity (*Mufāwah*), 4) partnership in arts and

crafts (*Sana'i*), and 5) partnership based on personal credit and goodwill (*Wujuh*) (Siddiqi, 1985). The most popular PLSC types are *Mushārah* and *Muḍārah* (Abdalla Ahmed, 2008; Kasri, 2007). In *Muḍārah* one party provides the whole capital and the other party provides the expertise. Meanwhile, all parties contribute to both capital and expertise in *Mushārah*; thus, they share the profit and loss based on a pre-agreed ratio. Unlike *Mushārah*, the fund provider in *Muḍārah* has no right in the management, but bears the profit and loss (Farooq, 2007).

### 3. METHODOLOGY

Systematic Literature Review (SLR) attempts to identify, appraise and synthesize all the empirical evidence that meets pre-specified eligibility criteria to answer a given research question (Babatunde et al., 2017). The first step is collecting the relevant literature. Skimming the existing literature showed that past studies on IBC, PLSC and PS (profit sharing) over the last decades has been very numerous (7,920 articles), but some were irrelevant. By combining those phrases with “interest-based”, the result had reduced to 2,870 articles but still, most were irrelevant.

To overcome the problem and find the most relevant studies, SSM or chain referral sampling is the best technique. This technique is widely used in qualitative sociological research, specifically applied in the studies where the population is difficult to reach (Penrod et al., 2003; Biernacki and Waldorf, 1981). This technique is useful for two reasons: (1) finding the studies that exactly discuss various aspects of IBC and PLSC together is not easy, and (2) usually more related studies especially those that produced a remarkable contribution to the existing literature, are cited in other studies.

To apply the SSM, recently published studies were reviewed, such as studies by Hamza (2016), Askari et al. (2012), and Iqbal and Llewellyn (2002). The focal point of these studies was comparing at least one aspect of PLSC and IBC. By scanning the reference lists of the mentioned studies the author created a longer list of the less or more relevant studies. In order to reach a set of completely relevant studies, the abstract, conclusion, and introduction of the listed works were reviewed one by one. This method shortened the list to 150 from 300 studies. Skimming the whole text of 150 studies had shortened the list to 116 studies. This process ensured in reaching a set of completely relevant studies without neglecting important ones.

Many studies in the final 116 articles discussed the banking system stability or compared the *Islāmic* and conventional banking system stability with z-score (a statistical index that says how many standard deviations from the average the score is) and other indices. In determining the inclusion or exclusion of those articles, further analysis was conducted to discover whether they focused on the role of the PLSC and IBC in generating a stable condition. If PLSC or IBC plays a key role in their argument, the study was included in the analysis, and vice versa. For example, Chong and Liu (2009) is considered a high-cited study that discussed *Islāmic* and conventional banking system stability, but it ignored the role of PLSC and IBC in achieving the outcomes; thus, this was excluded. In short, the banking system performance coverage was ignored, except when the study focused on the role of PLSC and IBC. Based on this logic, high-cited comprehensive studies, such as Beck, Demirgüç-Kunt, and Merrouche (2013) and Čihák et al. (2008) were excluded from the set of 116 studies.

The next step is classifying the relevant articles based on the main idea. To do this, two key points were considered, namely: 1) the difference between PLSC and IBC from the *Islāmic* scholars' points of view and 2) the frequency of issues in different studies. For instance, since it is claimed that PLSC is a fairer contract than IBC, Fairness or combination of Fairness-Justice was considered an important subject that should be reflected as a separate category. Furthermore, another example, whereby it is claimed that PLSC prevalence in an economy or financial market improves economic stability and resilience. Hence, stability and resiliency were considered as another category. In the case of books, the focus was on the chapter contents. For instance, the focal point of Iqbal and Llewellyn's (2002) reference book in comparing PLSC and IBC (or debt-based contract) was on the definition and general comparison of these two contracts. Therefore, this book falls into the introductory group called "Introduction". However, if any of the book chapters are consistent with any of the defined categories, the chapter would be classified under that category too.

