
FDI DECISIONS BASED ON A MULTI-DIMENSIONAL MACRO-ECONOMIC APPROACH IN THE AUTOMOTIVE INDUSTRY: THEORETICAL FOUNDATIONS AND EMPIRICAL EVIDENCE

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AUTHORS' CONTRIBUTIONS

This work was carried out in collaboration between both authors. Author JN designed the framework of the study and managed the analysis of the study. Author HB managed the literature searches and performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Both authors read and approved the final manuscript.

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ABSTRACT

Purpose: Foreign direct investments have been grown and accelerated over the last decades due to the ongoing globalization process. This determines that companies and their managers have to make decisions in respect to the FDI. Macro-economic factors increase their importance when companies go international. The macro-economic framework cannot be directly influenced by the managers and this forces them to adapt and fit to the given circumstances. During such complex processes also intervening factors may attract or distract FDI decisions. The purpose is to develop a model to investigate the impact of macro-economic and intervening factors on FDI decision-making process.

Methods: Developing a postulated causal model on potential impacts of macro-economic factors on FDI decisions with respect to FDI incentive schemes and risk/uncertainty potential intervening factors during decision process.

Findings: The conducted data show, macro-economic factors have a strong influence on FDI decisions and often are not that considered before starting such ventures. FDI incentives seem to be able to strongly positively impact FDI decisions. Risk/Uncertainty on the macro-level have a slight, but significant negative impact.

Limitations: The research was conducted on the specific characteristics of German and Austrian automotive industry.

Implications: The study underlines the perception of the investors' point of view.

Originality: A new causal model has been developed with focus on different levels of macro-economic determinants and FDI motives with respect to FDI decisions from the perspective of investors. The key contribution to management science is the holistic fine graining of potential impact environment of macro-economic factors, FDI incentive schemes and risk/uncertainties on the management FDI decision-making process.

Keywords: Decision making process; FDI; macro-economic factors; internationalization process.

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1. INTRODUCTION AND RESEARCH QUESTIONS

The growth of enterprises and expansions into new markets has dramatically accelerated over the last decades (Westerfield, et al. 2004, p. 180). This business model became more important and internationalization and globalization are terms which are used commonly in many economic contexts [1,2]. Industries such as the automotive industry, the chemical industry, the clothing industry, the food industry, etc. have business activities all over the world. Motivations hereby often are seeking natural resources, seeking markets, seeking efficiency or to seek strategic assets (UN, 2007, p. 122). Barney [3] states, that competition becomes much more international, even the scope of the company is mainly regional. It tends to increase rivalry, threat of new entry and threat of substitutes. But also opportunities will occur. Larger markets bring more business opportunities for companies. To develop a small existing market often is a good opportunity and a proactive motive of investors [4,5] (Hollensen, 2011), or even is the only chance to survive on the market or maybe to gain a higher value to the company. If a company is going to establish a subsidiary abroad, a dominant motive therefore is the exploitation of a new market with further potentials for existing products. Other reasons may occur when existing customers go abroad and want to take their suppliers with them or when the company is driven by the competitors [6]. This is also well known as a fast follower strategy. If the domestic market is saturated by their own company or by competitors, it is often the only opportunity to start transnational activities (Sternad et al., 2013, p. 11). This can be done only by selling to new markets via sales partners or sales representatives or also to start a production in a foreign country because of lower labour costs or production costs in general. Further reasons are important resources located outside the domestic market. Barney [3] defined the five most potential sources of economies of scope for firms pursuing international strategies. As these are: o) To gain access to new customers for current products and/or services. o) To gain access to low-cost factors of production. o) To develop new core competencies. o) To leverage current core competencies in new ways and o) to manage corporate risk.

This research work is related to specific requirements and characteristics of the automotive industry and includes effects which are not representative for other branches or markets. This work focuses to macro-economic influence factors and deliberately excludes micro-economic factors from this study. Geographically it is limited to companies with head

offices in Germany and Austria and their employees or entrepreneurs. A time wise limitation has also been set. Only FDI decisions from the last 10 years prior to the date of sending out of the electronic survey have been considered in this work.

1.1 Following Research Questions have been Formulated for this Research Work

RQ_{Base}: How important are different macro-economic factors for FDI motives in the automotive industry?

The base research question should deliver answers about the degree of importance of macro-economic factors on FDI intentions and motives in the automotive industry. Three different sub-groups of macro-economic factors allow a more detailed view on the potential power of them to impact FDI decisions.

RQ₁: Which macro-economic factors have the strongest influence on FDI motives in the German and Austrian automotive industry?

The RQ₁ raises the question of the macro-economic factors having the strongest influence on FDI decisions. This is going to be analyzed as a direct impact on FDI motives. Many countries establish and offer incentive schemes to foreign investors to attract specific industries which may influence the macro-economic impact on FDI decisions.

Another impacting variable is the risk and uncertainty factor. This implies, that if target countries (e.g. emerging markets) hold unforeseeable risks for the investors, they may hinder them to enter these markets.

This leads to the following research question RQ₂ and RQ₃:

RQ₂: How do FDI incentive schemes impact the macro-economic factors?

RQ₃: How do the macro-economic factors impact uncertainty/risk and what influence does this have on FDI motives?

To answer the research questions, the variables need to be operationalized and to integrate in a new postulated causal model. An SEM-PLS analysis gains data to see if significant effects occur between the variables.

2. THEORETICAL FOUNDATIONS, HYPOTHESIS AND MODEL

FDI has dramatically increased and has become an important factor in many economic sectors.

