



<https://jurnal.universitaspurabangsa.ac.id/index.php/fokbis/index>

ISSN: 2623-2480/ P-ISSN: 1693-5209

## Foreign Direct Investment Determinants and Their Impacts in Meta-Analysis Literature and Systematic Reviews

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### Article Information

#### History of Article:

Received August 5<sup>th</sup> 2023

Accepted September 21<sup>st</sup> 2023

Published December 13<sup>th</sup> 2023

#### DOI:

10.32639/fokbis.v22i2.395



### ABSTRACT

*Foreign Direct Investment (FDI) is an important field, yet only a few comprehensive reviews available on its current development. There are several meta-analysis studies and systematic literature reviews. However, none has summarized the findings in a unity. This study examines 31 meta-analysis articles and systematic literature reviews published in the last five years. Besides, it sums up the five-decades-spanned research. It also observes the FDI determinants, impacts, and research gaps. We lean to highlight future research's crucial direction and discover what is present nowadays. We conclude that the development of FDI studies is vast in the coming years. Many things are explorable to uncover the phenomenon deeper.*

**Keywords:** FDI, Meta-analysis, Systematic Literature Review, FDI Determinants, FDI Antecedents

### ABSTRAK

Foreign Direct Investment (FDI) merupakan bidang kajian yang penting namun masih sedikit yang berupaya melakukan tinjauan yang komprehensif pada perkembangan terkini dalam studi FDI. Beberapa studi meta analisis dan tinjauan literatur sistematis telah dilakukan tetapi belum ada yang merangkum temuan-temuan mereka dalam sebuah kesatuan yang utuh. Review ini memeriksa secara sistematis 31 artikel meta analisis dan tinjauan literatur sistematis yang diterbitkan dalam lima tahun terakhir, merangkum studi yang terentang selama lima dekade. Determinan dan dampak FDI serta gap-gap penelitian ditinjau. Kami berusaha menyorot arah penelitian selanjutnya yang paling penting dan apa saja yang telah diketahui saat ini. Kami menyimpulkan bahwa perkembangan studi FDI di masa depan masih sangat luas dan banyak hal-hal yang dapat digali dan diteliti lebih mendalam mengenai fenomena ini.

**Kata kunci:** FDI, Meta-analysis, Systematic Literature Review, FDI Determinants, FDI Antecedents

### INTRODUCTION

Foreign Direct Investment (FDI) is one of the crucial sources of economic growth in a country as it creates work fields and boosts MSMEs' capability (Cho & Lee, 2020; Demena & Afesorgbor, 2020). Many countries have issued investment-friendly policies such as bureaucracy simplification, lower labor wages, lower taxes, and promotional supports.

The first FDI unattached to the neoclassical economy is proposed by Stephen Hymer in his 1960 dissertation (Dunning & Pitelis, 2008; Hymer, 1960). FDI studies have taken their own independent forms since. Included in it is specific research in developing countries by Weisskopf in 1972 (Bhattacharyya, Intartaglia, & Mckay, 2018; Weiskopf, 1972). FDI has been around for six decades now and has undergone many developments.

This article examines its development employing the comprehensive reviews of the previous studies in meta-analysis and systematic literature reviews. Their conclusions shape our current knowledge on FDI and project the future trends.

To achieve the goal, we divide the article into five parts. After the introduction, the second part delivers a short explanation of the FDI concept and development. The third part presents the methods employed here, while the fourth discusses the results and discussion. The last part concludes the entire article.

The definition of FDI is an investment made by a company in a tangible asset in different countries to produce or market a product (Paul & Singh, 2017). FDI occurs through acquisition or green land investment by multinational companies that create company branches in other countries. It can also happen when those companies invest in other countries' local companies.

To academics, FDI is a field mostly studied in the international business discipline (Paul & Singh, 2017). Nevertheless, as Paul and Singh revealed (Paul & Singh, 2017), most of the research are replications applied in different countries. They have their advantages and shortcomings. On one side, it enables theory validity evaluation since similar connections are repeatedly examined. Without replication, research's quality lies on unscientific aspects such as researchers' expertise, their number, statistic innovation, writing skill, home campus, journal reputation, the number of significant relationships, and samples (Anderson & Kichkha, 2017). Nevertheless, replication misses the opportunities provided by the field's data richness.

We do not state that replication studies have less value than the original studies. Many authors affirm the importance of replication as a feature of science with its contribution to it (Anderson & Kichkha, 2017; Crandall & Sherman, 2016; Tullett & Vazire, 2018). The many replication studies suggest that this field is in a fit condition. Tullett and Vazire (Tullett & Vazire, 2018) assumed science as puzzles that are disassembled and assembled at times instead of as walls that get higher each day. However, technological advances and data abundance provide an opportunity of putting a new piece of puzzle into an old template and complete it.

This review describes the puzzle called FDI. It highlights the affluence results of replications along with their various consistence and inconsistency. It also features the demands of the new puzzle such as unexplored fields' theories and studies as well as methodological needs. It attempts to describe the puzzle we have assembled.