Focusing on 116 studies (including papers, books, chapters in books, and conference papers) and scanning the keywords, abstracts or even the full text, revealed that a variety of issues were discussed, such as feasibility, efficiency, optimality, stability, profitability, fairness, macro policies, and failure of PLSC and IBC. Unfortunately, there are many overlaps between the studies. For instance, a paper that argued the profitability of PLSC might discuss the "PLSC ratio". The



question is how is it possible to classify studies based on their main subjects without any overlap? To minimize the overlaps, the studies were again reviewed and the abstracts and introductions were scanned. Finally, six different subjects were identified with the least overlaps; Fair-Justice, Feasibility, Profitability, PLSC ratio, Stability and “Others”. These subjects, with the definitions, are mentioned in Table 1.

The next step is finding the criterion to show the importance of the studies and subjects. In this regard, the Google Scholar (GS) citations have been chosen, as there is no difference between WoS, Scopus and GS citations (Levine-Clark and Gil, 2008), except GS is a free database. The next reason is that the absolute number of citations is not a significant variable in this study, but the key point is comparing the citation between different categories, which is possible by any unique database. Hence, GS citation is enough for this purpose.

TABLE 1  
Definition and classifying the subjects

Subject	Definition
Feasibility	This category contains studies discussing the information problems (adverse selection and moral hazard problems), the optimality and incentive compatibility, efficiency of PLSC and IBC or reasoning their failure.
Stability	Studies arguing the stability, sustainability or even resilience of the PLSC or IBC, fall in this category.
Profitability	This group includes studies that directly discuss the profitability of the PLSC in comparison with IBC.
PLSC ratio	Because of the key effect of the PLSC ratio on the evolution of this contract, studies debating this item fall into this group.
Fair-Justice	Studies comparing the fairness, justice, and how PLSC and IBC affect the distribution of wealth and income in a society or population fall in this class.
Others	The rest of the studies that argue on the definition, introduction, evolution and a general comparison of the PLSC and IBC, belong to this class.

Source; author's elaboration based on the existing literature

Indexed studies are considered to be of higher scientific quality compared to non-indexed studies. Therefore, the next important point is to see how many of the relevant studies have been indexed. Furthermore, two databases, namely Web of Science (WoS)

and Scopus had indexed the economic and finance studies (Aghaei Chadegani et al., 2013). The journal was checked whether it was indexed in the WoS or Scopus.

#### 4. SEARCH RESULTS AND DISCUSSIONS

This section illustrates the finding based on the methodology explained in the previous section. Scanning of all 116 studies showed that they could be classified based on four specific features; (1) the applied method (theoretical or empirical), (2) indexed database (WoS or Scopus), (3) core subject or main idea, and (4) distribution by time period. These categories will be discussed in the following section.

##### 4.1. DISTRIBUTION OF STUDIES BY THEIR APPLIED METHOD

Categorizing the studies based on their applied methods produces interesting results. Some studies applied a theoretical approach, while others adopted an empirical approach. Studies that apply conceptual discussion, mathematical analysis, and literature review or evolutions are theoretical, while empirical studies adopt either qualitative or quantitative approaches. The qualitative approach is based on exploratory research by using primary data (interviews), whereas the quantitative approach is based on applied research by using either primary data (survey questionnaires) or secondary data (statistics or figures from a database that has already been collected by someone other than the user). In terms of analysis, qualitative research normally employs content and thematic analysis, while the main concentration of quantitative research is analyzing the numerical data using computational methods and normally producing regression estimates based on various techniques, such as partial least squares (PLS), structural equation modelling (SEM), or panel regressions.

The data depicted that 81% of the studies used theoretical approach, while 19% used empirical method, implying that most of the existing literature had discussed different aspects of PLSC and IBC theoretically. Nonetheless, empirical studies had been cited, on average, 89 times while averaged citation for all 116 studies was 59, and for theoretical studies was 52. This means that empirical studies, on average, had been cited about twice (1.7) than the theoretical studies. Therefore, empirical studies are more attractive to researchers.

