International Journal of Business and Management Sciences **E ISSN**: 2708 – 4337 **P ISSN:** 2708 – 4329
Available online at http://www.ijbms.org
International Journal of Business and Management Sciences
Volume 04 (03), 2023
Received, 05 September, 2023, Revised, 13 September, 2023,
Accepted, 15 September, 2023, Online First, 19, September, 2023.

INSTITUTIONAL QUALITY: THE HIDDEN ENGINE BEHIND FINANCIAL INNOVATION

[1]*Hina Shahzadi,* [2]*Muhammad Rizwan Ullah,* [3]*Sadaf Akram,* [4]*Shahid Irshad ,* [5]*Ejaz Ahmad*

Keywords:
Institutional Quality, Financial Innovation, Financial Development, Government Effectiveness, Systematic Review, Meta-Analysis.

ABSTRACT

Regardless of the increased research on institutional quality and financial innovation, there remained a review gap in this string of knowledge. Thus, we have highlighted the gaps in the existing knowledge of financial innovation and institutional quality through systematic analysis of the literature review and used a meta-analysis procedure, to sum up past quantitative studies on financial innovation and institutional quality to identify the direction and strength of the relation. Our analyses include 553 types of research on institutional quality and financial innovation for systematic literature review and 36 quantitative types of research for meta-analysis from 2000 to 2022. By examining the relationship between financial innovation and institutional quality, we established a rounded picture of what prevailing empirical researchers have identified and addressed the contradictions and inconsistencies in the available literature. It is acute given that the financial innovation and institutional quality nexus is still early. Thus, research on financial innovation and institutional quality is strong in some areas while weak in others. We find that institutional quality and financial innovation are positively correlated. We conclude that the knowledge has yet to develop that institutional quality matters for financial innovation vigorously. The study recommends improving institutional quality as a strategic action to foster financial innovation and enhance their innovation potential.

INTRODUCTION

Institutional quality (IQL) and innovation are widely recognized as crucial and sustainable drivers of long-term success for organizations (Camisón and Villar-López, 2014; Iturrioz et

[1] *PhD Scholar, Department of Economics, Government College University, Faisalabad, Pakistan. Email: hinaeconomist@gmail.com*
[2] *PhD Scholar, Lyallpur Business School, Government College University, Faisalabad, Pakistan. Email: mrizwanullah77@gmail.com (Corresponding Author)*
[3] *Teaching Assistant, Department of Commerce, Government College Women University, Faisalabad, Pakistan. Email: sadafakramgcwuf@gmail.com*
[4] *PhD Scholar, Department of Management Sciences, The University of Faisalabad, Pakistan. Email: siqazi72@yahoo.com.com*
[5] *PhD Scholar, Department of Management Sciences, The University of Faisalabad, Pakistan. Email: ejazamf@yahoo.com*

al., 2015). Organizations face challenges in the current global market beyond merely offering innovative products and solutions. They must also adapt their management practices to enhance productivity, customer service quality, and efficiency (Damanpour and Aravind, 2012). While much of the discussion on innovation has focused on technological and managerial advancements within enterprises (Ullah et al., 2023a; Crossan and Apaydin, 2010), researchers across various disciplines have emphasized the vital role of IQL and financial innovation (FIN) in driving organizational performance and fostering renewal (Walker et al., 2010). Moreover, Mol and Birkinshaw (2009) argue that IQL enables technological and financial innovation and is a significant source of competitive advantage.

A greater debate is available on the trade-off between FIN and IQL. FIN offers poor individuals access to resources to meet financial needs and can thus reduce income inequality (Dabla-Norris et al., 2015). The theory claims that FIN is also advantageous for the rich (Greenwood and Jovanovic, 1990). Inequality increases when individuals with higher asses and incomes have unduly large amounts of finance access, further enhancing skill premium and return on equity (Claessens and Perotti, 2007). Undeniably, numerous current researchers found that FIN (usually measured by the proportion of private sector credit to the GDP) enhances inequality. Thus, IQL boosts the FIN (Dabla-Norris et al., 2015; Tahir et al., 2021).

By considering the importance of FIN, it is common that the antecedents of FIN have been broadly studied. The antecedents of FIN that have been examined include (but are not limited to) financial and openness, control of corruption, trust, inflation, remittances, the rule of law, government effectiveness, and institutional quality (Vaccaro et al., 2012; Bhutta et al., 2022, among others). Though, the findings of the literature in this string are diverse.

However, these researchers offer fruitful visions; the literature needs to deliver consistent results about the relations' directions and intensity. Scholars have offered conflicting arguments and inconsistent results for twosome variables (such as financial innovation and institutional quality). For concern, some scholars identified positive nexus between FIN and IQL (Khan et al., 2019, 2020; Alsagr and van Hemmen, 2021; Ullah et al., 2021; Saied and Awad-Allah, 2020; Mardan, 2017; Sarhangi et al., 2021; Shaohua et al., 2021; Ehigiamusoe et al., 2021; Aluko and Ibrahim, 2020), whereas others found negative (Kutan et al., 2017; Lee et al., 2020; Khan et al., 2020; Sarhangi et al., 2021) even insignificant (Law et al., 2014; Law et al., 2008; Shahbaz et al., 2016) trade-off between FIN and IQL. Thus, a consistent and

agreed relationship between IQL and FIN has yet to be recognized. Such gaps in the available debate do not permit us to draw reliable conclusions about the drivers of FIN, which resultantly hampers dependable managerial recommendations.

Considering the above gaps in the current debate, it is identified that there is a need to systematically and quantitatively review the relationships between IQL and FIN. Thus, we present a systematic and quantitative literature review on the relation between IQL and FIN and the drivers of FIN. For this, the study has used a systematic review procedure and meta-analysis regression method established to recognize and quantify the nexus drawn from the current debate (Tahir et al., 2022; Schmidt and Hunter, 2014).

We, thus, contribute to the current debate of FIN and IQL in diverse ways. Firstly, it synthesizes the published research's contributions in the FIN field. Secondly, through the systematic literature review analysis, we highlight the gaps in the existing knowledge of FIN and IQL. Thirdly, we have used the meta-analysis procedure, to sum up past quantitative studies on FIN and IQL to identify the direction and strength of the relation. It is acute given that FIN and IQL nexus is still in its early stage, and thus, research on FIN and IQL is strong in some areas while weak in others. We have gathered 553 types of research on IQL and FIN for systematic LR and 36 quantitative research for MA. We find that IQL and GE are positively correlated with FIN and FD. Thus, we conclude that the knowledge has yet to develop that IQL matters for FIN vigorously.

LITERATURE REVIEW

Multiple previous attempts have explored the linkage between IQL and FIN. Much evidence has been found on the positive relationship between these variables. Most of the researchers have made an index of six indicators of governance to measure the IQL (Ahmed et al., 2021; Fukumi and Nishijima, 2010; Valeriani and Peluso, 2011; Nawaz et al., 2014). These indicators include “government effectiveness (GE), political stability (PS), voice and accountability (VA), control of corruption (CC), regulatory quality (RQ) and the rule of law (RL).” Some researchers have scrutinized the impact of GE (Wen et al., 2021), CC (Song et al., 2021), and PS (Alhassan et al., 2021) on different financial indicators, i.e., financial liberalization (FL), financial openness (FO), and FIN. To our knowledge, researchers gave limited attention to the role of RL, RQ, and VA. FIN is alternatively used with financial development (FD). Researchers employed different proxies to measure FIN. For instance,

"bank credit to the private sector (Tahir et al., 2018; Ullah et al., 2023b), liquid liabilities (Odhiambo, 2010), domestic private credit to the banking sector (% of GDP) (Al Mamun et al., 2018)." In comparison, some researchers have made an index by employing different proxies of FIN to capture a more favorable impact (Ahmed et al., 2021; Bauto et al., 2018; Ahmed et al., 2020).

The theory of law and finance highlights the importance of quality institutions, especially when implementing the law. Numerous researchers have used different indicators of institutional quality in their studies, which encourage financial innovation. Law and Azman-Saini (2018) highlight that when political institutions are weak or dysfunctional, the advantages of defaulting on financial contracts may become so apparent that they overshadow the importance of understanding the contract itself. The authors argue that robust institutions are necessary to ensure the effectiveness of financial markets in allocating resources toward productive activities. Many researchers have observed the significant interlinkage between these variables. For example, Pagano and Volpin (2001) stated that static political organizations are more inclined toward providing finance. Many other studies also found similar relationships when they used the polity index as a proxy of institutional quality (Huang, 2010). However, the findings of other studies contradict these conclusions. Some studies (Almarzoqi et al., 2015) did not reveal any supporting evidence on the association between IQL and FIN.