## **RESEARCH METHODS**

We carried out a systematic literature review to comply with our goal to develop an integrated framework covering all sorts of impacts. This approach allows profound analyses of all of the relevant articles. It also identifies areas that are still unexplored. Systematic literature review permits procedure reproduction and generates unbiased results based on extensive literature (Mulrow, 1994). The final sample obtained is analyzed using an inductive approach. We only analyze the meta-analyzed articles, which means that one article contains other already-quantitatively-reviewed ones (Anderson & Kichkha, 2017). Meanwhile, the systematic literature review leans to the qualitative one.

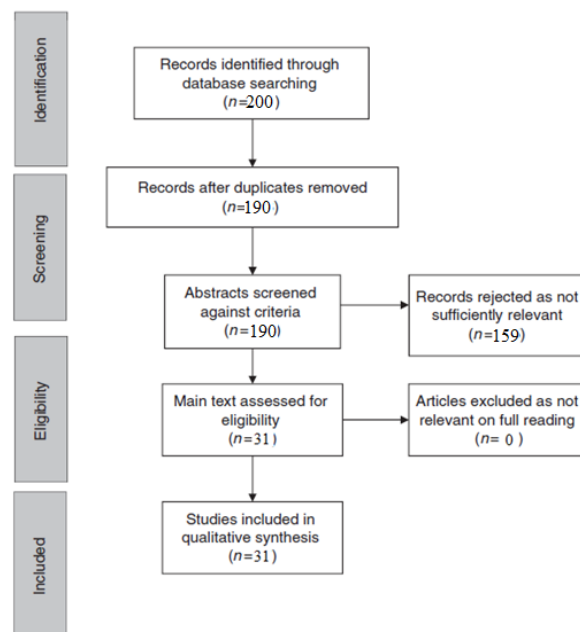
Google Scholar database is the data source. It is the largest available on the internet. We took only articles published in Scopus-indexed journals to ensure their quality. To look for the literature, we employed Boolean operator "AND" for keywords "foreign direct investment" combined with "meta-analysis" and "systematic review."

We used themes to group the articles and took only those published since 2016 to guarantee that they are contemporary. They should be published in trusted journals and written in English. They must

explore the relationship of FDI with the other variables and present the results in quantitative. We also limit the search to the first ten pages of Google Scholar as these are the most relevant-to-keyword articles.

The first step to analyze the samples is examining the titles. If they seem relevant, the abstract is evaluated. We read and summarize the discussions, especially those related to FDI's determinants or consequences when the abstract is appropriate. An open encryption procedure is carried out to begin the inductive analysis.

Figure 1 shows the flowchart of the article selection process. Step one generates two hundred articles from Google Scholar. Next, step 2 eliminates ten duplicates. Meanwhile, step 3 reduces the samples to 31 because the others are not meta-analyses, journals, and journals without the Scopus index. Both steps 4 and 5 do not further decrease them as they have all been relevant.



Source: Data processed (2023)

**Figure 1. The Prism Flowchart Visualizing Articles Selection Process**

We review them based on the number of the reviewed articles, the variables accounted for, and the key findings. We do not develop a list of variables as their identification is inductively carried out. The variables are then grouped into FDI's determinants and consequences, also suggestions for further research.

## RESULT AND DISCUSSION

The following table presents the data collection

**Table 1. The results of literature review**

No	Study	Sample	Finding	Kind of Relationship	Suggestion/gap
1	(Bruno & Cipollina, 2018)	52 articles (2000-2015). Context: European Union	On average, FDI shows indirect positive impacts on productivity.	Consequence	The need to find statistical nature that simplifies the options of publication bias types.
2	(Brada, Drabek, & Iwasaki, 2020)	74 articles	International investment agreements to protect foreign investors do not significantly affect the FDI. The developed country' FDI is more responsive towards investment protection.	Determinants	There has not been a theory connecting the international investment agreements to FDI in an investor's behavior model.
3	(Kastratović, 2020)	37 theoretical articles, 27 micro-empirical articles, and 117 macro-empirical articles	In general, FDI positively affects exports, especially in the developing countries.	Consequences	
4	(Moraghen, Seetanah, & Sookia, 2019)	101 studies	The effect of exchange volatility is relatively lower in countries with trade openness, higher human resources, and better intellectual property rights. Geographical distance and technological advancement between the home and the host countries increase uncertainty. They also strengthen the negative relationship between the exchange and the FDI.	Determinants	
5	(Tokunaga & ...)	69 studies	The FDI is affected by traditional and transition	Determinants	