#### 4.2. STUDIES BASED ON THEIR INDEXED DATABASE

Figure 1 shows that 42 out of 116 studies have been indexed by WoS or Scopus database (three in WoS, 23 in Scopus, and 16 in both of them), and 74 in none of them (grey areas in the square). The next interesting point arises from Figure 3, which showed that the indexed studies had been cited nearly 2.6 times more than the others (72% against 28%). Moreover, the number of these studies had a positive growth as indicated in Figure 4. In fact, Figure 4 illustrates the evolution of the studies over time by their indexed database. The diagram shows that the number of studies had experienced an increasing trend over the past few decades, which was 1.2 times higher in 2011-2020 than 1980-1990. Moreover, several studies had been indexed in recent decades (22 in 2011-2020) compared to the first decade of the period (nine in 1980-1990).

FIGURE 1

The Number of Studies Published Under Indexed Database

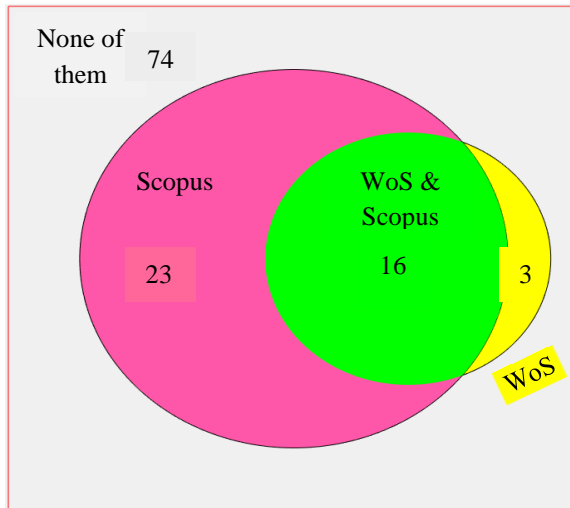


FIGURE 2  
The Percentages of Indexed Studies

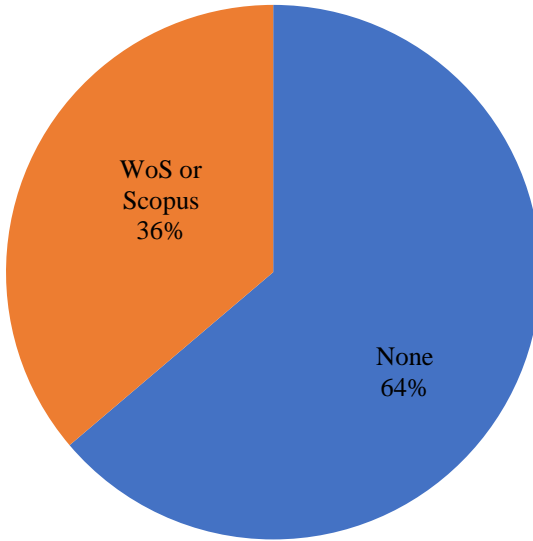


FIGURE 3  
The Percentages of Citation of the Indexed Studies

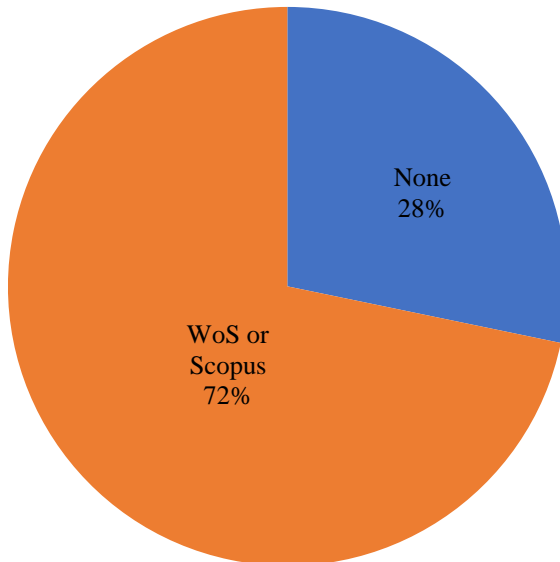