Debate still needs to be finished; some researchers have come into the field with a novel proxy of IQL (i.e., economic freedom) (Li, 2007; Ahmed, 2013) to quantify the role of IQL in FIN. Economic freedom comprises voluntary exchange, privately owned property, personal choice, and freedom to enter and compete in the market. From the references above, except for the study of Hauner (2009), other research showed a significant and positive affiliation between economic freedom and FIN. Summarizing the above debate, it is concluded that strong evidence exists on the positive affiliation between IQL and FD. However, only a few studies reported insignificant or negative relationships (see Appendix A1). These results vary across the nations and on the basis of proxy measurement.

Although studies on the IQL-FIN nexus are not very extensive in the available body of knowledge, results still vary under different contexts, methodologies, and proxies employed by the researchers to measure IQL and FIN. The present study reviews important studies to

show how the impact varies. For example, Law and Azman-Saini (2012) collected data from developed and developing economies and showed a positive relationship between IQL and FIN. Khan et al. (2019) did the same research in the US context and confirmed the positive connection between IQL and FIN. According to this study, IQL brings positive changes and thus improves FIN. Kutan et al. (2017) researched 21 MENA nations and found that IQL tends to decline FIN. Khan et al. (2020) did similar research in the context of EAGLEs nations and found that an increase in IQL leads to an increase in FIN. Anwar and Cooray (2012) stated that perfection in political rights and civil liberties positively improves FD. Andrianova et al. (2011) analyzed the financial markets of Europe and Asia and highlighted the critical role of government in enabling the global financial system. The study revealed the positive affiliation between country governance and FD. In contrast, Lee et al. (2020) found a negative relationship between government effectiveness and FIN. Similarly, Khan et al. (2020) highlighted the negative impact of the rule of law on financial development. Moreover, Law et al. (2008; 2014) and Shahbaz et al. (2014) also found little relation between IQL with FD.

Alsagr and van Hemmen (2021) contributed significantly to the IQL-FIN nexus. The authors took corruption as an indicator of IQL with the aim to test its symmetric and non-symmetric influence on FIN for the case of BRICS economies from 1991 to 2018. Results of the study illustrated that a positive shock in corruption tends to reduce FIN while a negative shock in corruption tends to increase FIN. Results elucidated that the impact of the positive shock is more prominent. Saied and Awad-Allah (2020) conducted research on 50 African economies to explore the role of control of corruption on FD and found that control of corruption tends to increase financial resources provided by the financial corporations to the private sector (as % of GDP). Results showed a positive coefficient of correlation between control of corruption and FD. Mäntylä (2017) conducted similar research by employing data from 13 economies. The study used different indicators of FD, “e.g., financial depth, financial access, financial stability, and financial efficiency." The study's results showed the positive impact of government effectiveness on all the FD indicators. The findings suggested that government effectiveness caused to increase financial access, depth, efficiency, and stability in the sample countries. Mardan (2017) pointed out that the restrictions to the external funds raising

imposed by the country's governance (e.g., interest releases and tax policies) improve the FIN.

Sarhangi et al. (2021) selected different indicators of country governance (i.e., government effectiveness, regulatory quality, political stability, and the rule of law) along with government budget deficit to explore their contributions to the FD. The study showed that all the selected variables were negatively related to FD except the rule of law. Hussain et al. (2021) believe that financial literacy is the crucial factor in promoting the FIN and found that strong IQL plays a positive role in promoting financial literacy, which positively contributes to the FIN. Shaohua et al. (2021) gathered data from 113 economies and scrutinized the role of transparent governmental and anti-monopoly policies on the development of the financial markets. The results of the study exhibited a positive linkage among variables of interest. The study concluded that these policies control corruption, which resultantly promotes FD. Ehigiamusoe et al. (2021) pointed out the positive role of governmental stability on the development of the financial sector. Olaniyi and Oladeji (2021) highlighted similar findings in the case of West African Economies. Aluko and Ibrahim (2020) analyzed Sub-Saharan Africa and found that financial institutions perform more efficiently under stable IQL. By summing up the above debate, we postulate that:

H_1: *There is a significant positive relation between institutional quality and financial innovation.*

METHODOLOGY

There are certain similarities between systematic literature review (LR) and meta-analysis (MA). Both methods analyze the erraticism of the impact sizes amongst the variables of interest from a specific perspective. There also exist some certain differences between MA and systematic LR. For concern, the MA only analyzes and validates quantitative research findings. It acquires the variances and mean values of the impacts amongst variables, estimates the confidence interval (CI), and measures the variability in various studies conducted (Field and Gillett 2010; Li and Chang 2013). It resolves the problem of inconsistency in various research findings due to the differences in effect size of prior research. On the other hand, LR allows a scholar to "map and assess the existing intellectual territory and to specify a research question to develop the existing body of knowledge further" (Tranfield et al., 2003).

This study explains the systematic LR procedure followed by the explanation of the MA procedure. First, the study explores the trade-off between FIN and IQL in the process of systematic LR. Second, to resolve the problem of inconsistency in various research findings that occurred due to the differences in effect size of prior research, we conducted MA to increase the size of the sample and identify the uncertainty of the findings, thus, elaborating and signifying the nexus between FIN and IQL.

Systematic Literature Review (LR) Procedure

The present study employed a systematic LR approach to investigate the intricate relationship between FIN and IQL. Within the realm of academic research, the adoption of a systematic LR is considered indispensable, as it allows for a focused and methodical assessment, thereby serving as a valuable tool within the field of management studies. The primary aim of conducting a literature review is to meticulously navigate and evaluate the existing body of knowledge, ultimately formulating a research question that contributes to the progression of scholarly understanding (Tranfield et al., 2003). Nevertheless, it is worth noting that numerous studies in the field of management have traditionally adopted a narrative approach, which has garnered criticism for its limited criticality and analytical rigor in certain instances (Denyer et al., 2009). Consequently, an escalating demand for the adoption of a systematic approach to reviewing prior research has emerged, championed by scholars advocating for a more thorough and comprehensive assessment (Rousseau et al., 2008; Vázquez et al., 2013).

A systematic LR differs from a descriptive equivalent as it adopts a rational, reproducible, and unbiased approach (Tranfield et al., 2003). In the field of management, comprehensive, detailed, and insightful literature evaluations are particularly important (Denyer et al., 2009). A systematic LR provides a concise overview of the current state of knowledge while offering enlightening insights into its evolutionary trajectory through a rigorous procedure (Rousseau et al., 2008). We used step-by-step process of review suggested by prior scholars (Tranfield et al., 2003) to conduct systematic LR.

Before the assessment, a group of well-known experts in finance and economics got together to come up with a method for a thorough and thorough review. Using their expertise, the people on this panel talked about the multidisciplinary nature of FIN and IQL and how perspectives are likely to change in this fast-changing area. Also, earlier academic works were carefully looked at and analyzed in order to learn more about how trends in FIN and

IQL research are changing. This first part of the study was mostly about setting up the review protocol. This meant coming up with relevant research questions, coming up with inclusion and exclusion criteria to help choose relevant studies, and coming up with strict protocols for identifying and getting rid of low-quality research. So, the main goal of this review was to answer the question, "What is the exact relationship between FIN and IQL?" Also, a full set of review criteria was made to weed out papers that didn't have much academic value and make sure that only high-quality studies were included.

Criteria of Inclusion/Exclusion and Keywords used for Search

The following are the inclusion and exclusion criteria for research publications to be reviewed:

- The article must be published between the period of 2000-2022 (as most of the articles fall in this period).
- The article must address financial innovation or institutional quality or their measurements.
- The article must have focused on the research question.
- The article must be written in the English language.
- The article focusing on other aspects of finance and economics was excluded.
- The articles not peer-reviewed (such as book chapters and conference proceedings) publications were also excluded.
- The documents which are not peer-reviewed were excluded from the sample.
- The keywords used for searching relevant studies were: “Institutional Quality, Financial Innovation, Financial Development, Government Effectiveness.”

The Selection Process

We employed a systematic LR approach (suggested by experts’ panel) in order to identify related keywords on our research topic. These keywords encompassed a comprehensive range of terms associated with the subject, such as “innovation, financial innovation, stock market capitalization, financial development, liquid liabilities, stock market turnover, stock market total value, domestic credit to the private sector, institutional quality, the rule of law, government effectiveness, country governance, control of corruption, credit rights, political stability, legal formalism, capital flows, credit ratings, World Bank loans, government debts, and stock market liberalization”.

These carefully chosen search terms were then utilized to query various well-suited databases that cater to management research. The databases were Emerald, JSTOR, Sage, Elsevier, Springer, Taylor & Francis, Web of Knowledge, Informs, Oxford, the American Economic Association, and Wiley Online Library. Publish and Perish software was used to collect the related articles.. This software can easily retrieve and analyze the citations by using diverse data sources of the web of science, google scholar, crossref, semantic scholar, Scopus, etc. It retrieves raw data, analyses them and shows a variety of citations matrices such as h-index, total citations and the total number of articles.