Table 1. Factors influencing FDI decision-making process

Factors affecting FDI decisions		
Supply factors	Demand factors	Government factors
- Production Cost	- Customer Access	- Economic Priorities
- Logistics	- Follow Clients	- Avoidance of Trade Barriers
- Resource Availability	- Follow Rivals	- Economic Development Incentives
- Access to Technology	- Exploitation of Competitive Advantage	-----

Source: Author’s own construction based on [7]

The globalization and interconnection of markets and trends on a global basis also allows companies and enterprises to expand to foreign countries to conquer new markets and to meet demands. The upward trend in FDI accelerates in almost all main country groups. Developed countries, developing countries and transition economies (United Nations, 2007, p. 3). To take the decision and doing investments is always affected by different factors. Investments of companies who may spend big amounts of money into foreign countries are even more complex and often are combined with risks and the potential to lose money. According to Pustay and Griffin [7] three major factors affecting FDI decision-making process. And these can be classified into Supply Factors, Demand Factors and Government Factors as shown in Table 1.

Those main factors which affect the FDI decision-making process according to [7] in the strongest way, will be enlarged to factors from other researchers, such as Dunning [8,9] or Earnest and Young [10], which regularly publish new empirical data about drivers for FDI decisions with focus to special branches and markets and also for the specific characteristics of the automotive branch.

2.1 Macro-Economic Determinant Demand and Its Indicators

Demand factors [11]: The market expansion is a strong motive for FDI decisions. This includes Customer Access, Following Clients, Following Rivals, Exploitation of Competitive Advantage and Customer Mobility [7]. Gaining access to customers often requires physical presence in their markets to be able to serve them in a proper way. Some countries bring a high level of quality reputation for certain products with them. German automotive engineering is a good example as a high quality reputation. The perception of buyers can enable firms to produce the goods in the country with the highest quality reputation and therefore be able to get premium prices. Although the company is based in a different country. Companies with a high reputation and a valuable trademark or brand name or even technology may choose to operate in foreign countries (with

subsidiaries) rather than export to them to gain competitive advantage. Clients of companies often attract FDI. Following clients, who build facilities in foreign countries to enter new markets, enable the possibility to also expand business with existing customers by locating a new factory of its own nearby. It enables to continue to supply its customer promptly and attentively. This practice is often used in industries in which main goods are obtained from suppliers with whom the company has a close working relationship. Following clients also means a competitive advantage can bring win-win situations for both parties. The supplier minimizes the risk of gaining business after spending FDI and the customer doesn’t need to establish a new and unknown supplier. A further possibility of gaining competitive advantage by spending FDI is to follow rivals. A competitor analysis enables to find out their geographic strengths and weaknesses of individual competitors and the followers can select markets for FDI for their ventures. Most of the MNCs [7] regularly monitor market sizes and growth rates – also on a global perspective.

2.2 Macro-economic Determinant Supply and Its Indicators

Supply factors according to Griffin and Pustay [7] include: Production costs, logistics, resource availability and access to technology. Production costs can influence the competitive situation in both ways, negative and positive. MNCs often try to locate their production facilities in low wage countries to gain competitive advantage out of it. Not only labour costs are of importance for FDI [12], but also real estate prices and lower taxes. Hunady et al. (2014, p. 224) says, that taxes are still often emphasized as a crucial determinant of FDI. In terms of logistics, MNCs seek to invest into subsidiaries in foreign markets if the cost of transport raw materials is high. Also infrastructure is a driver for FDI. Natural resources are often of essential importance for companies and their products. MNCs tend to utilize FDI to access natural resources. Natural resources attract many MNCs. Examples for important resources are iron ore and wood. Key Technology is

also a main supply factor and affects FDI decision-making process. Technology [11] influences every aspect of the global market place, it drives innovation, affects partnership and locations and changes stakeholder relationships.

2.3 Macro-economic Determinant Public and Governmental Conditions and Its Indicators

Political factors Griffin and Pustay [7]: Political activities are often influence factors to attract or repel FDIs. Economic priorities and strategic political directions of the host country, avoidance of trade barriers and development incentives are the main political impact determinants for FDI [11]. Economic priorities of emerging markets and development countries regularly have misalignments with profit-oriented strategies and goals of MNCs. The host countries want MNCs to invest into infrastructure and developing areas, but the international investors seek to invest more into consumer goods industries. Therefore, development countries impose restrictions on the flow of FDI into their economies. This is not in general, there are examples, see on the example of China or India (UNCTAD, 2015), which allowed and welcomed FDI to enable large economic growth. A driver to affect FDI flows is the avoidance of trade barriers [11]. Such barriers reduce the flexibility and the willingness of FDI from MNCs which follow the profit-oriented strategies. Development incentives are interesting for MNCs and related FDI decisions. Governments offer attractive development incentives to MNCs to invest in their economies, in particular developing countries use this instrument. The primary motive of developing countries to attract FDI [7] is to fill the resource gaps from the industrialized countries.

2.4 Empirical Research of Incentive Schemes as Potential Intervening Factors in the Automotive Industry Related to FDI Decision-making Process

Countries often create policies to attract FDI. Host government policies are location specific factors that may influence profitability and MNE’s decision for doing FDI in different ways. Such governmental policies include both, incentives and

performance requirements [13]. Related to incentive schemes are performance requirements for FDIs. A host government can place performance requirements on investors to push to ensure that the benefits of FDI will be at the country. Examples for such requirements could be hiring and training of local personnel, local content, technology transfer and exporting of output. Such performance requirements may distract FDI flows. To decrease negative effects, governments often link meeting the requirements to FDI incentives [13]. This paper focuses only on the intervening power of incentive schemes to FDI decisions. Performance requirement policies are excluded in this paper. Typical incentives based (Table 2) mentioned factors are presented in Table 2. (Navaretti et al., 2004).