No	Study	Sample	Finding	Kind of Relationship	Suggestion/gap
	Iwasaki, 2017)	Context: transitional economy (CEE and FSU)	variables.  Traditional variables: market size (+), buying power (-), trade impact (ns), agglomeration effect (+), labor cost level (-), labor cost gap (-), abundance resources (-), European Union accession (ns), geographical distance (-).  Transition variables: liberation (ns), company reformation (ns), competition policy (-), privatization (ns).		
6	(Jones, 2017)	73 research	The economy built on domestic resources has the strongest effect on the FDI compared to the economy built on foreign resources. The latter is significant only if it relates to the investor's home country.	Determinants	They require more accurate studies to find and decompose the sources of agglomeration economy, which aim to determine the importance of these sources in the FDI locations.
7	(Fan, He, & Kwan, 2019)	41 research  Location: China	FDI gives horizontal, forward, and backward spillover effects positively and significantly. China has more horizontal and backward spillover effect than the whole world in average.	Consequence	-
8	(Hampl, Havranek, & Irsova, 2020)	8 studies  Location: Czechoslovakia	FDI's 10% increase lifts up domestic companies' productivity by 11% and joint ventures by 19%.	Consequence	
9	(Bruno, Campos, & Estrin, 2018)	104 micro studies  71 macro studies	The effect of FDI to the host country's economy	Consequence	There is a need to have a study that investigates the following paradox: how to connect the findings that FDI's effect emerges

No	Study	Sample	Finding	Kind of Relationship	Suggestion/gap
		Location: emerging markets	Micro studies: 44% positive, 44% insignificant, 12% negative  Macro studies: 50% positive, 39% insignificant, 11% negative  The macro effect is six times bigger than the micro effect.		only when a country has crossed a limit with the finding that this effect emerges in a country below the limit. It also needs to explore the effect on company level is smaller than that of the country level. Perhaps the key lies on the private and social benefits provided by the FDI.
10	(Demena & Afesorgbor, 2020)	65 research	FDI reduces environmental emission significantly, especially in the developed countries.	Consequence	
11	(Iwasaki & Tokunaga, 2016)	30 studies  Location: transitional economy	The effect of FDI on productivity is lower than the direct foreign participation in company's management via ownership.	Consequence	
12	(He, Kwan, & Fan, 2019)	41 studies  Location: China	The effect of FDI on horizontal spillover is positive and significant. It varies according to the characteristics of the foreign-invested companies, the origin of those companies, and the domestic company's ownership structure.	Consequence	
13	(Li, Owen, & Mutchell, 2018)	40 studies (level studies and share studies)	Level studies: the effect of democracy to FDI is mediated by IPR, political obstacles, domestic political risk, regime duration, exchange volatility, labor cost, trade openness, and capital control.  Share studies: the effect of democracy to FDI is	Determinant	Further research needs to clarify the labor's political role and political instability that are incoherent and inconsistent in these studies.

No	Study	Sample	Finding	Kind of Relationship	Suggestion/gap
			mediated by economic growth and regime duration.		
14	(Duan, Meriluoto, & Reed, 2020)	99 research &	The spillover effect on export is significant, but small and ignorable.	Consequence	
15	(Paul & Singh, 2017)	451 articles (1970-2015)	<p>There are two FDI concepts: Inward and Outward</p> <p>The most common theories employed are OLI (ownership, Location, and Internalization), internalization, exchange, PLC (Product Life Cycle), and neoclassical.</p> <p>There is dispute whether FDI affects GDP.</p> <p>Some found bidirectional effects while others found no significant effects.</p> <p>Trade is generally bidirectional towards FDI.</p> <p>Uncertainty and risks reduce FDI, in accordance to evasive response and hassle factor theories.</p> <p>Exchange value affects FDI.</p> <p>Tax in general negatively affects FDI.</p> <p>Profit potential increases FDI.</p>	Determinant and consequence	<ol style="list-style-type: none"> <li>1. There are only a few literatures contributing to the theory (15%).</li> <li>2. Focus is only on macro economy instead of on international business construct as they only stand on secondary data.</li> <li>3. Despite the many new theories, none is more comprehensive than OLI.</li> <li>4. There are only a few studies on company level.</li> <li>5. Only a small of number of studies focusing on many countries at once since there is no theoretical reasons to opt the countries.</li> <li>6. New variables are rare.</li> <li>7. Why investors choose acquisition vs green-field investment</li> <li>8. Why investors choose joint venture instead of branching?</li> <li>9. Why FDI instead of export?</li> <li>10. A simultaneous study is necessary: antecedents, FDI, and consequences.</li> <li>11. OLI theory needs advancement with new variables.</li> <li>12. Exploration on the business cost variable at industrial and country level.</li> </ol>