The detected keywords and search strings served as the basis for the literature selection procedure. Initially, the titles and abstracts of retrieved papers were evaluated against established inclusion and exclusion criteria. Furthermore, the references and citations of the selected papers were rigorously evaluated to determine their relevance and eligibility. During this iterative procedure, 811 articles were first discovered and refined. In addition, Google Scholar was used to broaden the search and include any other relevant publications. As previously stated, duplicate papers from the databases were meticulously deleted, and the remaining references and citations were scrutinized based on the predetermined inclusion and exclusion criteria. As a consequence, a total of 553 papers were judged appropriate for further study and analysis.

To assure the quality of the selected papers, precise criteria were used to assess the rigor of each study. These criteria included correct referencing practises and explicit results supported by strong arguments and evidence. All of the articles included in the evaluation satisfied these high quality assessment criteria. Furthermore, the final sample of 553 articles underwent an independent expert review to ensure consistency and reliability. Mendeley software was utilized to effectively manage and organize the reference details of the selected papers, with manual cross-checking performed to guarantee accuracy. The data extracted from the selected articles were synthesized to identify recurring themes and patterns. The validation process involved a comprehensive reassessment of all the articles in the sample, including the entire set of papers that met the assessment as mentioned above criteria.

Meta-Analysis Procedure

After the prior published review studies in the management literature (Klier et al., 2017; Blut et al., 2015), this study employs the analytical guidelines of Hunter and Schmidt (2004). This

methodology uses a correlation coefficient (r) to analyze the samples. This technique of MA is beneficial over others as it offers the procedures to rectify the sampling and measurement errors (Hunter and Schmidt, 2004). The authors autonomously coded all the outcomes and predictors in the data set of MA. Before conducting the analysis, the study corrected measurement and sampling errors. We have estimated a "sample size-weighted correlation" to correct the sampling error, and a mean coefficient of reliability has been computed for the correlations. Where the estimates of reliability were not given, we have used the reliability estimates' average for that link from other research papers included in the current study. For the measurement error, we have divided each of the given correlations by square roots of the reliabilities of the two constructs. Besides the unweighted correlation (Avg. r) of sample size and the reliability-corrected and weighted (rc) sample size, we have calculated the confidence intervals (CI) for RC. The significance of rc is designated by CI, which does not include a true zero (Geyskens et al., 2009).

Criteria of Inclusion/Exclusion in MA

A set of empirical research studies involved in systematic LR is also included in MA. We included only empirical articles in the first step, and the simulation and replication articles were removed. Secondly, the studies that utilized the same data set and similar correlations in the prior published articles were also removed. Third, the empirical papers on the nexus between IQL and FIN were included, and the documents with diverse purposes, themes, and qualitative papers were deleted. The papers containing practical information such as correlation coefficients, p-values, t-values, sample size, coefficients of regressions, correlation matrix, and path coefficients that could be transformed into the coefficients of correlation were inserted. Lastly, by keeping in mind the analytical suggestions of Hunter and Schmidt (2004) and past published research (Schmidt et al., 2008, Eby et al., 2008, among others), we have included variables with at least 4 empirical samples in data analysis. Thus, a total of 36 empirical papers were collected with a cumulative size of a sample of 8840.

Variables

The study uses institutional quality as a predictor and financial innovation as the outcome variable. Several measurements of these variables are available in the literature. Financial innovation (FIN) is often measured by "domestic credit to the private sector (DCPS) as a percentage of GDP." Other measures of FIN include stock market capitalization (SMC),

financial development, a ratio of liquid liabilities to GDP, stock market turnover, the stock market total value to GDP ratio, SMC to GDP ratio, and domestic credit to GDP ratio. This study takes two categories of FIN; if DCPS measures the FIN, it is named financial innovation (FIN), and if it is measured with other proxies, it is named financial development (FD); FD is also a measure of FIN. Institutional quality (IQL) is generally measured using an index of six components. Other measures include the rule of law, government effectiveness, control of corruption, credit rights, political stability, legal formalism, capital flows, credit ratings, world bank loans, government debts, stock market liberalization, etc. If measured using six indicators, it is termed IQL, and government effectiveness (GE) if the measure differs.

RESULTS

Systematic Literature Review (LR)

During the last decades, the systematic LR assisted scholars in better examining the research trends within a specific area and recognizing future research guidelines. Regardless of the diverse data analysis techniques, we focused on the number of papers published per year, the number of documents by 4 year-interval, the number of papers based on publishers, the most cited documents and authors, and journals having the most number of papers as these parameters are appropriate for determining yield and its influence. The dataset was retrieved from google scholar on February 10, 2022, which resulted in 811 documents initially with a final sample of 553. Besides, Microsoft Excel was used to provide a graphical representation of data.

Most Cited Articles

Table 1 presents 30 highly cited papers (greater than 3500 citations) in data with the publication year, the total number of citations, authors' names, cites per author, and cites per year. The highly cited article by Anderson and Van Wincoop (2003) has been cited 9601 times, accounting for 1.486% of the total number of citations in our study period. Of these 30 highly cited articles, 11 documents were published between 2000-2003, 14 were published between 2004-2007, and 5 were published from 2008 to 2010. The 5 most cited documents account for 6.38% of total citations in the sample, while 10 highly cited articles represent 10.21%. The document with the most citations was cited 505 times yearly, with 4801 citations per author.

Table 1. Articles with Most Citations

Sr. No.	Author	Year	Citations	Cites Per Year	Cites Per Author
1	Anderson & Van Wincoop	2003	9601	505.32	4801
2	Orlitzky et al.	2003	9251	486.89	3084
3	Williamson	2000	8651	393.23	8651
4	Kline & Rosenberg	2010	7298	608.17	3649
5	Burnside & Dollar	2000	6433	292.41	3217
6	Campbell	2007	5275	351.67	5275
7	McWilliams & Siegel	2000	5051	229.59	2526
8	Brunnermeier	2009	4945	380.38	4945
9	Altbach & Knight	2007	4718	314.53	2359
10	He & Wong	2004	4697	260.94	2349
11	Smarzynska & Javorcik	2004	4525	251.39	4525
12	Faccio	2006	4457	278.56	4457
13	Carlile	2002	4451	222.55	4451
14	Geels	2004	4423	245.72	4423
15	Rajan & Zingales	2003	4362	229.58	2181
16	Reinhart & Rogoff	2010	4343	361.92	2172
17	Johnson et al.	2000	4311	195.95	1437
18	Guiso et al.	2006	4149	259.31	1383
19	Acemoglu & Johnson	2005	4099	241.12	2050
20	Luo & Bhattacharya	2006	4063	253.94	2032
21	Schneider & Enste	2000	3986	181.18	1993
22	Edquist	2010	3983	331.92	3983
23	Etzkowitz et al.	2000	3978	180.82	995
24	Hausmann et al.	2007	3906	260.4	1302
25	Jansen et al.	2006	3819	238.69	1273
26	Carlile	2004	3762	209.00	3762
27	Crossan & Apaydin	2010	3740	311.67	1870
28	Alfaro et al.	2004	3571	198.39	893
29	Fisman	2001	3557	169.38	3557
30	Mehlum et al.	2006	3506	219.13	1169

Moreover, Figure 1 shows the top 5 authors based on citations; Anderson and Van Wincoop (2003) were the highly cited authors (9601 citations), followed by Orlitzky et al. (2003) (9251 citations), Williamson (2000) (8651 citations), Kline and Rosenberg (2010) (7298 citations) and Burnside and Dollar (2000) (6433 citations). Besides, Figure 2 looks into the spread of citations by an interval of four years. The highest citation spread was seen in the period of 2004-2007 with 219956 citations, followed by 2000-2003 (212658 citations), 2008-2011 (137962 citations), 2012-2015 (60411 citations), 2016-2019 (14693 citations) and 2020-2022 (147 citations). Thus, the trend line shows a declining trend of citations from 2004 to 2022.