Applicable measures for incentive schemes have already been mentioned in an UNCTAD report in 1996. The most common financial incentive schemes to finance new foreign investments or operations are have been defined as follows (UNCTAD, 1996): o) Government grants (direct subsidies) to cover capital, production or marketing costs; o) Government credits at subsidized rates; o) Government equity participation and government insurance at preferential rates; o) Subsidized infrastructure or services; o) Special market preferences or preferential treatment on foreign exchange. Nowadays further measures have been discovered, but the main drives stayed the same. The effectiveness and influence of incentive schemes to foreign direct investments seems to be a controversial topic and different studies have produced different conclusions (Navaretti et al., 2004, p. 261). The study from UNCTAD (1996) concluded that incentive schemes seem to play a minor role relatively seen to other factors such as market size, economic stability, political stability, regulatory framework production costs or skill levels. But they also state, that incentives are not negligible. Especially when two or more interesting countries bring quite similar framework conditions with them for the investor. Then, incentives are a good tool to attract investors. Hanson (2001) did a large number of case studies with the aim of analyzing the effect of incentive schemes to FDI. In particular he did also two case studies for the automotive industry. In this case study, generous incentive schemes, including both direct subsidies and long-term tax breaks were

Table 2. Examples for typical incentive schemes

Tax reductions	Exemptions from import duties
Investment allowances	Exemptions from export duties
Tax deductions	Rent reduction for governmental owned buildings

(Source: Author’s own construction based on Navaretti et al., 2004)

offered to attract the plants to different states in Brazil. And the incentives worked. They actually influenced the final location. For other industries and markets they got quite different results.

2.5 Empirical Research of Risks/Uncertainties as Potential Intervening Factors in the Automotive Industry Related FDI Decision-making Process

Every company which needs to take the decision if it would go international or not has to be conscious about the chances and risks which are linked to this decision (Jahrman, 2010). Multinational companies facing certain macro-economic risks which are completely outside of their control. These include cataclysmic events such as wars and natural calamities and also equilibrium-seeking or random movements in exchange rates, commodity prices, interest rates or even wage rates [14]. And in addition to that, MNEs facing what is usually referred to in the literature as political risks [15], (Jahrman, 2010), [14] but may be more appropriately called policy risks to emphasize that they arise from policy makers and their decisions and actions of national governments and not from either long-term equilibrium-seeking forces of global markets, nor short-term random fluctuations in economic variables arising out of stickiness or unpredictability of market mechanisms [14]. As it is obvious, risks are often not directly controllable by the companies themselves [14]. They depend on macro-economic varieties and volatile conditions. Political frameworks and subsidies can change very fast when politicians change, parties change or other circumstances make it necessary to change. Then, companies are forced with changes of their environment. This can bring changes but also may bring risks and uncertainties into the mid- and long-term success of a company (Hungenberg and Meffert, 2005). Gann [15] includes foreign risks into the international investment decisions of

multinational firms. He defines two main groups of factors for quantitative risk analysis: Country risk and currency risk. For the country risks he defines two sub-groups, the political country risks and the economic country risks. The same he does for the currency risk [15]. Hereby he mentions the conversion and transfer risk and the exchange rate risk. Following Fig. 1 shows the hierarchical construct for foreign risks by international business.

The group of country risks includes factors which have the potential to bring losses on companies by disturbing their business activities. Occurring threats about unforeseeable changes of the host economy and political stability are critical for companies and its investors [15]. According to Brealy and Myers [16] a threat by foreign governments to investors is a break of a promise or understanding or to change the rule of game. This is not influenceable nor predictable by the investors. Country risks consist always political and economic components [17] (Meyer, 1987; Levi, 1990). Political country risks [15,18] (Jokisch, 1987; Schüning, 1991) include the intervention of governmental institutions which limit the trade and business activities of companies [19]; Lessard, 1989, p. 197). Thereof, two sub-groups can be defined: The first group consists of governmental actions which limits the disposition freedom by intervening into the business activities, which again shrinks the competitive situation [19] (Lessard, 1989). The second group consists of risks where governments overtake properties of companies (Meyer, 1987). Economic country risks may occur when a nation or state is not able to follow the duty to pay of its foreign trades. FDIs can be temporarily, partially or completely be forbidden to do any foreign financial transfers [19,15]. Conversion risks [20] (Meyer, 1987) may threaten a limitation of foreign currencies. Cross-border investments contain financial inflows- and outflows and hold the risk of currency instabilities and changes.

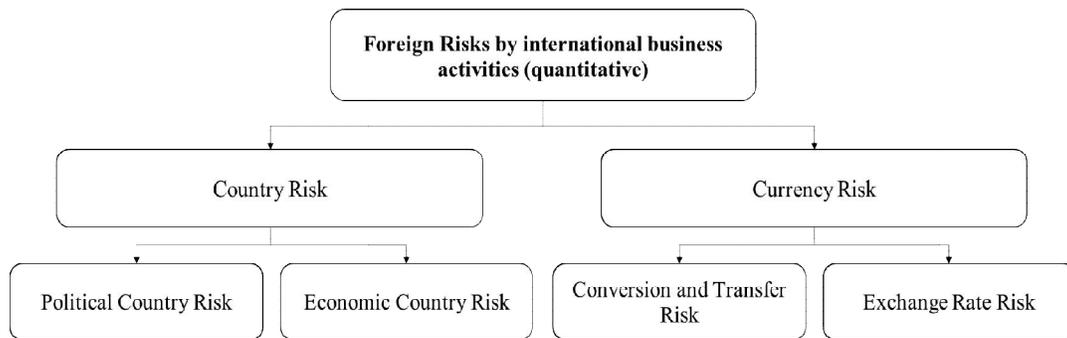


Fig. 1. Risks through foreign investments
 Source: Author's own construction based on [15]

Uncertainties about currency developments [15] may influence business activities in a positive or in a negative way. Currency conversion calculations may also influence the annual financial statements of companies (within the consolidation calculations). The term for this risk is called translation risk [19] (Levi, 1983). Currency exchange risks define the difference by changing from one currency to another during cross-border financial flows. The term which is used for this kind of financial flow is *transactions* [21] (Bernhard, 1992; Shapiro, 1992) [19,22]. FDI's are often forced with this topics and it is a factor a company can't influence by itself. Currency fluctuations are difficult to anticipate. The more long-term oriented view into the future, the more vague the prediction. So, it can become a big topic for a cross-border trade company.