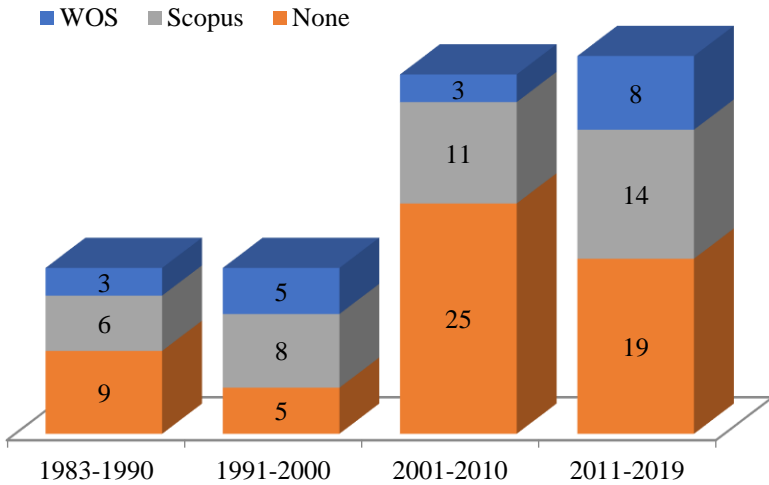


FIGURE 4  
The Number of Indexed Studies Over Last Decades



#### 4.3 DISTRIBUTION OF THE STUDIES BY SUBJECTS

Some interesting information was noted by mapping the distribution of the studies based on their main subjects (mentioned in Table 1) and applying the method and the indexed database. Figure 5 presents the frequency of the subjects alongside with the methods applied in the studies. As it shows, Feasibility is the most frequent subject in both groups of the theoretical and empirical studies. Fifty-six out of 116 studies argued on this topic of which 42 studies used the theoretical method, and 14 used the empirical method. Stability, ‘Others’ and Profitability are in the next order of the frequent aspects with Fair-Justice being the least frequent topic.

Figure 6 illustrates the number of studies, which have been published in an indexed source. As it depicted, 34 studies (22 Scopus plus 12 WoS) out of 56 studies discussed the Feasibility of PLSC and IBC, which were indexed. Stability, ‘Others’ and Profitability groups were in the next orders. Only two studies argued on the Fair-Justice of PLSC and IBC (Figure 5), but none of them were indexed (Figure 6).