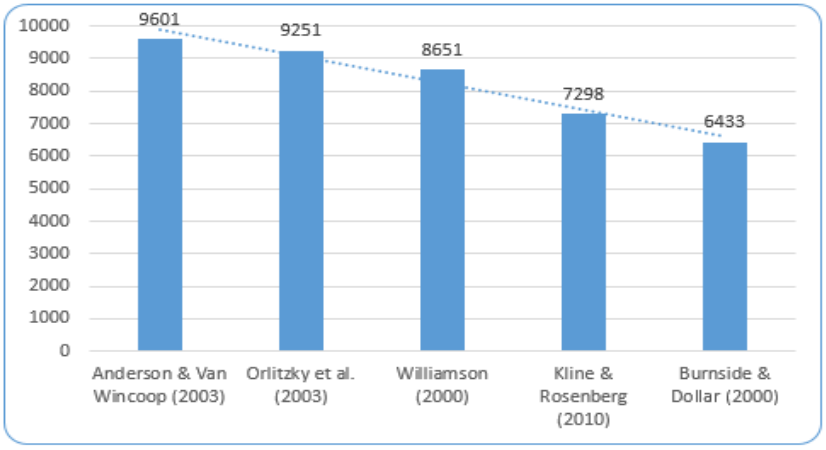

Figure 1. Top Five Authors based on Citations

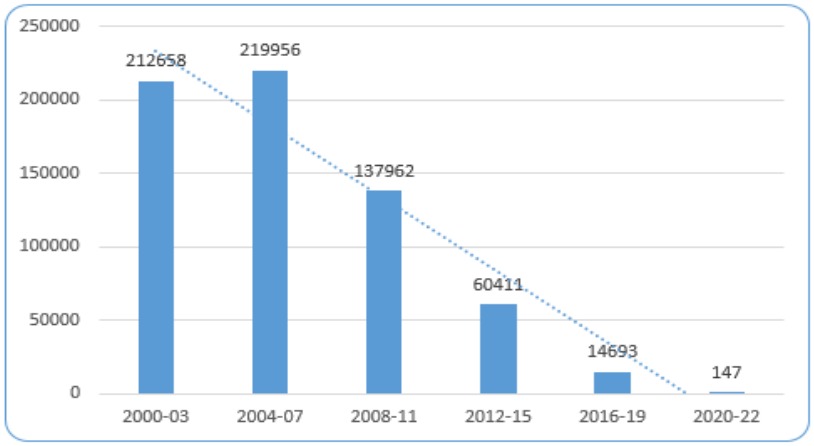

Figure 2. Spread of Citations by Four Years Interval

Number of Articles Published Each Year

Figure 3 summarizes the documents published every year during the period of study. It reveals that most documents were published in 2002 and 2011 (39 articles each year), representing about 14.10% of the total documents. Figure 4 summarizes the number of research articles published over four years. It shows that most of the documents (144) were published in the time between 2004 to 2007, representing about 26% of the total papers. Moreover, 125 articles were published during 2000-2003, 138 articles during 2008-2011, 82 documents during 2012-2015, 51 papers during 2016-2019, and 13 researches were published during 2020-2022. However, a decreasing trend was noted from 2004 to 2022.

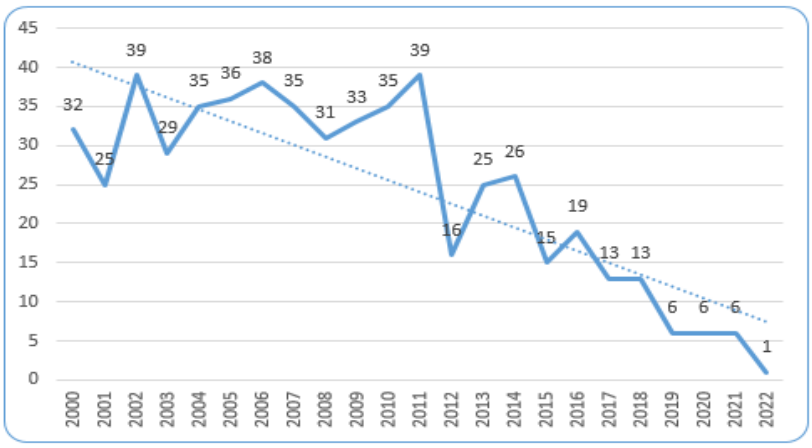

Figure 3. Number of Articles Published Per Year

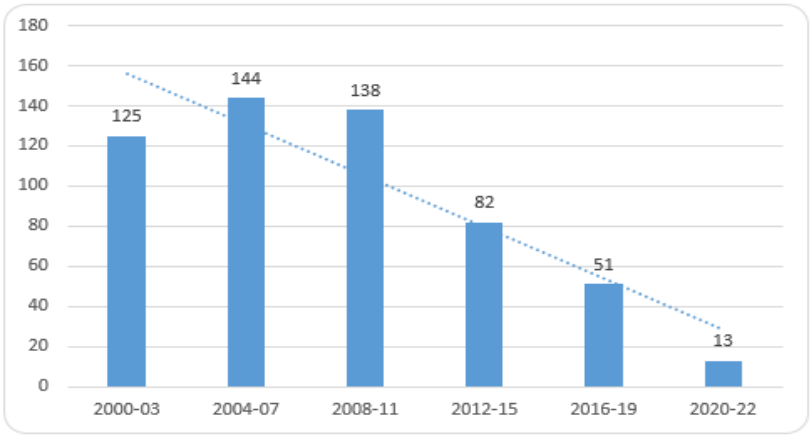

Figure 4. Number of Articles by Four Year Interval

Databases and Journals with Most Published Documents

Figure 5 displays the most number of documents based on the publishers. It shows that the "Database of Elsevier" has the most published articles, accounting for 23.15% of the total 553 documents. American economic association has 109 published documents, followed by Informs (82 documents), Wiley (34 documents), Taylor & Francis (32 documents), Sage (30 documents), Springer (27 documents), Oxford (24 documents), JSTOR (8 documents) and Emerald (8 documents). Figure 6 depicts ten highly productive and dynamic journals based on the total number of published documents. It can be seen that the journals “Management Science, Organization Science, and Research Philosophy” have the most published articles; they each have 35 documents published with them which accounts for about 19% of the total published articles.

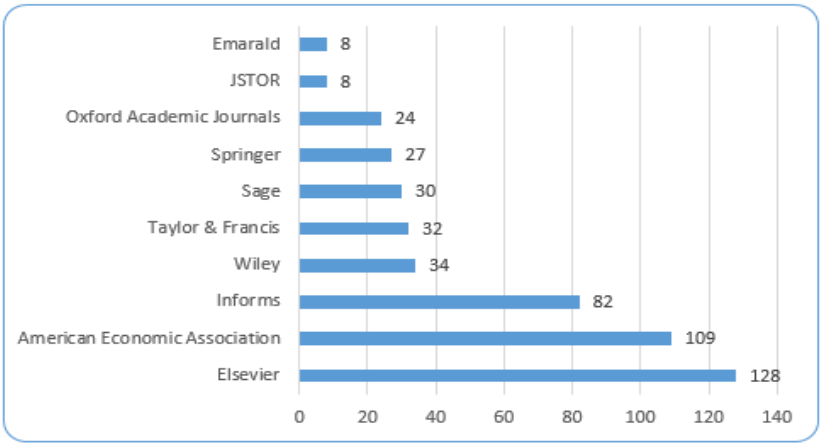

Figure 5. Number of Articles based on the Publisher

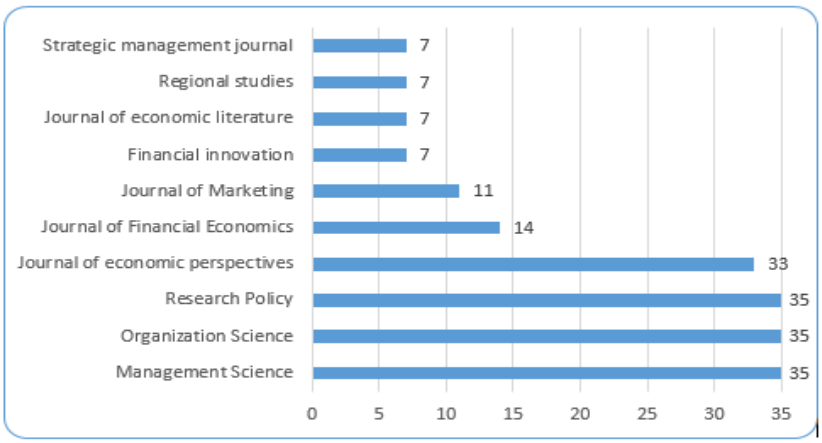

Figure 6. Journals with the Highest Number of Published Articles

Meta-Analysis (MA)

In the MA, we have included outcome and explanatory variables analyzed in the prior research studies. The papers that must contain practical information were included. By considering the analytical suggestions of Hunter and Schmidt (2004) and past published research (Schmidt et al., 2008, Eby et al., 2008, among others), we have included those variables with at least 4 empirical samples in the data analysis. Thus, 36 empirical papers were analyzed using a “Meta-Analysis Software CMA2.0”. The results of MA are reported in Table 2. The outputs in the Table indicate that 36 empirical studies (K) were included in the MA with an overall sample of 8840 (N). The study estimates a "sample size-weighted correlation" to correct the sampling error, and a mean coefficient of reliability has been computed for the correlations. For the measurement error, the study has divided each of the

given correlations by square roots of the reliabilities of two constructs. For the unweighted correlation (Avg. r or mean r) of sample size, and the reliability-corrected and weighted (rc) sample size, we have calculated CI for RC. The SDc is the standard deviation of RC. The significance of rc is designated by CI, which does not include a '0' (Geyskens et al., 2009).