2.6 Following Hypotheses have been Formulated for This Work

Derived from the research questions RQ_{Base}, RQ₁ - RQ₃, following assumptions have been made by the author:

Base hypothesis:

H₀: There is no significant impact of macro-economic factors and intervening factors FDI incentive schemes and risk/uncertainty on FDI motives of German and Austrian Automotive companies.

The base hypothesis H₀ should provide a holistic novel view on macro-economic perspectives and their impact on FDI motives. It assumes that besides the well-studied micro-economic impact factors (Porter, 2008, Kreutzer, 200), [23], the macro-economic level as well as FDI incentive schemes and risk/uncertainty factors have no significant impact on FDI decisions. The macro-economic level has been divided into three main groups of determinants according to Griffin and Pustay's [7] model: demand factor, supply factor and public and governmental factor. To answer the base hypothesis H₀, seven sub-hypotheses (SH₁ – SH₇) have been derived to provide a new and holistic view of macro-economic influence factors to FDI intentions (Wagner et al., 2016) including potential intervening variables FDI incentive schemes and risk/uncertainty factors.

Derived Sub-hypothesis:

SH₁: The macro-economic factor *Demand* – Expected Market Volume positively impacts both, the macro-economic factors Supply – Production Factors and Public and Governmental Conditions.

SH₂: The factor Demand impacts the Risk/Uncertainty factor in a significant positive way.

SH₃: The factor Demand impacts the FDI Motive more strongly than Supply and Public does.

SH₄: *Supply* has more influence on FDI Motive than on Risk/Uncertainty.

SH₅: FDI incentive schemes have a positive impact on macro-economic factors.

SH₆: The Public factor is reversely positively related to Risk/Uncertainty.

SH₇: The Risk/Uncertainty factor impacts FDI Motives significantly in a negative way.

The null hypothesis H₀ and the derived sub-hypothesis SH₁ – SH₇ shall grant a whole picture of macro-economic influence to FDI decisions extended with intervening variables of FDI incentive schemes and risk/uncertainty factors. The aim is to find out the biggest influencing factors and potential relationships between them to then derive interpretations and conclusions. These results are only valid and limited to the selected industry, which is the German and Austrian located automotive industry. The aim is to find out the strongest influence factors and potential relationships. After testing the relationships, the results will be analyzed and interpretations will be worked out as well as conclusions derived.

2.7 Empirical Design and Postulated Causal Model

Research design and methodology of evaluation of the impact of macro-economic-determinants on FDI decision-making process: The third chapter compiles the research questions for this promotional work which were extracted from certain literature caps found in the intensive literature study. Another step in this chapter is the deduction of hypothesis from the research questions to create a closed causal model for further investigations. After the model has been constructed, a determination and operationalization of the dependent variable FDI Motive has been performed. The indicators therefore were carefully extracted from existing research works. Furthermore, the determination of the independent variables Demand, Supply and Public and Governmental Conditions [7] and the intervening variables Risk/Uncertainty and FDI Incentive Schemes is made. The relationships between the latent variables are going to be designed in accordance to the research questions and deduced hypothesis as they are of interest and need to be answered in this thesis. To evaluate and collect data about the influence of macro-economic factors including intervening factors to FDI decision-making process, a structured questionnaire has been created and distributed to