FIGURE 5  
Frequency of the Subjects in the Studies by Their Applied Methods

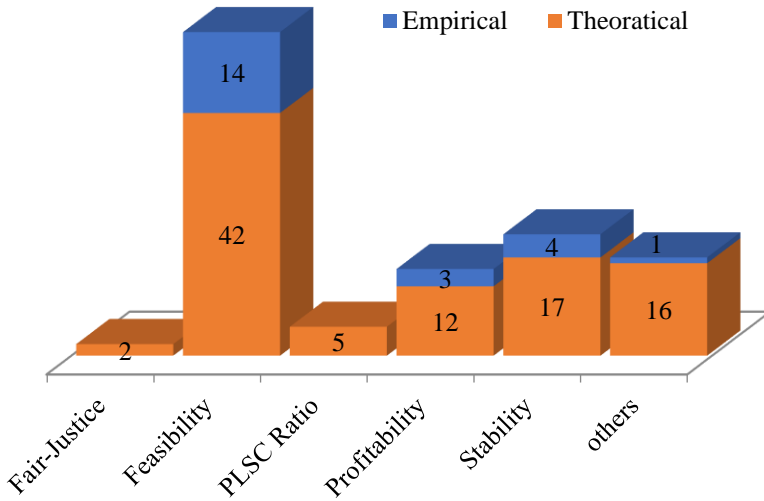
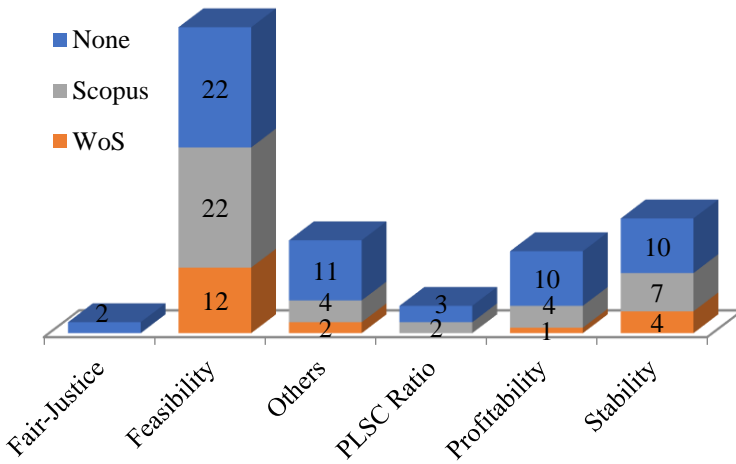


FIGURE 6  
Frequency of the Subjects in the Studies by Their Indexed Database



The following Table 2 demonstrates the frequency of subjects along with their average citation. As shown in Table 2, the total citation of 116 studies was 6,850 times, indicating that each study, on average, had been cited 59 times.

TABLE 2  
Frequency of Subjects in the Literature and Their Average Citations

Row	Subject	Cited		Number		Average
		Times	%	No.	%	Cited
1	Feasibility	2402	35.1	56	48.3	43
2	Stability	1619	23.6	21	18.1	77
3	Others	1821	26.6	17	14.7	107
4	Profitability	258	3.8	15	12.9	17
5	PLSC Ratio	59	0.9	5	4.3	12
6	Fair-Justice	691	10.1	2	1.7	346
	Grand Total	6850	100	116	100	59

Source; author's elaboration

The first notable point from Table 2 showed that studies which discussed the Fair-justice topic had been cited, on average, 346 times, which was five times more than the total average. The Fair-justice group showed that one of the two relevant studies, which was by Chapra (1985) that discussed a monetary system had been cited 689 times up to September 2019. The next interesting point from Table 2 is about the 'Others' group. The average citation of this group was remarkably high with each study in this group, on average, being cited 107 times, which was 1.8 times more than the total average. The last interesting point was that while Feasibility was the most frequent subject in the study, its importance was lower than the average.

Due to the importance of the subjects for this study, each of the subjects' status in the literature is discussed based on the above information in the following subsections.

#### 4.3.1 FEASIBILITY

Data showed that 48.3% of the studies (with 35% of all citations) discussed the Feasibility of PLSC and IBC (Table 2). In other words, about half of the relevant studies argued on the information problems (moral hazard and adverse selection). As PLSC was exposed to this problem more than IBC, it had been a controversial discussion for a

long time. Classical economists, such as Adam Smith and Alfred Marshall believed that IBC is an efficient contract because it required the least information from entrepreneurs and the underlying projects (Ashour, 1999). Additionally, as the total marginal profit produced by the borrower's marginal effort will not go back to him or her, the borrower in PLSC does not undertake all effort. Consequently, the borrower's effort in PLSC will be lower than in IBC. This idea is known as the secret of the dominance of IBC in the global financial system (Dang, 2010; Diamond, 1996; Innes, 1990; Gale and Hellwig, 1985). However, Stiglitz (1974) proved that IBC is not always the most efficient contract due to exposure to some types of asymmetric information (Gale and Hellwig, 1985). Furthermore, incentives for the borrower will promote the borrower's effort (Shavell, 1979). Nevertheless, the result of this study showed that this issue is still controversial.