Table 2. Results of Meta-Analysis

Variables	K	N	Avg. r	r_c	SD_c	95% CI		Z-Value	*p*	Q	Q *df*	Q *p*
						LL	UL					
Predictors												
IQL	9	2193	0.553	0.462	0.089	0.523	0.581	29.140	0.00	194.356	8	0.00
GE	5	1402	0.322	0.255	0.125	0.274	0.368	12.488	0.00	98.364	4	0.00
Outcomes												
FIN	8	1604	0.219	0.547	0.201	0.172	0.265	8.907	0.00	113.654	7	0.00
FD	14	3641	0.496	0.369	0.156	0.471	0.520	32.811	0.00	104.099	13	0.00

Note: "IQL is institutional quality; GE is government effectiveness; FIN is financial innovation, FD is financial development, K is number of studies; N is sample size; Avg *r* is mean *r* (unweighted); r_c is sample size weighted and reliability-corrected mean; SDc is standard deviation for r_c; CI is confidence interval; LL is lower limit; UL is upper limit; Q is chi-square test of heterogeneity; Qdf is degree of freedom for chi-square test; Q p is p-value for chi-square test."

Table 2 reports the outputs of the heterogeneity test and MA for the effect of IQL on FIN. The significant p-values of the heterogeneity test (Q p) indicate the existence of heterogeneity in literature data. As indicated in Table 2, a significantly positive correlation exists between IQL, FIN, and FD ($r = 0.553$; $p < 0.001$). As the $r > 0.40$, there is a "significant, high-strength and positive relation" between IQL and the measures of financial innovation, showing that IQL significantly improves FIN and FD. Moreover, GE (an alternate measure of IQL) is also significantly related to FIN and FD ($r = 0.553$; $p < 0.001$). It also indicates that GE has a "significant, high-strength and positive relationship" with FIN and FD, which is robust with the IQL measure of institutional quality indexing. On the other hand, FD is also significantly correlated ($r = 0.496$; $p < 0.001$) with both measures of institutional quality, IQL, and GE. Besides, the r for FIN is 0.219 ($p < 0.001$), showing significant relation with IQL and GE. In line with Durlak and Lipsey (1991), when the size of the effect (r) is ≥ 0.25, the relation is considered moderately correlated. Thus, the output shows that FD has a "positive, significant, and moderate-to-high-strength correlation" with GE and IQL. Thus, the findings are fairly robust (Rothstein et al., 2005). Consequently, our H1 is acknowledged. Out findings of MA are robust with prior studies (Khan et al., 2019, 2020; Alsagr and van Hemmen, 2021; Saied and Awad-Allah, 2020; Mardan, 2017; Sarhangi et al., 2021; Shaohua et al., 2021; Ehigiamusoe et al., 2021; Aluko and Ibrahim, 2020). Whereas, the results contradict some

researchers (Kutan et al., 2017; Lee et al., 2020; Khan et al., 2020; Sarhangi et al., 2021; Law et al., 2014; Law et al., 2008; Shahbaz et al., 2016).

DISCUSSION AND CONCLUSION

Discussion

The study addresses the existing knowledge gap regarding the relationship between IQL and FIN. While there has been an increase in research on this topic, there needs to be a systematic LR specifically focusing on this area, as Damanpour and Aravind (2012) pointed out. Therefore, this study aims to fill this gap by conducting a comprehensive and systematic LR of the available literature on the relationship between IQL and FIN. By examining and synthesizing the findings from 553 published documents from 2000 to 2022, we aim to comprehensively understand the prevailing empirical research while addressing any contradictions and inconsistencies in the literature.

The existing body of literature presents conflicting and inconsistent results regarding the nature and strength of the relationship between IQL and FIN. Some scholars have found a positive trade-off between these variables (such as Alsagr and van Hemmen, 2021; Sarhangi et al., 2021; Ehigiamusoe et al., 2021), while others have identified a negative (e.g., Lee et al., 2020; Sarhangi et al., 2021) or even insignificant (e.g., Law et al., 2014; Shahbaz et al., 2016) relationship. Consequently, a consistent and widely accepted relationship between IQL and FIN has yet to be established. Such inconsistencies in the existing discourse hinder the ability to draw reliable conclusions and provide dependable managerial recommendations.

This study contributes to the existing knowledge of FIN and IQL in several ways. Firstly, it synthesizes published research contributions in FIN and IQL, providing a comprehensive overview of the available literature. Secondly, through a systematic literature analysis, this study identifies the gaps in the current knowledge on the relationship between FIN and IQL. Thirdly, a meta-analysis (MA) procedure is employed to summarize past quantitative studies and examine the direction and strength of the relationship between FIN and IQL. This is especially useful given that the FIN-IQL connection remains in its infancy, with research in certain fields being stronger than others.

The systematic LR findings reveal that the IQL-FIN relationship results need to be more consistent. While several scholars have documented positive associations (Alsagr and van Hemmen, 2021; Saied and Awad-Allah, 2020; Mardan, 2017; Sarhangi et al., 2021; Shaohua

et al., 2021; Ehigiamusoe et al., 2021), others have identified negative (Lee et al., 2020; Khan et al., 2020; Sarhangi et al., 2021) or insignificant (Law et al., 2014; Shahbaz et al., 2016) relationships. However, the findings from the meta-analysis indicate a significant and positive relationship between IQL and FIN, which is consistent with prior studies (Alsagr and van Hemmen, 2021; Saied and Awad-Allah, 2020; Mardan, 2017; Sarhangi et al., 2021; Shaohua et al., 2021; Ehigiamusoe et al., 2021). Previous studies employing meta-analysis have suggested biases or differences may influence inconsistent results in measuring variables. For instance, Camisón and Villar-López (2014) highlighted that the effect of a predictor could be influenced by the specific measurement employed. Therefore, we observed that some scholars (e.g., Andrianova et al., 2011; Shaohua et al., 2021; Alsagr and van Hemmen, 2021; Olaniyi and Oladeji, 2021; Saied and Awad-Allah, 2020) had utilized a single measure of IQL, while others (Aluko and Ibrahim, 2020; Hussain et al., 2021; Shahbaz et al., 2016; Altunbaş and Thornton, 2012, among others) have employed a multidimensional measure.

Policy Implications

This study has significant policy implications for organizational leaders and practitioners seeking to foster FIN within their organizations. By offering a comprehensive framework and synthesizing the findings of our review, this research provides valuable insights into the factors that can either facilitate or hinder FIN. These insights enable enterprises to prioritize and direct their attention toward the appropriate facilitators of FIN, ultimately enhancing their innovation potential. Improving IQL as a strategic action for managers and practitioners is one critical policy implication obtained from our findings. While numerous scholars have discovered a positive trade-off between IQL and FIN, it is worth mentioning that other researchers have highlighted the complexities of this relationship. As a result, organizations should thoroughly examine and improve their IQL before embarking on innovation efforts. This may entail steps such as adequate development or outsourcing to improve the overall quality of their institutions, which can contribute to a favorable climate for innovation.

Furthermore, our research illustrates the range of FIN drivers and outcomes, giving significant insights for management in navigating the opportunities they find along the innovation process. Organizations can better align their objectives and decision-making by recognizing and accounting for this variety. As a result, our research provides policy

recommendations for encouraging FIN. These recommendations include prioritizing IQL improvement, taking into account the multidimensional nature of the relationship between IQL and FIN, and recognising the multiplicity of determinants and consequences in the innovation landscape. Organizations can build a FIN-friendly atmosphere and improve their innovation potential by following these suggestions.

Concluding Remarks

Practitioners and researchers have been paying close attention to the link between FIN and IQL. While various studies have investigated this relationship, there is still a need for comprehensive research that synthesizes and integrates existing knowledge on the subject. Our research addressed this gap by developing a model of the IQL-FIN nexus, which improves our knowledge of this interaction. Our methodology is useful in practice because it helps institutions to examine their strengths and weaknesses in embracing innovations. Organizations may make informed judgements about introducing innovative practices by getting insights into the IQL-FIN relationship, boosting their chances of success and minimizing the waste of important resources.

Furthermore, our work provides a good beginning point for future researchers who want to investigate different outcomes or factors in the FIN and IQL domains. The wide range of outcomes and factors studied in our study provides a solid platform for additional investigation and deeper insights into this topic. Overall, our research adds to previous information by thoroughly exploring the link between FIN and IQL. By bridging the gap in the literature and providing practical consequences, we hope to motivate more research and encourage institutions to use the power of FIN in conjunction with IQL to promote success and long-term growth.