No	Study	Sample	Finding	Kind of Relationship	Suggestion/gap
					<p>13. FDI bilateral study uses data from UNCTAD.</p> <p>14. The relationship of the FDI with technological transfer and competition.</p> <p>15. It needs strong theory on the outward FDI process and determinants because OLI and PLC are formulated in outflow FDI in the developed countries by multinational companies.</p>
16	(Fan & He, 2019)	24 research Location: China	The foreign companies' structure, origin, market orientation, local companies' ownership structure and technological advance affect the backward spillovers.	Consequence	
17	(Fan, He, & Kwan, 2020)	24 studies Location: China	Technical articles verifying the previous ones (Fan & He, 2019)		
18	(Rojec & Knell, 2018)	129 research	They aim to seek the roots of the contradictory findings on the FDI's effect to knowledge spillover. Studies in three decades have developed and show more heterogeneous sources and the host country's absorptive capacity.	Consequence	It is urgent to develop modelling methods and estimation procedures. Included in it is genuine causal effect identification. It also needs to leave out the idea that FDI spillover has linear effect to productivity and the assumption that foreign companies' sourcing behavior are similar. Another thing to avoid is inappropriate econometric techniques (pooled OLS or static data panel). The company level requires high quality data.
19	(Paul & Feliciano-	500 research in the	Theoretical basis: OLI, internalization, TCE,	Consequences	1. It is necessary to have longitudinal level analysis in companies and countries.



No	Study	Sample	Finding	Kind of Relationship	Suggestion/gap
	Cestero, 2020)	last five decades.	<p>PLC, LLL &amp; Springboard, and CAGE framework</p> <p>Context: FDI origin, FDI destination, MNE strategy, entry mode</p> <p>Variables: outward FDI, GDP and growth, Inward FDI, tax, export</p> <p>Effects: spillover, productivities, company's performance</p>		<p>2. MNE studies of the emerging market.</p> <p>3. FDI and Global Value Chains disaggregation.</p> <p>4. FDI and future industry.</p>
20	(Gunby, Jin, & Reed, 2017)	37 research	The effect of FDI to China's economic growth is extremely low and insignificant.	Consequence	
21	(Bailey, 2018)	97 research	Political stability, democracy, and rule of law draw FDI. Corruption, tax, and cultural distance hinder FDI. The development level, host area, and competitive industrial environment is inconsistent.	Determinant	<p>More profound contextual studies are required by controlling the followings as the moderator variable: differences between the countries, trade between the home and host countries, host country's wage level, geographical distance, GDP, GDP per capita, and population.</p> <p>Research developing the relationship between institutional and economic factors are also necessary.</p>
22	(Villar, Mesa, & Barber, 2019)	73 studies (1997-2018)	The type of export spillover depends on the institutional context. In the advanced economy, spillover affects the competition/imitation that pushes the local company to enter the foreign market. In the developing countries, the governments go with the companies to do that. In the	Consequence	Direct studies exploring FDI's export spillover to the process of local companies' internationalization.

No	Study	Sample	Finding	Kind of Relationship	Suggestion/gap
			developed countries, local and foreign companies cooperate and integrate.		
23	(da Fonseca & Jucá, 2020)	41 studies	Tax is an important consideration for investors. However, the studies found contradicting results (positive vs negative).	Determinant	There is an issue of model estimation using similar data. Two studies found contradicting results due to the differences in calculating tax variable.
24	(Papadopoulos, Hamzaoui-Essoussi, & El Banna, 2016)	112 studies	There is no consensus of the main factor affecting investors' and countries' decision and behavior in advertising, promoting, branding, and marketing the investment.	Determinant	The necessity to assess the host's image in choosing the location for the investment.  The negative effect of promotion instead of marketing in a country's branding efforts.
25	(Paul & Benito, 2018)	91 research	FDI's motives, home and host country's factors affect its location, entry mode, establishment mode, size/volume, and time. They will in turn affect the finance, survival, innovation, technological transfer, and reverse technology transfer.	Determinant and consequence	The change of operation mode, for example from JV into full company's subsidiary, is rarely examined while common in Western companies.  Only a few studies are conducted in South America and Africa.  Company-level studies which are difficult but worthwhile.  The output or OFDI in emerging countries are scarcely explored despite potential unique antecedents or impacts beyond finance.
26	(Oguji, Degbey, & Owusu, 2018)	22 research Location: Africa	The institutional factors largely affect the IJV's (International Joint Venture) strategies and success.	Determinant	Research on the effect of the motive, formation, institution, resources, commitment, trust, and technological transfer on IJV's

No	Study	Sample	Finding	Kind of Relationship	Suggestion/gap
27	(Demena & van Bergeijk, 2017)	69 studies (1986-2013)  Location: developing countries	The developing country's context significantly affects the productivity spillover.	Consequence	establishment and performance.  Further research should consider the moderator variables causing spillover heterogeneity.  Resolving the debate on how local company's technological level affects the spillover.  How spillover takes place in the real world.
28	(Buckley et al., 2017)	11 studies  Location: China	China's OFDI is affected by the home (China) and host country factors. The first includes the political liberalization. The latter involves the market size, natural resources, strategic asset, political risk, China's ethnic population, exchange rate, inflation, export to and import from China, geographical distance, and FDI openness.	Determinant	The development of OFDI theory requires assessment in some newer, challenging, and different contexts.
29	(Ugur, Churchill, & Luong, 2020)	60 studies	The average effect of R & D Spillover on positive but insignificant productivity of the full sample, and the significant one in the OECD countries.	Consequences	Further research should control other spillover, such as knowledge, rent, and their mix.  They should also explore how and whether the spillover affecting productivity is mediated by its own research and development. Besides, it is necessary to see whether or not the mediation has threshold effects on the company, industry, and country level.  They need to consider the gap on the technological limit in building external research