#### 4.3.2 STABILITY

In total, 21 out of 116 studies argued the Stability of IBC and PLSC in or out of the banking system. These types of studies started in 1983 when Zarqa and Thinking (1983) theoretically discussed the issue. Khan (1986), Mirakhor (1993), Chapra (2002), Mirakhor (2012) and Askari et al. (2014), conducted 17 theoretical studies, whereas Darrat (1988), Ahmad and Khan (1990), Samad and Hassan (1999) and Hasan and Dridi (2010) conducted four empirical studies.

#### 4.3.3 PROFITABILITY

Only 15 studies compared the Profitability of the PLSC and IBC. In total, they had been cited 258 times. Nienhaus (1983) was the pioneer in arguing the Profitability of PLSC by considering the interest-free banking when it had to co-exist with interest banking. This theoretical study was cited 69 times. It means 26.7% of all citations in the case of Profitability was just for this study. Other theoretical studies included research by Khan (1983), Hasan (1985), Pryor (1985), and Mirakhor (1986). Furthermore, other empirical studies included research by Karim (2002), Ahmed (2008), Muda and Ismail (2010), Sugema et al. (2010) and Sumarti et al. (2014).

#### 4.3.4 PLSC RATIO

Only five papers with 59 citations discussed the PLSC ratio. This ratio is important because it is comparable with the interest rate in IBC.



Uzair (1978) was the first researcher who attempted in discussing the profit sharing ratio at the two tiers of *Muḍārabah* financing that would prevail in a PLSC *Islāmic* banking system. Hasan (1985) and Bacha (1997) focused on the PLSC ratio, which discussed the micro and macroeconomic aspects of this subject. All of those studies applied the theoretical approach.

#### 4.3.5 FAIR-JUSTICE

Despite the *Islāmic* scholar claims about the justice and fairness aspects of the PLSC in comparison with IBC, only two studies (taking theoretical approach) with 691 citations, discussed this issue. Chapra (1985), one of the *Islāmic* economist pioneers claimed that *ribā'* is not a fair contract and the government should take policies to move toward a fair economy by monetary policies. He believed in *qarḍul-ḥasan* and participation contract as alternatives for *ribawi*. Chapra (1985) is the highest cited study in the literature.

#### 4.3.6 OTHERS

In total, 17 out of 116 studies with 1,821 citations focused on the introduction of PLSC and its general difference with IBC.

### 4.4 EVOLUTION OF STUDIES OVER TIME

Figures 7, 8, 9, and 10 show the time trends of the number of relevant studies over the past decades by subjects and indexed databases. The interesting points arise from the graphs, as shown below:

1. The number of relevant studies increased over time (Figure 7). As indicated by the trend (the line graph), after a good start in the 1980s, the number of publications dramatically declined in the following years, specifically in 1986-2001. After the recession period in publications, the number of publications increased again, indicating a change in the trend.