REFERENCES

Acemoglu, D., & Johnson, S. (2005). Unbundling institutions. *Journal of political Economy*, *113*(5), 949-995.

Ahmed, A.D. (2013). Effects of Financial Liberalization on Financial Market Development and Economic Performance of the SSA Region: An Empirical Assessment. *Economic Modelling*, 30, 261–273.

Ahmed, F., Kousar, S., Pervaiz, A., & Ramos-Requena, J. P. (2020). Financial development, institutional quality, and environmental degradation nexus: new evidence from asymmetric ARDL co-integration approach. *Sustainability*, *12*(18), 7812.

Ahmed, F., Kousar, S., Pervaiz, A., & Shabbir, A. (2021). Do institutional quality and financial development affect sustainable economic growth? Evidence from South Asian countries. *Borsa Istanbul Review*, 22(1), 189-196.

Al Mamun, M. S., Ariffin, M. I., & Hamid, Z. (2018). Does Domestic Credit of the Banking Sector Promote Economic Growth? Evidence from Bangladesh. *International Journal*, *3*(1), 33-55.

Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: the role of local financial markets. *Journal of international economics*, *64*(1), 89-112.

Alhassan, A., Li, L., Reddy, K., & Duppati, G. (2021). The relationship between political instability and financial inclusion: Evidence from Middle East and North Africa. *International Journal of Finance & Economics*, *26*(1), 353-374.

Almarzoqi, R.M., S. Ben Naceur and A. Kotak (2015). What Matters for Financial Development and Stability? IMF Working Paper 15/173, International Monetary Fund, Washington DC.

Alsagr, N., & van Hemmen, S. (2021). The asymmetric influence of corruption on financial development: fresh evidence from BRICS economies. *Journal of Financial Crime*. https://doi.org/10.1108/JFC-03-2021-0062

Altbach, P. G., & Knight, J. (2007). The internationalization of higher education: Motivations and realities. *Journal of studies in international education*, *11*(3-4), 290-305.

Aluko, O. A., & Ibrahim, M. (2020). On the macroeconomic determinants of financial institutions development in sub-Saharan Africa. *International Review of Economics*, *67*(1), 69-85.

Anderson, J. E., & Van Wincoop, E. (2003). Gravity with gravitas: A solution to the border puzzle. *American economic review*, *93*(1), 170-192.

Andrianova, S., Demetriades, P., & Xu, C. (2011). Political economy origins of financial markets in Europe and Asia. *World Development*, *39*(5), 686-699.

Anwar, S., & Cooray, A. (2012). Financial development, political rights, civil liberties and economic growth: Evidence from South Asia. *Economic Modelling*, *29*(3), 974-981.

Batuo, M., Mlambo, K., & Asongu, S. (2018). Linkages between financial development, financial instability, financial liberalisation and economic growth in Africa. *Research in International Business and Finance*, *45*, 168-179.

Becerra, O., E. Cavallo, and C. Scartascini (2012). The Politics of Financial Development: The role of Interest Groups and Government Capabilities. *Journal of Banking and Finance*, 36, 626-643.

Beck, T., A. Demirgüç-Kunt, and R. Levine (2003). Law and Finance: Why Does Legal Origin Matter? *Journal of Comparative Economics*, 31, 653-675.

Ben Naceur, S. S. Ghazouani and M. Omran (2008). Does Stock Market Liberalization Spur Financial and Economic Development in the MENA Region? *Journal of Comparative Economics*, 36(4), 673–693.

Bhutta, A. I., Ullah, M. R., Sultan, J., Riaz, A., & Sheikh, M. F. (2022). Impact of green energy production, green innovation, financial development on environment quality: a role of country governance in Pakistan. *International Journal of Energy Economics and Policy*, *12*, 316-326.

Blut, M., Frennea, C. M., Mittal, V., & Mothersbaugh, D. L. (2015). How procedural, financial and relational switching costs affect customer satisfaction, repurchase intentions, and repurchase behavior: A meta-analysis. *International Journal of Research in Marketing*, *32*(2), 226-229.

Brunnermeier, M. K. (2009). Deciphering the liquidity and credit crunch 2007-2008. *Journal of Economic perspectives*, *23*(1), 77-100.

Burnside, C., & Dollar, D. (2000). Aid, policies, and growth. *American economic review*, *90*(4), 847-868.

Camisón, C., & Villar-López, A. (2014). Organizational innovation as an enabler of technological innovation capabilities and firm performance. *Journal of Business Research*, *67*(1), 2891-2902.

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of management Review*, *32*(3), 946-967.

Carlile, P. R. (2002). A pragmatic view of knowledge and boundaries: Boundary objects in new product development. *Organization science*, *13*(4), 442-455.

Carlile, P. R. (2004). Transferring, translating, and transforming: An integrative framework for managing knowledge across boundaries. *Organization science*, *15*(5), 555-568.

Chinn, M. D., & Ito, H. (2006). What matters for financial development? Capital controls, institutions, and interactions. *Journal of development economics*, *81*(1), 163-192.

Claessens, S. and E. Perotti (2007). Finance and Inequality: Channels and Evidence. *Journal of Comparative Economics*, 35, 748–773.

Cooray, A. (2011). The Role of the Government in Financial Sector Development. *Economic Modelling*, 28 (3), 928-938.

Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of management studies*, *47*(6), 1154-1191.

Cull, R. and L. Effron (2008). World Bank Lending and Financial Sector Development. *The World Bank Economic Review*, 22(2), 315–343.

Dabla-Norris, E., K. Kochhar, F. Ricka, N. Suphaphiphat and E. Tsounta (2015). Causes and Consequences of Income Inequality: A Global Perspective. IMF Staff Discussion Note 15/13, International Monetary Fund, Washington DC.

Damanpour, F., & Aravind, D. (2012). Managerial innovation: Conceptions, processes, and antecedents. *Management and Organization Review*, *8*(2), 423-454.

De Gregorio, J. (1999). Financial Integration, Financial Development, and Economic Growth. *Estudios de Economia*, 26(2), 137–161.

Denyer, D. and Tranfield, D. (2009). Producing a Systematic Review. in Buchanan, D.A., and Bryman, A. (eds.), *The SAGE Handbook of Organizational Research Methods*, London: Sage.

Djankov, S., C. McLiesh and A. Shleifer (2007). Private Credit in 129 Countries. *Journal of Financial Economics*, 84, 299–329.

Durlak, J. A., & Lipsey, M. W. (1991). A practitioner's guide to meta-analysis. *American Journal of community psychology*, *19*(3), 291-332.

Eby, L. T., Allen, T. D., Evans, S. C., Ng, T., & DuBois, D. L. (2008). Does mentoring matter? A multidisciplinary meta-analysis comparing mentored and non-mentored individuals. *Journal of Vocational Behavior*, *72*(2), 254-267.

Edquist, C. (2010). Systems of innovation perspectives and challenges. *African Journal of Science, Technology, Innovation and Development*, *2*(3), 14-45.

Ehigiamusoe, K. U., & Samsurijan, M. S. (2021). What matters for finance-growth nexus? A critical survey of macroeconomic stability, institutions, financial and economic development. *International Journal of Finance & Economics*, *26*(4), 5302-5320.

Etzkowitz, H., Webster, A., Gebhardt, C., & Terra, B. R. C. (2000). The future of the university and the university of the future: evolution of ivory tower to entrepreneurial paradigm. *Research policy*, *29*(2), 313-330.

Faccio, M. (2006). Politically connected firms. *American economic review*, *96*(1), 369-386.

Field, A. P., & Gillett, R. (2010). How to do a meta-analysis. *British Journal of Mathematical and Statistical Psychology*, *63*(3), 665-694.

Fisman, R. (2001). Estimating the value of political connections. *American economic review*, *91*(4), 1095-1102.

Fukumi, A., & Nishijima, S. (2010). Institutional quality and foreign direct investment in Latin America and the Caribbean. *Applied Economics*, *42*(14), 1857-1864.

Galindo, A. and A. Micco (2004). Creditor Protection and Financial Markets: Empirical Evidence and Implications for Latin America. *Federal Reserve Bank of Atlanta Economic Review*, 2004.Q2, 29-37.

Geels, F. W. (2004). From sectoral systems of innovation to socio-technical systems: Insights about dynamics and change from sociology and institutional theory. *Research policy*, *33*(6-7), 897-920.

Geyskens, I., Krishnan, R., Steenkamp, J. B. E., & Cunha, P. V. (2009). A review and evaluation of meta-analysis practices in management research. *Journal of Management*, *35*(2), 393-419.

Girma S. and A. Shortland (2008). The Political Economy of Financial Development. *Oxford Economic Papers*, 60(4), 567–596.

Greenwood, J. and B. Jovanovic (1990). Financial Development, Growth, and the Distribution of Income. *Journal of Political Economy* 98, 1076–1107.