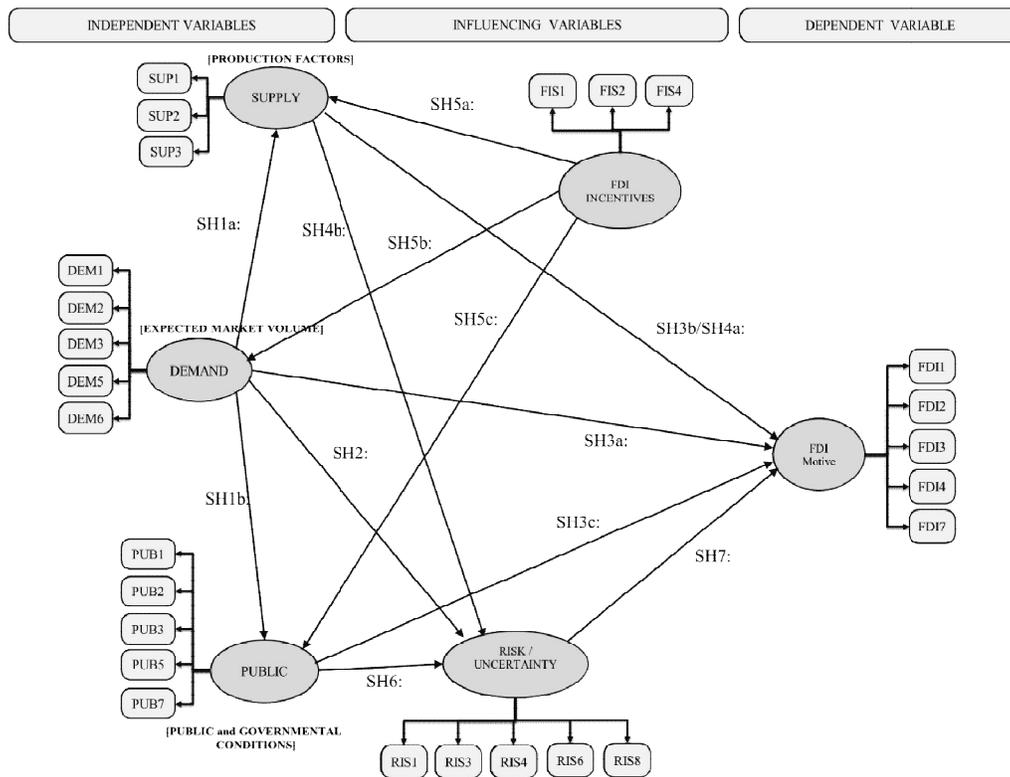


Fig. 2. Complete postulated causal model with indicators and paths
(Source: Author’s own construction)

experienced persons out of the focus group of employees of German and Austrian based companies from the automotive industry sector. A structured questionnaire and interview is the most popular way in psychological research (Mitchell et al., 2010) in which all respondents are asked a standard list of questions in a standard order. A structured questionnaire includes the advantage to reduce bias and increases reliability. Important is to only use fixed-alternative questions. Another advantage according to Bechhofer et al. [24] is that they are ideal for statistical descriptions and factual matters. This structured questionnaire is based on the causal model which has been created under consideration of existing research results from different scientific researchers and adapted to author’s postulated model.

3. RESEARCH RESULTS AND FINDINGS

3.1 Research Results and Findings, Data Interpretation and Deduction of the FDI Motives and their Macro-economic Impact Determinants in the Automotive Industry

Analyzing the empirically gained research results with a descriptive analysis of the general section of the

survey. To assess the structural equation model, a 5-step approach after Hair et al. [25] was going to be performed. As this model has been developed by the author, it hasn’t been proofed before. The five steps brought positive results with concludes that the model fit has a good quality and the variables and its indicators have a good descriptive quality. A detailed description of each step can be reviewed in the promotional work. After this has been performed, the evaluation of the holistic postulated causal model needs to be done to furthermore assess the hypothesis. The interpretation of the research results in combination with the expert post-survey discussion finalizes the model and ends with specific suggestions as an outcome from this promotional work.

3.2 Assessment and Criteria to Proof the Postulated Causal Model’s Fit and Quality

After the descriptive analysis of the survey data, correlations are going to be analyzed in accordance to the postulated causal model which is shown in detail in Fig. 2 including the paths which represent the research questions and hypothesis to be tested of this work. Validity and reliability of collected data underlying following criteria for proofing or rejecting hypothesis presented in Table 3.

Table 3. Acceptance criteria for hypothesis testing

Characteristic	Value description / definition
Coefficient of Determination [R ²] Chin [26] (Kuckartz et al., 2010)	> 0,67 (substantial); 0,33 (average); 0,19 (weak)
Path Coefficient [β] (Sapp, 2006, Lohmüller, 1989, Bühl [27])	Null hypothesis: < 0,5 All Sub-hypotheses: > 0,1
Level of Significance [p-Value] (Kuckartz et al. 2010, Hair [25])	< 0,05

(Source: Author's own construction in accordance to researchers shown in table)

Table 4. Assessment of the measured values for the model fit

Model fit characteristic	Cronbach's alpha	AVE	Composite reliability
Threshold Value:	≥0,70	≥0,50	≥0,70
Literature source:	Hair et al. [25]	Hair et al. [25]	Hair et al. [25]; Nunally & Bernstein, 1994
Used variables in the SEM-model	Actual values		
FDI Motive/Decision-Making	0,790	0,545	0,856
Demand [Expected Market Volume]	0,753	0,591	0,808
Supply [Production Factors]	0,707	0,486	0,710
Public and Governmental Conditions	0,742	0,592	0,780
Risk/Uncertainty	0,760	0,541	0,781
FDI Incentive Schemes	0,731	0,503	0,750

(Source: Author's own construction)

To evaluate how strong and good a predictive statement is, i.e. how strong and good the predicted values accord with the observed values, the coefficient of determination (R²) is going to be calculated (Kuckartz et al., 2010). To proof the significance level of one sample size to another is measured with the p-value. Rating: <5% or <0,05 as significant (Kuckartz et al., 2010), Hair [25]. For validation of the quality of the causal model, the internal consistency reliability has been measured. An established and broadly accepted criterion is the Cronbach's Alpha measurement characteristic. This value explains the quality of model and it is recommended that the value for the variables should be 0,70 or above [25] (Cronbach, 1951). Indicators with very low loadings (<0,40) is recommended to extract from the model [25] to increase the internal consistency of the model.

Following Table 4 shows the model fit criteria for this construct. Three characteristics will be proofed: Cronbach's Alpha, AVE and Composite Reliability.

Cronbach's Alpha value is recommended by Hair et al. [25] and Nunally & Bernstein (1994) with ≥0,70. For exploratory research, also ≥ 0,60 for each variable is acceptable [25]. In the author's postulated causal model the highest value is 0,790 (FDI Motive) and the lowest value is 0,707 (Supply).