FIGURE 7  
Trends of the Studies Over Time

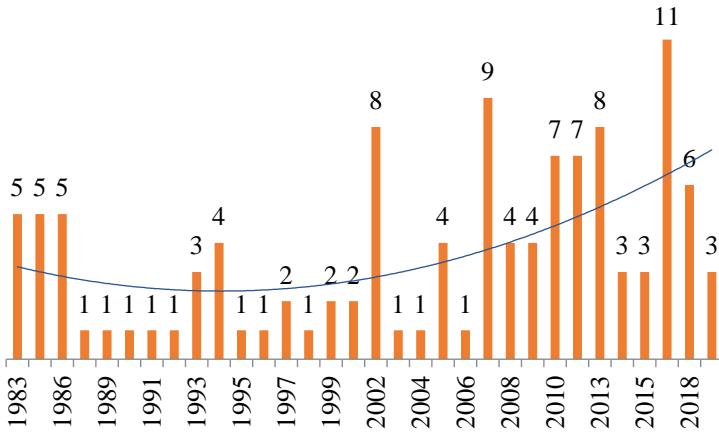
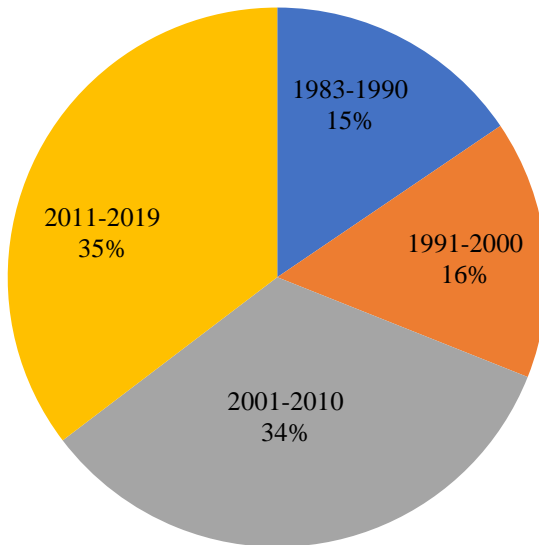
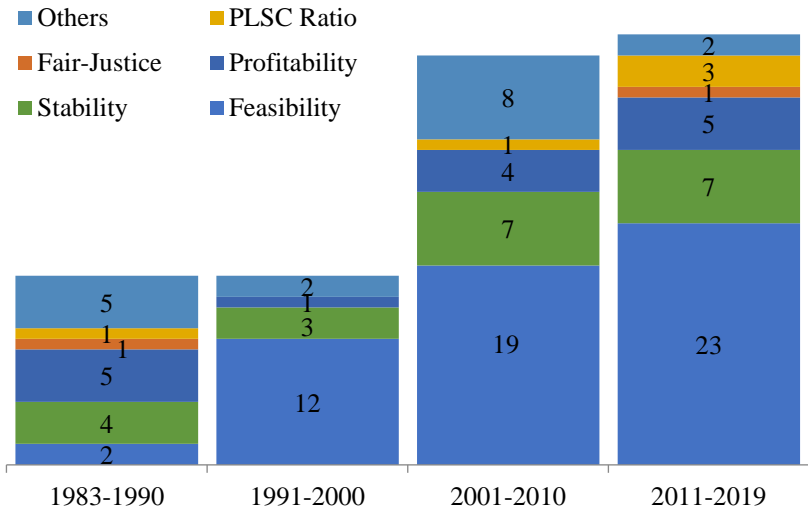


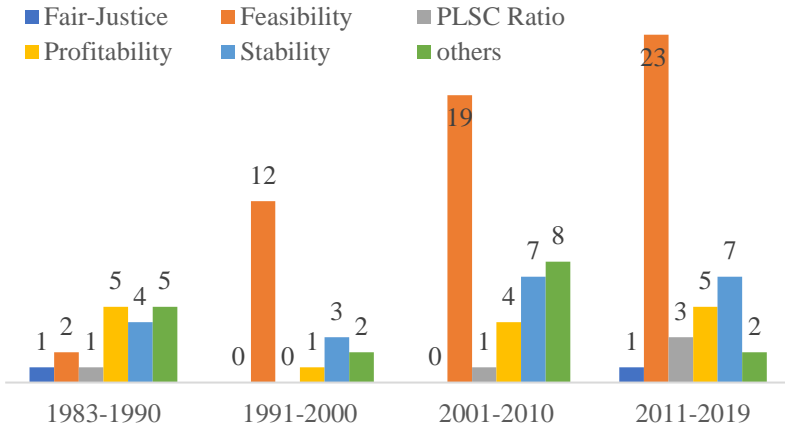
FIGURE 8  
Trends of the Relevant Studies Over Time



**FIGURE 9**  
Distribution of the Relevant Studies Over Decades



**FIGURE 10**  
Trends of the Relevant Studies by Subject and Decades



2. The next point arises from Figure 7. Although the 1970s had been the milestone decades for *Islāmic* finance evolution, the first relevant study was published in 1983, which was in the next decade.