No	Study	Sample	Finding	Kind of Relationship	Suggestion/gap
30	(Magombeyi & Odhiambo, 2017)	20 studies	The effect of FDI on poverty alleviation is unclear as some studies found it positive, while some others negative and insignificant.	Consequence	and development. It is necessary to have studies examining the direct effect of FDI on poverty alleviation.
31	(Tang & Buckley, 2020)	64 studies	The influence of the host country's risk and company ownership on foreign entry strategies are moderated by decision-maker institutional barrier and the tendency to take risk in the home country.	Determinant	Further research is necessary to examine the distance integration and institution direction.  There is a need to develop theories on factors of formal and informal institution contingency.

*Source: Data processed (2023)*

We obtained data of literature samples from eight to 500 studies that span for 50 years from 31 meta-analyses research and reviews. Thus, 500 studies have been maximally reviewed, and if each of the reviews a different study, there are 2.874 studies compiled in 31 research. The themes emerge from the studies are:

### **1) FDI Concepts**

FDI studies differentiate inward and outward FDI, reflecting distinct focus (Paul & Singh, 2017). Inward FDI leads to FDI host country and its boosting factors. Meanwhile, outward FDI sets in factors coming from FDI home country. Besides, the studies also make a distinction of their level and share (Li et al., 2018). Level studies examine FDI based on the net FDI flow, while share studies assess the FDI flow ratio to GDP. The results of the meta-analysis by Li et al (Li et al., 2018) show that FDI determinants might vary in both types. The studies can also be in the micro-level (a single company), meso-level (industry), and macro-level (country) (Bruno et al., 2018). They break FDI into several components namely location determination, entry mode, establishment model, FDI size/volume, and FDI time (Paul & Benito, 2018).

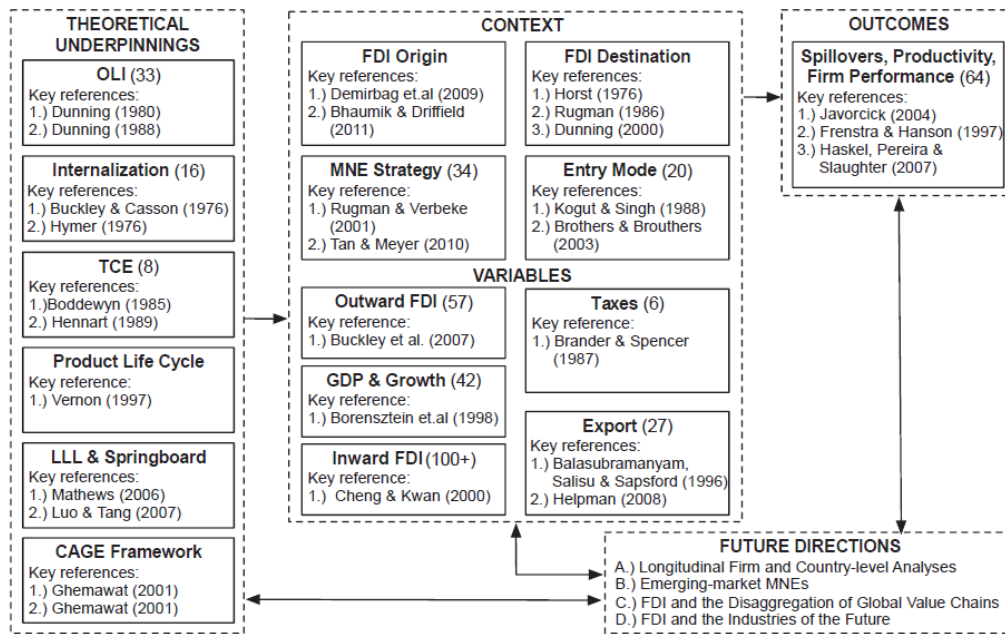
### **2) Theories in FDI Studies**

There are many theories used to examine FDI in all its aspects. Paul and Singh (Paul & Singh, 2017) in their review of 451 studies found that the theories commonly used are in sequence OLI (Ownership, Location, Internationalization), internationalization theory, exchange theory, PLC (Product Life Cycle) theory, and neoclassical theory. Other parts also mentioned the presence of evasive response theory and hassle factor theory (Paul & Singh, 2017). A more recent review adds up TCE, LLL & Springboard, and CAGE framework theory (Paul & Feliciano-Cestero, 2020).