The following characteristic to proof the convergent validity of the author's model is the AVE value. This

value is more than the correlation squared of the other constructs [28]. Discriminant validity has been assessed by the AVE value and is the extent to which a construct is distinct from other constructs, evaluated by empirical standards [25]. Discriminant validity implies that a construct is unique and captures phenomena not represented by other constructs in the model. The convergent validity which is measured by the AVE value should be higher than 0,50 [25]. The highest measured AVE value is 0,592 (Public) and the lowest value is 0,486 (Supply). The variable Supply is slightly below (0,014) the required 0,50. But due to a good value at Cronbach's Alpha and Composite Reliability and the almost reached target of the AVE value, it has been taken as valid for the construct. Furthermore, Hair et al. [25] describes these targets as rules of thumb for reflective measurement models and not as hard minimum targets. Therefore, the author has decided to keep this variable with the adjusted indicators in the model.

The third measurement for evaluating the model's quality was the Composite Reliability. This value represents the internal consistency reliability of the model. In exploratory research it should be 0,60 and 0,70 to be considered as acceptable. The highest measured value in the construct was 0,856 for the dependent variable FDI Motive. The lowest measured value was 0,710 for the independent variable Supply. So, all AVE values are above the recommended limits to have a good base of the model fit for further investigations.

All hypotheses are marked in the model accordingly and are numbered in relation to their identification given by the hypothesis numbers. The direction of the arrows shows the path of how the hypotheses are designed and define the way of explorative analysis. The β -value at each of the arrows shows the loading to the illustrated variable. All single values of each indicator and for each variable are explicitly shown in appendix 5. Indicators with a β -loading of $<0,400$ are marked with “x” and have been deleted from the final model for improving the quality of each variable and in accordance to the recommendations of Hair et al. [25]. This model is the result of the extensive research work and developed by the author of this thesis. The aim was to determine the power of potential macro-economic impact factors on FDI motives and its decision-making process. It should diminish the lack of results in terms of the potential macro-economic impact on such ventures. The model is extended by potential intervening factors which may attract or distract managers for FDI decisions in the context of macro-economic perspective. The model is constructed for the B2B business activities only and the participants are entrepreneurs or employees exclusively from the German and Austrian automotive industry. Applying this model to other industries, countries, specific companies, etc. may need to adapt it to their specific environments and needs.

The SEM-model is constructed to gain resilient results for impact factors from the macro-economic perspective on FDI motives (Liebscher et al. 2007). The in-depth analysis of existing literature and already existing research results has been executed for a holistic picture of this specific task. Latent variables have been analyzed and operationalized, indicators were selected by literature excerpts and existing papers of sub-fields. After this was completed, further investigations to build up a solid basement for developing hypotheses and modeling a causal construct needed to be performed. The main part of the existing research results in terms of influence factors on FDI motives/decisions are focused on the internal perspective and the immediate environment. The macro-economic perspective is only partly considered. The empirical evidence of not directly influenceable macro-economic factors by companies was just rarely available. Macro-economic factors are differently and inhomogenously defined in theory. A collection and comparison of the factors to gain specific variables and its indicators were of high importance for the further investigations of this work. They built the core part. A differentiation between the macro-economic variables was necessary to get a diversified view and subsequently measures to evaluate each factor about its impact on other factors. The three main variables have been differentiated into

Demand = Expected Market Volume; Supply = Production Factors and Public and Governmental Conditions [7].

Fig. 3 shows the final construct of the postulated causal model. This model represents the essence of this promotional work. The main three macro-economic determinants have been brought into relation to FDI motives/decisions. To complement this construct with potential intervening variables, the risk and uncertainty factor has been included to proof the impact of this dimension in such ventures. In addition to this, FDI incentive schemes have also been included into the model, as they have the potential to attract FDI inflows (Siddique et al., 2017). The finding in the fourth chapter is based on the assessment of the new developed model which showed a strong and resilient construct. Even though, there are intervening variables included which influence investment decisions (Moran et al., 2018, p. 2) [29,30] after Svetlicic (2017, p. 462) say that the main motive for investors after market-seeking are strategic asset seeking, efficiency seeking and resource seeking. This is similar to the results of the causal model's results. The focus on macro-economic levels in relation with FDI incentive schemes and risk/uncertainties in terms of FDI motives/decisions brought more evidence in this case. The impact of this level on planned investments is significant and often is seen as not considered in this certain context.

3.3 In Respect to the Postulated Null Hypothesis and the Derived Sub-hypotheses Following Results can be Derived

The null-hypothesis [H_0] had to be rejected because of a significant impact of the three defined macro-economic determinants DEMAND, SUPPLY and PUBLIC AND GOVERNMENTAL CONDITIONS [7]. It could be seen, that besides the well-considered micro-economic determinants, also the macro-level has a strong impact on FDI motives. Seven sub-hypotheses [SH_1 - SH_7] have been derived from the null-hypothesis to get a more detailed view on each variable and its impact within the postulated causal model. The sub-hypotheses The three sub-hypothesis SH_1 , SH_2 and SH_3 measured the impact factor from Demand on Supply and Public and Governmental factors [SH_1], Demand on Risk/Uncertainty [SH_2] and proofed if Demand has a stronger impact on FDI motives/decisions than on Supply and Public and Governmental factor [SH_3]. All three sub-hypotheses could be accepted. The fourth sub-hypothesis [SH_4] verified the size of impact of Supply on FDI motives/decisions and risk/uncertainty. It was hypothesized, that Supply has more influence on FDI