Guiso, L., Sapienza, P., & Zingales, L. (2006). Does culture affect economic outcomes?. *Journal of Economic perspectives*, *20*(2), 23-48.

Harper, J. and J. McNulty (2008). Financial System Size in Transition Economies: The Effect of Legal Origin. *Journal of Money, Credit and Banking*, 40(6), 1263–1280.

Hauner, D. (2009). Public Debt and Financial Development. *Journal of Development Economics*, 88, 171–183.

Hausmann, R., Hwang, J., & Rodrik, D. (2007). What you export matters. *Journal of economic growth*, *12*(1), 1-25.

He, Z. L., & Wong, P. K. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization science*, *15*(4), 481-494.

Herger, N., R. Hodler and M. Lobsiger (2008). What Determines Financial Development? Culture, Institutions or Trade? *Review of World Economics*, 144(3), 558-587.

Huang, Y. (2010). Political Institutions and Financial Development: An Empirical Study. *World Development*, 38(12), 1667–1677.

Hunter, J. E., & Schmidt, F. L. (2004). Methods of meta-analysis: Correcting error and bias in research findings (2nd edition). New York, NY: Academic Press.

Hussain, M., Yahya, F., & Waqas, M. (2021). Does strong governance stimulate the effect of economic freedom and financial literacy on financial inclusion? a cross-country evidence. *Future Business Journal*, *7*(1), 1-10.

Iturrioz, C., Aragón, C., & Narvaiza, L. (2015). How to foster shared innovation within SMEs' networks: Social capital and the role of intermediaries. *European Management Journal*, *33*(2), 104-115.

Jansen, J. J., Van Den Bosch, F. A., & Volberda, H. W. (2006). Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management science*, *52*(11), 1661-1674.

Jing-Hua, L. I., & Xiao-Ran, C. H. A. N. G. (2013). The influence factors of knowledge transfer: a meta-analytic review. *Studies in Science of Science*, (3), 394-406.

Johnson, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *American economic review*, *90*(2), 22-27.

Khan, M. A., Khan, M. A., Abdulahi, M. E., Liaqat, I., & Shah, S. S. H. (2019). Institutional quality and financial development: The United States perspective. *Journal of Multinational Financial Management*, *49*, 67-80.

Khan, M. A., Kong, D., Xiang, J., & Zhang, J. (2020). Impact of institutional quality on financial development: cross-country evidence based on emerging and growth-leading economies. *Emerging Markets Finance and Trade*, *56*(15), 3829-3845.

Kim, S. and E. Wu (2008). Sovereign Credit Ratings, Capital Flows and Financial Sector Development in Emerging Markets. *Emerging Markets Review*, 9, 17–39.

Klier, H., Schwens, C., Zapkau, F. B., & Dikova, D. (2017). Which resources matter how and where? A meta-analysis on firms' foreign establishment mode choice. *Journal of Management Studies*, *54*(3), 304-339.

Kline, S. J., & Rosenberg, N. (2010). An overview of innovation. *Studies on science and the innovation process: Selected works of Nathan Rosenberg*, 173-203.

Kutan, A. M., Samargandi, N., & Sohag, K. (2017). Does institutional quality matter for financial development and growth? Further evidence from MENA countries. *Australian Economic Papers*, *56*(3), 228-248.

La Porta, R., F. Lopez-de-Silanes, and A. Shleifer (2002). Government Ownership of Banks. *The Journal of Finance*, 57(1), 265-301.

Law, S. H., & Azman-Saini, W. N. W. (2008). The quality of institutions and financial development. Available at: https://mpra.ub.uni-muenchen.de/id/eprint/12107

Law, S. H., & Azman-Saini, W. N. W. (2012). Institutional quality, governance, and financial development. *Economics of Governance*, *13*(3), 217-236.

Law, S. H., Tan, H. B., & Azman-Saini, W. N. W. (2014). Financial development and income inequality at different levels of institutional quality. *Emerging Markets Finance and Trade*, *50*(sup1), 21-33.

Law, S.H. and M.S. Habibullah (2009). The Determinants of Financial Development: Institutions, Openness and Financial Liberalisation. *South African Journal of Economics*, 77(1), 45-58.

Law, S.H. and P. Demetriades (2006). Openness, Institutions and Financial Development. Mimeo, University of London, Birkbeck.

Le, T., J. Kim and M. Lee (2016). Institutional Quality, Trade Openness, and Financial Sector Development in Asia: An Empirical Investigation. *Emerging Markets Finance & Trade*, 52, 1047–1059.

Lee, C. C., Wang, C. W., & Ho, S. J. (2020). Financial innovation and bank growth: The role of institutional environments. *The North American Journal of Economics and Finance*, *53*, 101195.

Levine, R., N. Loayza, and T. Beck (2000). Financial Intermediation and Growth: Causality and Causes. *Journal of Monetary Economics*, 46, 31–77.

Li, K. (2007). The Growth in Equity Market Size and Trading Activity: An International Study. *Journal of Empirical Finance*, 14 (1), 59–90.

Luo, X., & Bhattacharya, C. B. (2006). Corporate social responsibility, customer satisfaction, and market value. *Journal of marketing*, *70*(4), 1-18.

Mäntylä, M. (2017). The Effect of Control of Corruption on Financial Development. Available at: https://osuva.uwasa.fi/handle/10024/3420

Mardan, M. (2017). Why countries differ in thin capitalization rules: The role of financial development. *European Economic Review*, *91*, 1-14.

Mbulawa, S. (2015). Determinants of Financial Development in Southern Africa Development Community (SADC): Do Institutions Matter? *European Journal of Accounting Auditing and Finance Research*, 3(6), 39-62.

McNulty, J.E., J.T. Harper and A.K. Pennathur (2007). Financial Intermediation and the Rule of Law in the Transitional Economies of Central and Eastern Europe. *The Quarterly Review of Economics and Finance*, 47, 55–68.

McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification?. *Strategic management journal*, *21*(5), 603-609.

Mehlum, H., Moene, K., & Torvik, R. (2006). Institutions and the resource curse. *The economic journal*, *116*(508), 1-20.

Mol, M. J., & Birkinshaw, J. (2009). The sources of management innovation: When firms introduce new management practices. *Journal of Business Research*, *62*(12), 1269-1280.

Nawaz, S., Iqbal, N., & Khan, M. A. (2014). The impact of institutional quality on economic growth: Panel evidence. *The Pakistan Development Review*, 53(1), 15-31.

Newbert, S. L. (2007). Empirical research on the resource-based view of the firm: an assessment and suggestions for future research. *Strategic management journal*, *28*(2), 121-146.

Odhiambo, N. M. (2010). Finance-investment-growth nexus in South Africa: an ARDL-bounds testing procedure. *Economic Change and Restructuring*, *43*(3), 205-219.

Olaniyi, C. O., & Oladeji, S. I. (2021). Moderating the effect of institutional quality on the finance–growth nexus: insights from West African countries. *Economic Change and Restructuring*, *54*(1), 43-74.

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization studies*, *24*(3), 403-441.

Pagano M. and P. Volpin (2001). The Political Economy of Finance. *Oxford Review of Economic Policy*, 17(4), 502–519.

Perotti, E.C. and P. van Oijen (2001). Privatization, Political Risk and Stock Market Development. *Journal of International Money and Finance*, 20, 43–69.

Pistor, K., M. Raiser and S. Gelfer (2000). Law and Finance in Transition Economies. *Economics of Transition*, 8, 325–368.

Rajan, R. G., & Zingales, L. (2003). The great reversals: the politics of financial development in the twentieth century. *Journal of financial economics*, *69*(1), 5-50.

Reinhart, C. M., & Rogoff, K. S. (2010). Growth in a Time of Debt. *American economic review*, *100*(2), 573-78.

Roe M.J. and J.I. Siegel (2011). Political Instability: Effects on Financial Development, Roots in the Severity of Economic Inequality. *Journal of Comparative Economics*, 39(3), 279–309.

Rothstein, H. R., A. J. Sutton, and M. Borenstein. 2005. Publication Bias in Meta-Analysis: Prevention, Assessment, and Adjustments. New York: Wiley.

Rousseau, D. M., Manning, J. and Denyer, D. (2008). Evidence in Management and Organizational Science: Assembling the Field's Full Weight of Scientific Knowledge Through Syntheses. *The Academy of Management Annals*, 2(1), 475-515.

Saied, A. E., & Awad-Allah, M. M. (2020). The impact of corruption on financial development in Africa. *Noble International Journal of Economics and Financial Research*, *5*(2), 32-39.

Sarhangi, K., Niya, M. J. M., Amiri, M., Sargolzaei, M., & Sarvolia, M. H. E. (2021). The Impact of Effective Governance and Regulatory Quality on Financial Development Under Economic Conditions of the Mena Countries. *Journal of Contemporary Issues in Business and Government| Vol*, *27*(3), 2791.