3. Figure 7 also indicated that 2017 had been the most important year over the period, as 11 studies on the issue had been published. The number of publications in 2002, 2007 and 2009 were also remarkable.
4. The next interesting point is that about 35% of the studies, in the case of numbers, had been published in 2011-2019, which was more than the number of studies published in 2001-2010 and more than double the number of studies published in 1991-2000 and 1983-1990 (Figure 8). Again this evolution over the past decades showed that more studies had been published in recent decades and the trend had a positive slope.
5. Figure 9 shows that the number of indexed studies increased from nine in 1983-2000 to 13 and 14 in the following decades and finally peaked at 22 in 2011-2019.
6. The first interesting point arising from Figure 10 is the number of studies arguing the Feasibility of PLSC and IBC grew from two in 1983-2000 to 23 in 2011-2019. The same trend, but with moderate speed holds for Stability (from four to seven). This trend showed that Feasibility and Stability had been controversial topics over the five decades. In contrast, the number of studies arguing 'Others' declined from eight in 2001-2010 to two in the recent decade. This means that the lower contribution is possible to make in 'Others' class, which contains the definition and general descriptions of the two contracts.

## 5. CONCLUSION AND POLICY IMPLICATIONS

The PLSC and IBC are two financial contracts used to distribute excess money to the best investment opportunities. Although both of them are similar in function, as instruments for carrying money, they are completely different in the case of sharing risks of the underlying business/project. Moreover, while the outcome for the financier who applies IBC is free of business risk, his or her risk is limited just to the entrepreneur's default, which is usually solved by worthy warranties.

This study applied a systematic literature review and snowball method, resulting in 116 related studies among more than 150 works. The shortest list was provided considering the studies focused on the comparison between PLSC and IBC. Many studies discuss *Islāmic* banking system stability, but they do not focus on the role of PLSC as the source of stability. Therefore, such previous studies were ignored,

and this study concentrated on discussing or comparing various aspects of these two contracts. Then, the focus was on the shortlist (116 studies) and classified them based on six main ideas; Feasibility, Profitability, Stability, Fairness, PLSC ratio and 'Others' along with their applied method (theoretical or empirical), their evolution over time, and their importance (citation).

The most important result was that the literature strongly suffered from a lack of strong (high cited) studies that compared various aspects of IBC and PLSC. All of the 116 studies had been cited about 6,850 times for about four decades, while one study, such as Stiglitz (1974) had been cited more than 1,670 times. Moreover, only 36% of the studies were indexed by WoS or Scopus. It shows that the contribution of these studies is still inadequate to convince researchers and editors. About 15% of the existing literature discussed issues including definitions, similarities, and evolutions. Nevertheless, the average citation of these studies was more than the average citations of those 116 studies. It means that scholars are still in the early stage of the PLSC and IBC research.

This last decade has been a milestone for producing related literature. Nearly 35% of the related studies had been produced in 2011-2019 and 34% in 2001-2010. Since the subprime crisis (2007) had been the main economic and financial phenomenon in those periods, it was also claimed that PLSC might solve the problem inherently.

In general, empirical PLSC and IBC studies, whereby their average citation is higher than the total average, are rare. Lack of valid data about these two contracts is the most important reason for this scenario. This problem is serious in the case of Fairness and Justice. It shows that more effort should be undertaken to produce appropriate measures and indices for this subject. Discussion on PLSC ratio, which played a key role in promoting PLSC, and a comparable criterion with interest rate for IBC (in lender's case), had been neglected in the literature. It simply means that PLSC is not applied in practice. Supposedly, many studies should have discussed various aspects of the PLSC ratio (i.e., how to determine the pre-agreed ratio, what factors should be considered, what is the best benchmark for it, what are the challenges of obtaining the optimal ratio, and the related issues) and how it is different from interest rate. The evolution of studies is not moving on a stable line. It shows that a continuous attempt is not made in covering these issues.

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