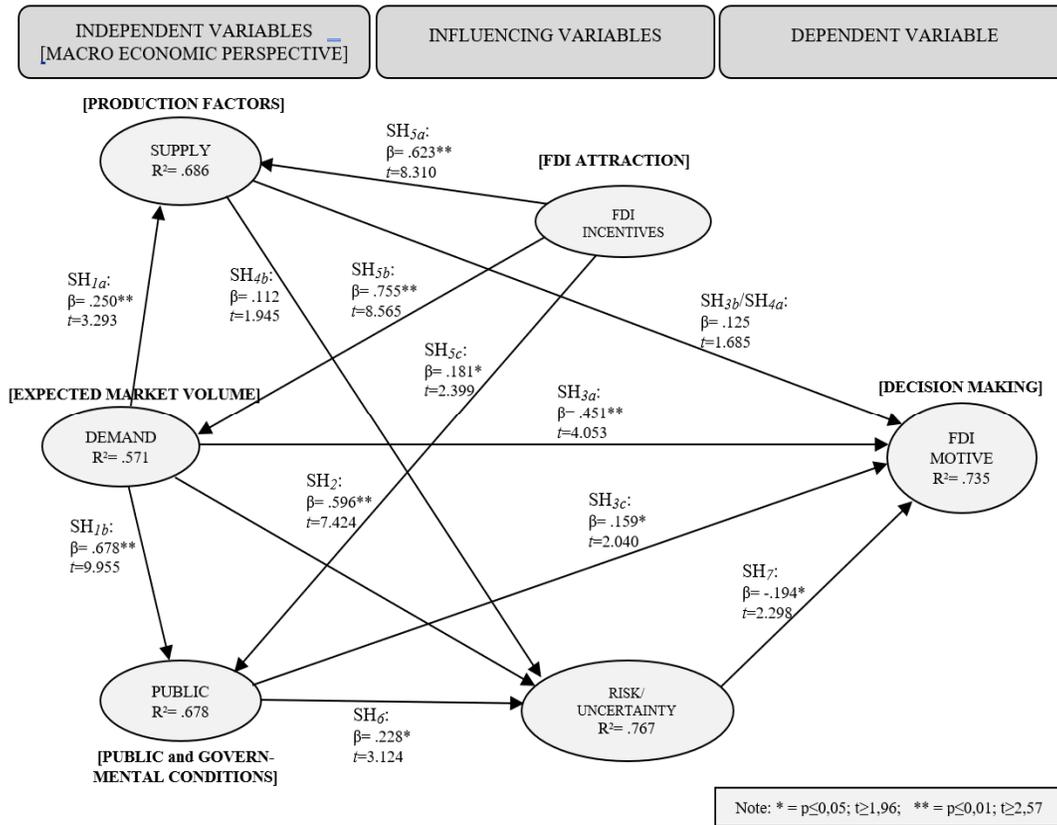


Fig. Error! No text of specified style in document.. **Final postulated causal model including statistical values**
 (Source: Author's own construction)

motives/decisions than on risk/uncertainty. This sub-hypothesis needed to be rejected because risk/uncertainties are more impacted by supply than FDI motives/decisions. Sub-hypotheses SH₅ predicted a significant positive impact of FDI incentive schemes on macro-economic determinants. The high factor loadings and significance values showed a strong positive relation. The sub-hypothesis SH₅ could be accepted. SH₆ predicted a reversely positive relationship of public and governmental conditions on risk/uncertainty. The last sub-hypothesis SH₇ predicted a significant negative impact of risk/uncertainty on FDI motives/decisions. This prediction also could be accepted due to the values gained by the survey. It can be concluded, that the null-hypothesis needed to be rejected due to a significant impact of macro-economic factors on FDI motives. Only one [SH₄] out of seven sub-hypotheses had to be rejected.

3.4 Results and Implications on Research Questions

RQ_{Base}: How important are different macro-economic factors for FDI motives in the automotive industry?

The postulated causal model shows strong relationships between the macro-economic factors and the FDI Motive. The minimum level for the factor loading β is set ≥0,100 to be accepted. All three factors fulfill this limit (Demand: β = .596; Supply: β = .125; Public: β = .159. Demand and Public, both also represent a high significant value on FDI Motive. Only the SUPPLY factor didn't reach the minimum significant limit of ≤0.05. It also can be seen that Demand is positively related to Supply and Public factors as well. It leads to the interpretation, that if Demand obviously exists, also the other macro-economic factors are positively affected. The FDI Motive is highly explained in the model (R²= .735) which proves the model's quality and stability. The model shows, that macro-economic factors have a strong influence on FDI MOTIVES and influence it in a positive way. In addition to those factors, there exist peripheral intervening factors to increase or decrease the FDI decision. In this work, FDI Incentive Schemes and Risk/Uncertainty have been put into relation to the macro-economic factors and FDI Motive to further see potential influences on the decision process.

RQ₁: Which macro-economic factors have the strongest influence on FDI motives in the German and Austrian automotive industry?

To be able to diversify differences macro-economic impact factors on FDIs, it was necessary to separate the huge amount of potential factors into certain groups. The separation has been done into expected market volume (Demand), *production factors* (Supply) and Public and Governmental Factors (public). The survey shows a significant difference between the factors. The Demand factor hereby is the strongest one in terms of impact on the FDI Motives ($\beta = .451$; $p=0,000$; $t=4.053$). This factor is followed by the Public factors, but in much weaker way ($\beta = .159$; $p=0.042$, $t=2.040$). This factor is still significant according to the limits, but not as strong as Demand. and the weakest factor on FDI Motives is Supply ($\beta = .596$; $p=0.093$; $t=1.685$). This factor even hasn't no strong significant level and a weak factor loading. The explanation rate of each macro-economic factor by the indicators is high (Demand: $R^2=.571$; Supply: $R^2=.688$; Public: $R^2=.678$). This is the basis for a strong model. Also the FDI Motive is explained by $R^2=.735$. It can be concluded, that if a host country wants to attract FDI, the macro-economic performance of such a country is of high importance for investors. In addition to that, also FDI Incentives have a positive impact on macro-economic performances, but political stability, unforeseeable risks or volatile legal frameworks can change investor's minds easily.