Schmidt, F. L., & Hunter, J. E. (2014). *Methods of meta-analysis: Correcting error and bias in research findings*. Sage publications.

Schmidt, F. L., Shaffer, J. A., & Oh, I. S. (2008). Increased accuracy for range restriction corrections: Implications for the role of personality and general mental ability in job and training performance. *Personnel Psychology*, *61*(4), 827-868.

Schneider, F., & Enste, D. H. (2000). Shadow economies: Size, causes, and consequences. *Journal of economic literature*, *38*(1), 77-114.

Shahbaz, M., Shahzad, S. J. H., Ahmad, N., & Alam, S. (2016). Financial development and environmental quality: the way forward. *Energy Policy*, *98*, 353-364.

Shaohua, Z., Yahya, F., Pham, H., & Waqas, M. (2021). Do transparency and anti-monopoly policies matter for financial development? Evidence from a panel ARDL-PMG approach. *Journal of Applied Economics*, 24(1), 1-16.

Smarzynska Javorcik, B. (2004). Does foreign direct investment increase the productivity of domestic firms? In search of spillovers through backward linkages. *American economic review*, *94*(3), 605-627.

Song, C. Q., Chang, C. P., & Gong, Q. (2021). Economic growth, corruption, and financial development: Global evidence. *Economic Modelling*, *94*, 822-830.

Tahir, S. H., Shah, S., Arif, F., Ahmad, G., Aziz, Q., & Ullah, M. R. (2018). Does financial innovation improve performance? An analysis of process innovation used in Pakistan. *Journal of Innovation Economics & Management*, *3*, 195-214.

Tahir, S. H., Ullah, M. R., Ahmad, G., Syed, N., & Qadir, A. (2021). Women in top management: Performance of firms and open innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, *7*(1), 87.

Tahir, S. H., Ullah, W., Haider, M. H., Ullah, M. R., & Majeed, M. (2022). The distinction as an innovative dimension of SERVQUAL model for Islamic banks. *International Journal of Business Innovation and Research*, *28*(2), 246-262.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, *14*(3), 207-222.

Ullah, M. R., Tahir, S. H., & Shahzadi, H. (2023a). From Pixels to Profits: Configurations of Digital Alchemy for SMEs Excellence. *Journal of Development and Social Sciences*, *4*(3), 708-719.

Ullah, M. R., Tahir, S. H., Shahzadi, H., & Kamran, H. W. (2023b). Digital Pathways to Success: The Transformative Power of Digitalization and Digital Capabilities on SMEs' Financial Performance. *iRASD Journal of Economics*, *5*(2), 465-485.

Ullah, M., Kamran, H., Akram, S., Nawaz, M., & Rehman, F. (2021). Organizational antecedents and talent turnover: A relational analysis of credit card departments of banks. *Management Science Letters, 11*(4), 1211-1220.

Vaccaro, I. G., Jansen, J. J., Van Den Bosch, F. A., & Volberda, H. W. (2012). Management innovation and leadership: The moderating role of organizational size. *Journal of Management Studies, 49*(1), 28-51.

Valeriani, E., & Peluso, S. (2011). The impact of institutional quality on economic growth and development: An empirical study. *Journal of Knowledge Management, Economics and Information Technology*, *1*(6), 1-25.

Vázquez-Carrasco, R. and López-Pérez, M. E. (2013). Small & medium-sized enterprises and Corporate Social Responsibility: a systematic review of the literature. *Quality & Quantity*, 47(6), 3205-3218.

Walker, R. M., Damanpour, F., & Devece, C. A. (2010). Management innovation and organizational performance: The mediating effect of performance management. *Journal of Public Administration Research and Theory*, *21*(2), 367-386.

Wen, J., Deng, P., Zhang, Q., & Chang, C. P. (2021). Is higher government efficiency bringing about higher innovation?. *Technological and Economic Development of Economy*, *27*(3), 626-655.

Williamson, O. E. (2000). The new institutional economics: taking stock, looking ahead. *Journal of economic literature*, *38*(3), 595-613.

Appendix: Table A1. Studies on Institutional Quality and Financial Innovation

Author	Outcomes	Predictors	Findings
La porta et al (1997)	SMC, BCPS	Rule of law, shareholder protection, legal institutions	Rule of law (+), legal institutions (-), shareholder protection (+)
De Gregorio	BCPS, SMC	Capital flow, financial openness	Capital flow (+), financial openness (+)
Levine et al. (2000)	BCPS; LLG	IQL, creditor rights, legal institutions	IQL (+), creditor rights (+), legal institutions (-)
Pistor et al. (2000)	SMC, BCPS	Rule of law, legal rights	Rule of law (+), legal rights (INS)
Perotti & van Oijen (2001)	SMC	IQL	IQL (+)
La Porta et al. (2002)	SMC, BCPS; LLG	GE	GE (+)
Beck et al. (2003)	SMC, BCPS	Legal institutions	Legal institutions (-)
Galindo & Micco (2004)	BCPS	Rule of law, IQL	Rule of law (+), IQL (+)
Acemoglu & Johnson (2005)	BCPS, SMC	IQL, political stability	IQL (+), political stability (+)
Law & Demetriades (2006)	BCPS, SMC, LLG	IQL	IQL (+)
McNulty et al. (2007)	BCPS, SMC, LLG	IQL, rule of law,	IQL (+), rule of law (+)
Djankov et al. (2007)	BCPS	Creditor rights	Creditor rights (+)
Li (2007)	SMC	IQL	IQL (+)
Herger et al. (2008)	SMC, BCPS	IQL, legal formalism	IQL (+), legal formalism (INS)
Harper & McNulty (2008)	BCPS	Rule of law, legal institutions	Rule of law (+), legal institutions (+)
Kim & Wu (2008)	SMC; BCPS	Credit ratings	Credit ratings (INS)
Girma & Shortland (2008)	SMC, BCPS	Democracy, stability	Democracy (+), stability (+)
Ben Naceur et al. (2008)	SMC	Stock market liberalization	Stock market liberalization (+)
Cull & Effron (2008)	BCPS, LLG	World bank loans	World bank loans (INS/+)
Law & Habibullah (2009)	BCPS, SMC	IQL, trade & financial openness	IQL (+), trade & financial openness (+)
Huang (2010)	BCPS, LLG	IQL, political stability	IQL (+), political stability (+)
Cooray (2011)	BCPS	IQL, legal institutions	IQL (+), legal institutions (+)
Roe & Siegel (2011)	SMC, BCPS, LLG	Political instability	Political instability (-)
Becerra et al. (2012)	BCPS	IQL, credit dependence	IQL (INS), credit dependence (INS)
Law & Azman-Saini (2012)	SMC, BCPS	IQL, world bank credit	IQL (+), world bank credit (+)
Mlbulawa (2015)	BCPS	IQL	IQL (+)
Le et al. (2016)	LLG	IQL, world bank debts	IQL (+), world bank debts (INS)
Khan et al. (2019)	FIN	IQL	IQL (+)
Khan et al. (2020)	FIN	IQL	IQL (+)
Anwar & Cooray (2012)	FD	IQL	IQL (+)
Andrianova et al. (2011)	FD	GE	GE (+)
Alsagr & Hemmen (2021)	FIN	CC	CC (+)
Saied & Awad-Allah (2020)	FIN	CC	CC (+)
Mäntylä (2017)	FD	GE	GE (+)

Mardan (2017)	FIN	GE	GE (+)
Khan et al. (2020)	FD	CC	CC (+)
Sarhangi et al. (2021)	FD	Rule of law	Rule of law (+)
Hussain et al. (2021)	FIN	IQL	IQL (+)
Shaohua et al. (2021)	FD	CC	CC (+)
Ehigiamusoe et al. (2021)	FD	Government stability	Government stability (+)
Olaniyi & Oladeji (2021)	FD	Government stability	Government stability (+)
Aluko and Ibrahim (2020)	FD	IQL	IQL (+)
Kutan et al. (2017)	FIN	IQL	IQL (-)
Lee et al. (2020)	FIN	IQL	IQL (-)
Khan et al. (2020)	FD	Rule of law	Rule of law (-)
Law et al. (2014)	FIN	IQL	IQL (INS)
Law et al. (2008)	FIN	IQL	IQL (INS)
Shahbaz et al. (2016)	FD	IQL	IQL (INS)
Sarhangi et al. (2021)	FD	Political stability, GE	Political stability (-), GE (-)

Note: "SMC: Stock market capitalization, BCPS, banking credit to private sector; RL: rule of law, IQL: institutional quality, GE: government effectiveness; LLG: liquid liabilities/GDP, CC: control of corruption, FIN: financial innovation, INS: insignificant, (+): positive relation, (-): negative relation"