However, there is a need for theories for various parts. Overall, Paul and Singh (Paul & Singh, 2017) found only 15% contributing-to-the-theory articles out of the 500 studies they reviewed. There is no theory connecting international investment agreement to FDI in an investor behavior model (Brada et al., 2020). No theory is more comprehensive than OLI either, although it needs development for being specifically built in an outflow FDI context in multinational companies of developed countries (Paul & Singh, 2017). Buckley et al (Buckley et al., 2017) have started to develop the outward FDI theory within one country context, China. Therefore, it is necessary to elaborate on OFDI tested in a newer, challenging, and different context (Buckley et al., 2017). Besides, there is also a need to postulate theories on the FDI formal and informal institutional contingency factors (Tang & Buckley, 2020).

### **3) Conceptual Framework**

The conceptual framework used by meta-analysis studies and systematic literature reviews are generally simple and involve only two lines (free to bound variables), such as the study by Buckley et al (Buckley et al., 2017). Two studies employ a three-line framework (determinant – decision – consequence) (Oguji et al., 2018; Paul & Benito, 2018). One study develops a four-line framework (aim – determinant – decision – consequence) (Papadopoulos et al., 2016). The most complex one belongs to Paul and Feliciano-Cestero (Paul & Feliciano-Cestero, 2020) that uses a conceptual framework. It incorporates four variable groups with three interactive/correlational/to-and-fro relationships and two causal relationships. Figure 2 describes it (Paul & Feliciano-Cestero, 2020).



Source: Data processed (2023)

Figure 2. The Conceptual Framework of Paul and Feliciano-Cestero (Paul & Feliciano-Cestero, 2020)

#### 4) FDI Determinants

It is obvious that there are so many FDI determinants that can be filtered from the previous studies. The variables known as FDI determinants are exchange volatility, market size, buying power, domestic vs foreign economy, political stability, democracy, rule of law, corruption, and cultural distance (Bailey, 2018; Jones, 2017; Moraghen et al., 2019). Li et al (Li et al., 2018) found that at the study level, the effect of democracy on FDI is mediated by IPR, political obstacles, regime period, exchange volatility, labor cost, trade openness, and capital control. Meanwhile, at the share level, the democracy's effect is mediated by economic growth and regime period. Paul dan Singh (Paul & Singh, 2017) discovered that trade, uncertainty, risk, exchange, tax, and potential profit affect FDI. Paul and Benito (Paul & Benito, 2018) noted that FDI's motives, home country, and host country determine the location, entry mode, establishment model, size/volume, and FDI time. Oguji et al (Oguji et al., 2018) learned that the institutional factors largely affect the international joint venture's strategies and success in Africa. Meanwhile, in China, Buckley et al (Buckley et al., 2017) found that FDI's determining factors include the home country (China) and host country factors. The home country factor includes political liberation. The host country factor involves the market size, natural resources, strategic assets, political risk, Chinese ethnic population, foreign currency exchange, inflation rate, export to and import from China, geographical distance, and FDI openness. Tang dan Buckley (Tang & Buckley, 2020) found that the risk and company ownership of the host country affects the foreign entry strategies.

The determinant moderator variables encompass country type (developed, developing, transition, emerging), trade openness, human capital, IPR protection, geographical distance, technological gap, market size, buying power, agglomeration effect, labor cost, labor cost difference, abundant resources, and competition policy (Moraghen et al., 2019; Tokunaga & Iwasaki, 2017). Tang and Buckley (Tang & Buckley, 2020) found that institutional obstacles moderate the risk of the host country and company's ownership level towards foreign entry strategies.

A number of inconsistencies of FDI's determinant effects are also found. Bailey (Bailey, 2018) noted that development level, the destination area, and competitive industrial area are not inconsistent, whether

they encourage or hinder FDI. The tax also generates contradictory findings in affecting FDI (da Fonseca & Jucá, 2020).

Nevertheless, there are also some surprising findings in which the related determinants are insignificant or have contradicting effects. Brada et al (Brada et al., 2020) discovered that international investment agreement to protect foreign investment does not significantly affect the FDI. Tokunaga dan Iwasaki (Tokunaga & Iwasaki, 2017) found that trade, accession to a regional area, liberation, company reformation, and privatization do not affect the FDI. However, Paul and Singh (Paul & Singh, 2017) noted that trade is commonly bidirectional to FDI.

Papadopoulos et al (Papadopoulos et al., 2016) discovered that studies in FDI marketing are premature since there has not been any consensus of the main factors affecting the investors' and countries' decisions and actions in advertising, promoting, branding, and marketing investment.

### **5) FDI Consequence**

The consistent FDI consequences include productivity, export, forward, backward, and horizontal spillover, and environmental emission (Bruno & Cipollina, 2018; Demena & Afesorgbor, 2020; Demena & van Bergeijk, 2017; Fan & He, 2019; Fan et al., 2019, 2020; Hampl et al., 2020; He et al., 2019; Iwasaki & Tokunaga, 2016; Kastratović, 2020). Paul and Benito (Paul & Benito, 2018) found the effect of FDI on financial result, survival, innovation, technological transfer, and reverse technological transfer.