RQ₂: How do FDI incentive schemes impact the macro-economic factors?

The peripheral impact factor FDI Incentive Schemes seem to have the power to positively impact macro-economic factors in relation to FDI behavior. A deeper look on the path coefficients and significant levels shows following values: FDI Incentive \rightarrow Demand: $\beta = .755$; $p=0.000$; $t=8.565$; FDI Incentive \rightarrow Supply: $\beta = .623$; $p=0.000$; $t=8.310$; FDI Incentive \rightarrow Public: $\beta = .181$; $p=0.017$; $t=2.399$. The impact of FDI Incentive Schemes on Public factor is weaker than on the other two, even though it is significant positive and acceptable. The analysis shows, that the efforts a country, government or public department puts into foreign-friendly environments, is accepted and granted by investors to reduce risks and uncertainties as well as being better able to start the business.

RQ₃: How do the macro-economic factors impact uncertainty/risk and what influence does this have on FDI motives?

The postulated causal model was set-up also to gain an insight into the relationship of macro-economic

factors on risks and uncertainties. The Risk/Uncertainty factor has a substantial explanation by the macro-economic factors and its indicators (determination of coefficient $R^2 = .767$). All three macro-economic factors directly impact the Risk/Uncertainty variable in a positive way. The Demand factor again has the strongest positive impact on the Risk/Uncertainty factor ($\beta = .596$; $p=0.000$; $t=7.424$) which can be explained by having a positive und stable outlook in terms of expected market volume and economic performance, the investor sees the risk and uncertainties less important in the conglomerate of potential intervening factors. The allocation of importance to potential negative impacts shrinks. The Public factor also has a significant and positive impact on the Risk/Uncertainty factor, but less strong as the Demand factor has ($\beta = .228$; $p=0.002$; $t=3.124$). Here again it can be concluded, that if the public and governmental frameworks are of good health, the risks and uncertainties of investors are going to be reduced in their mind. Supply has no significant impact on Risk/Uncertainty ($\beta = .112$; $p=0.052$; $t=1.945$). This factor represents FDI Motives, which mainly have the aim of reducing production costs (cost-driven decisions). This may is a reason why risk and uncertainty are more or less given and the decision is not that much dependent on such intervening factors. The influence from Risk/Uncertainty on to FDI Motives is obviously negative related ($\beta = -.194$; $p=0.022$; $t=2.298$). Vice versa it can be concluded that if the risk and uncertainty factors can be reduced by the host country, it will have a positive impact on FDI inflows.

4. CONCLUSIONS AND IMPLICATIONS

In general, it can be concluded, that FDI motives can be of various forms and are often based on mid- and long-term corporate strategies. The willingness to expand in this context is mainly the core objective, but impact factors from the macro-economic perspective are often not considered in early stages of the decision process. Specifically, before taking decisions on FDIs, not just taking care of micro-economic factors, such as customers, products, suppliers, etc., but also having a deeper look on the macro-economic environment in the targeted country is necessary. This environment impacts the company on a mid- and long-term perspective and can't be changed directly by the company. The factor demand in the model has the strongest positive and the most significant impact on FDI motives/decisions out of the three defined macro-economic dimensions ($\beta= 0.451$; $p=0,000$; $t=4.053$). It can be concluded, that an expected market volume development therefore is more important or even a stronger driver than production cost or better and more stable public and

governmental conditions. The main opinions of the experts in the post-survey interview were that market conditions and their potentials are most important. Than good and stable conditions are the base for economic success, and thirdly, production costs are an added value for the whole investment and can secure it in the long-term perspective. The other macro-economic factors all have a significant impact on FDI decisions, even though they are much weaker than the factor “demand”.

A further dimension in the causal model construct besides the influence of macro-economic factors on FDI motives included the FDI incentive schemes. It has been hypothesized, that FDI incentives have a significant positive influence on macro-economic factors and deal as moderating impact factors. As this can be directly steered by governments and public institutions, it is an adjusting and regulating instrument in terms of effect on FDI inflows. The results show, that FDI incentive schemes have a strong positive and significant influence on the demand factor ($\beta= 0.755$; $p=0.000$; $t=8.565$). It can be concluded, when FDI incentive schemes positively increase, also the willingness for investments increases. Therefore, it can be concluded, that countries, which want to attract FDI inflows, have a strong instrument to steer them.

A special position in the causal model construct is assigned to the risk/uncertainty variable because of its direct intervening potential on the FDI motive. The research results gained in the survey shows a significant negative impact ($\beta= -0.194$, $p=0.022$; $t=2.298$). It can be concluded, that if investments are planned into target countries where political stability is poor, corruption is part of daily business, the market situation is unstable it brings a significant negative impact on FDI inflows. Experts also stated that it is of essential importance and in the responsibility of the decision makers in the company, to collect as much information as possible about the target country and its environmental conditions before taking a decision. Even if expected market volumes are strong positive drivers for investments, the political and legal environment has to be analyzed beforehand. The final postulated causal model as a whole is a strong and stable construct. All variables have a high coefficient of determination (all R^2 are $>0,57$). The FDI motive is mainly positively impacted by the demand factor in the model, whereas the supply factor and the risk and uncertainty factor also are positively related, but weaker. The risk and uncertainty factor impacts the FDI motive negatively and is able to reduce investors’ willingness to go ahead. It is noteworthy, that governments can influence this variable in a short time to attract

investors whereas the other variables are more long-term oriented and not directly influenceable.

Macro-economic environment has a significant influence on the investment motives from the investor’s point of view, especially in the automotive industry, and may attract or distract the investment decision. Combining this result with outputs from the post-survey expert interviews, there is still a potential to further improvements in better including macro-economic factors into FDI decisions.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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