Bruno et al (Bruno et al., 2018) found the inconsistent effect of FDI on the host country. In the macro-studies, the positive and insignificant effects are balanced (both are 44%), while 12% of the 175 studies report negative effects. On the other hand, the macro-studies generate six times higher effects than those of the micro, in which 39% is insignificant and 11% negative. Paul dan Singh (Paul & Singh, 2017) also stated that FDI inconsistently affects GDP as some found the bidirectional effects while others observed no significant effect. Another study reveals that FDI inconsistently influences the knowledge spillover (Rojec & Knell, 2018). Demena and Van Bergeijk (Demena & van Bergeijk, 2017) highlighted the debates on how technological level affects the spillover impacts that probably due to the moderating factors. One study on the effect of FDI on poverty alleviation underlines the inconsistency of the previous research, in which some found positive impacts while others found insignificant, even negative results (Magombeyi & Odhiambo, 2017).

He et al (He et al., 2019) learned that the observed consequence moderator moderates the effect of FDI on the horizontal spillover that include the company's characteristic with the foreign investment, the origin of the investment, and the domestic company ownership. Another moderating variable is the nature of the country (developing or developed) determining the effect of the spillover export on the economy. In developing countries, the spillover influences the competition/imitation that forces local companies to enter the foreign market. Here, the government guides them in doing that. Meanwhile, in developed countries, local and foreign companies work together and integrate (Villar et al., 2019).

Another study found that the spillover's effect on the export is small and ignorable (Duan et al., 2020). In China, research stated that FDI's effect on its economic growth is so small and insignificant (Gunby et al., 2017). There is also a study that highlights the insignificant effect of R & D spillover if reviewed globally, but significant when the samples include only OECD countries (Ugur et al., 2020).

### **6) Rarely explored research**

The studies with a few literature samples are those with rarely explored fields. Research by Hampl et al (Hampl et al., 2020) has only eight samples, making it a meta-analysis study with the least sample. It explores the effect of FDI on domestic and joint venture companies' productivity. Hence, this topic is seldom studied. It is natural considering the data collection is carried out at the company level, which is more difficult than at the national level. Another theme requiring further research is OFDI determinants

(Buckley et al., 2017), FDI's effect on poverty alleviation (Magombeyi & Odhiambo, 2017), the effects of institutional factors on IJV's strategies and success (Oguji et al., 2018), backward spillovers determinants (Fan & He, 2019), and FDI's effect on productivity by moderating company's ownership (Iwasaki & Tokunaga, 2016).

Further studies are possible from the recommendations of the reviewed research. 19 out of 31 research provide at least one further research. Paul dan Singh (Paul & Singh, 2017) gave 15 recommendations. It is the largest amount of recommendation ever given. It is in line with their large samples (451 studies). Readers can refer to Table 1 to specifically see the recommendation. In it, the writer only narrates some recommendations that are deemed urgent.

First, the theoretical development of statistics to create a statistic method that simplifies the option to evaluate publication bias in the meta-analysis. Bruno and Capillano (Bruno & Cipollina, 2018) recommended this considering the difficulties of establishing the right method to measure publication bias in meta-analysis.

Second, a theoretical development suggested by Brado et al (Brada et al., 2020) on the need for theory connecting the international investment agreement on FDI that is seen in an investors' behavior model. It derives from a confusing finding where international investment agreements to protect foreign investors do not affect FDI, which implies their unimportance. Whereas countries continuously make this agreement. Brado et al (Brada et al., 2020) suspected that it is caused by measurement and research model instead of the fact. Hence, it requires a theory.

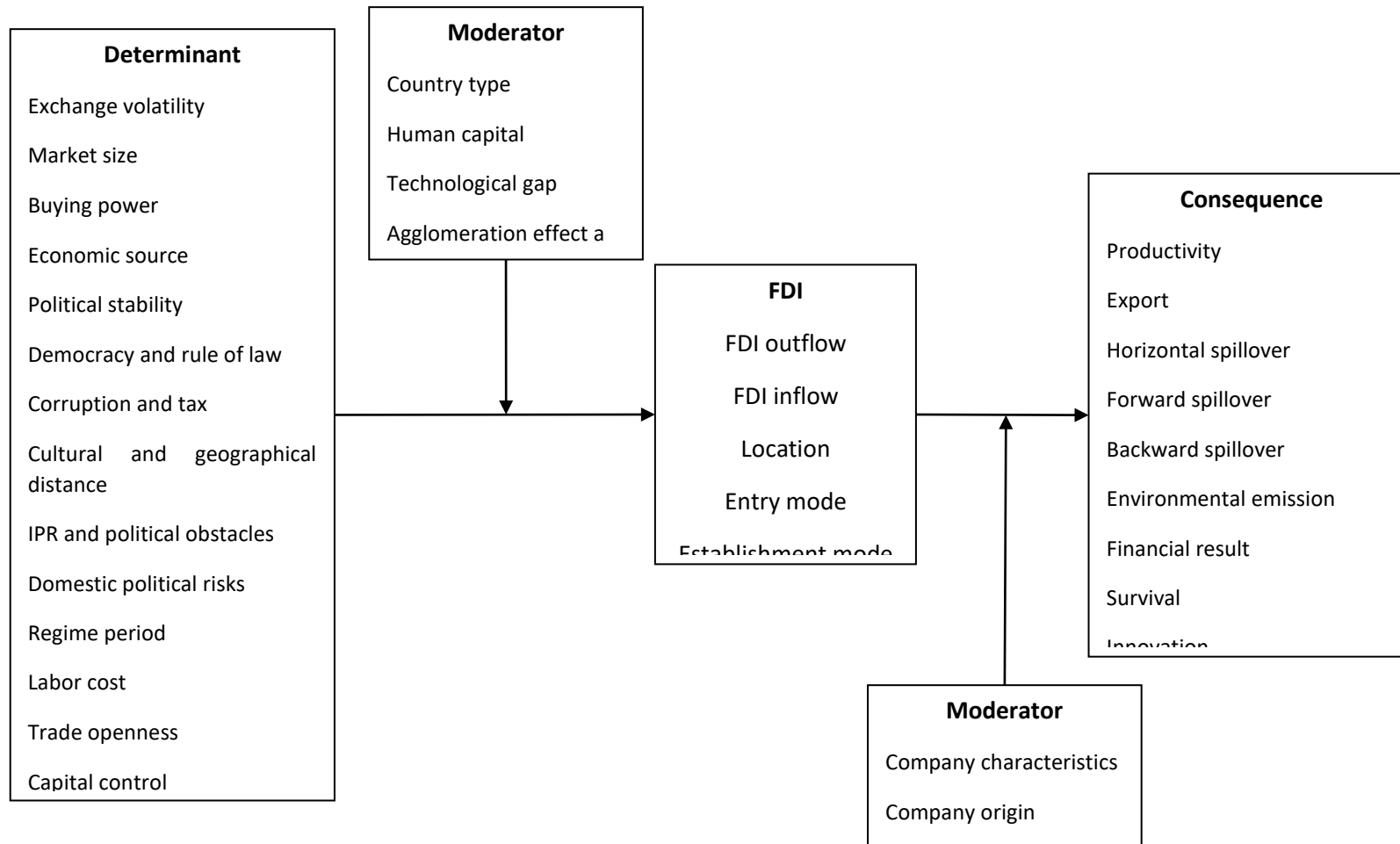
Third, there is a need for studies that take into account the moderating variables causing spillover heterogeneity and knowledge of the mechanism enabling spillover to bring positive economic effect, as proposed by Demena and Van Bergeijk (Demena & van Bergeijk, 2017). Spillover is an important consequence of FDI but has inconsistent varied impacts on the economy.

Fourth, a theory on formal and informal institutional contingency factors that affect FDI is also necessary (Tang & Buckley, 2020). A study by Tang and Buckley (Tang & Buckley, 2020) revealed that many of the significant control variables in some research become insignificant in their regression model when relating CR – OS (Country Risk – Ownership Strategy). International experience supposedly significant in affecting the ownership strategy (Tang & Gudergan, 2018) is insignificant. It is probably due to the interaction among the formal and informal institutional variables (such as international experience), either complementary or substitutionally. In one context, these institutions can complement each other and boost the FDI, while in another it might replace each other (Tang & Buckley, 2020). If so, a presently unknown moderating variable is necessary. The formal institution is rules explicitly written and forced in a country, such as statutes and regulations. Meanwhile, the informal institution is implicit, such as norms, culture, guanxi, and so forth (Escandon-Barbosa, Urbano-pulido, & Hurtado-ayala, 2019; Horak & Restel, 2016).

Fifth, Da Fonseca and Juca (da Fonseca & Jucá, 2020) highlighted the issues of the estimation model and how to calculate certain variables that need certainty. In their study, two research used similar data produced different outcome because they used different tax calculation. They admitted the difficulty to equalize tax rules in complex and varied countries. One country has so many tax rules. It explains why FDI research employing tax variables yielded different results.

The following figure 3 summarizes all determinants and consequences of the reviewed research. It depicts an incomplete FDI study puzzle, which probably stays so since we have no ability to predict the complete future FDI puzzle.





Source: Data Processed (2023)

Figure 3 The Knowledge of FDI 1960-2020

## CONCLUSION

This article offers a meta-analysis review of research in FDI. We used 31 meta-analysis studies and systematic literature reviews in FDI. They comprise 500 to 2.874 previous studies that span five decades and describe the academic study of FDI along with its unanswered issues. A large number of determinant and consequence factors, including their moderating factors, have been identified. Nevertheless, many of the findings are inconsistent. Further studies and more comprehensive theoretical development are necessary. They provoke hope that future research will be more productive and provide a better insight into FDI, especially in the emerging countries nowadays.

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